

## Chapter 7. ENVIRONMENTAL AND SOCIAL CONSIDERATIONS

### 7.1 Legal, Policy and Institutional Framework of Environmental and Social Considerations in India and Odisha

#### 7.1.1 Laws, Regulations Relevant to Environmental and Social Considerations

Legal frameworks are an important context when implementing project components, sub-components and activities that reflect the responsibility of a country/ state to its adopted international, national and state regulatory framework for the sustainable management of forest resources. In fact, the project is in tune with the national policies and is also aligned with its commitment towards ecological and social security that the country is bound under the Constitution to provide. This chapter reviews and analyzes the policies, laws and regulations of relevant environment and social considerations with respect to the project.

Lender safeguard policies/ guidelines “The Environment and Social Considerations (ESC)” in a JICA project must comply with the laws, standards, policies, and plans of the host country. If the standard set by the host country differs from the international standard, the project proponents are advised to adopt the standard that better serves the purpose of attaining a higher level of ESC. The ESC in a JICA project reflects elements that are aligned with the World Bank’s safeguard policies including operational policies on environmental assessment (OP 4.01), natural habitats (OP 4.04), involuntary resettlement (OP 4.12), indigenous peoples (OP 4.10), and other relevant policies. International standards, treaties, and declarations should also be applied as appropriate”.<sup>1 2</sup> **Attachment 7.1.1** elucidates the international environment and social policy frameworks with regard to the Environment and Social Considerations (ESC) of JICA and the applicable safeguard policies of the World Bank.

Overall, environmental and social safeguard policies and related legislation in India do not deviate from the requirements of the JICA guideline.

#### 1) Union Level

This section attempts to highlight legislative initiatives towards environment and social considerations in India with respect to this Project. **Table 7.1.1** outlines the national level important and relevant laws, rules, regulations, notifications, guidelines, policies and standards for the key areas which shall be applicable for ESC with respect to this project: namely., environment protection and environmental impact assessment (EIA), forest (forest and wildlife protection and conservation), water, air and pollution (prevention and control of pollution), resettlement (land acquisition and involuntary resettlement), and tribal and traditional forest dwellers.

The Constitution of India, through the 42<sup>nd</sup> Amendment (1976) added Article 48A to the Directive Principles of State Policy, which declared that “The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country”. The same amendment also incorporated Article 51A part (g) that comes under Fundamental Duties, declares “to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures”.

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<sup>1</sup> The Basics of Environmental and Social Considerations: Introduction to the JICA Guidelines for Environmental and Social Considerations

<sup>2</sup> Japan International Cooperation Agency (JICA) Guidelines for Environmental and Social Considerations, (Translation of Japanese Version), April 2010)

**Table 7.1.1 National Level Legal/ Regulatory Framework for Environmental and Social Considerations**

Law/ Policy	Description	Responsible Ministry/ Agency
<b>A. Environment Protection and EIA</b>		
Environment (Protection) Act, 1986 and Amendment 1991	<ul style="list-style-type: none"> <li>• This is an umbrella regulation that concerns all aspects of environmental safeguards. This provides a framework for coordination among various central and state government authorities for protection and improvement of environment and prevention of hazards to human beings, other living creatures and property.</li> <li>• In all it is mandated to prevent environmental pollution in all its forms and to tackle specific environmental problems peculiar to different parts of the country.</li> </ul>	MoEF&CC Central and/or State Pollution Control Boards
Environment (Protection) Rules 1986 and Amendments	<ul style="list-style-type: none"> <li>• The rules provide standards for emissions or discharge of environmental pollutants, prohibitions/ restrictions on the location of industries and on carrying-out processes and operations in different areas, procedure for taking samples and submission of samples for analysis and the form of laboratory report, providing information to authorities and agencies in certain cases, prohibition and restriction on handling hazardous substances in different areas and submission of environmental statement.</li> </ul>	MoEF&CC, Central and/or State Pollution Control Boards
EIA Notification 2006 and Amendments 2007, 2008, 2009, 2011 and 2012	<ul style="list-style-type: none"> <li>• This notification provides procedures for conditions required for environmental clearance (EC), categorization of projects for EC, activities for EC and stages for EC, for construction of new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule</li> </ul>	MoEF&CC, Expert Appraisal Committees (EAC) at the Centre (MoEF&CC)/ State Expert Appraisal Committees (SEAC) of State Environment Impact Assessment Authority (SEIAA) at the State level
• The National Green Tribunal Act 2010	<ul style="list-style-type: none"> <li>• This act provides for the establishment of a National Green Tribunal to provide specialized medium for effective and prompt clearance of case related to environment protection, conservation of forests and other natural resources. This act also includes enforcement of any legal right relating to environment and providing relief and compensation for damages caused to people or property due to violation of environmental laws or conditions specified while granting permission.</li> </ul>	National Green Tribunal (NGT: under MoEF&CC)
<b>B. Forest &amp; Wildlife</b>		
Indian Forest Act 1927	<ul style="list-style-type: none"> <li>• This act was enacted to preserve forest cover and significant wildlife. It defines procedure for declaring reserved forest, protected forest and village forest.</li> <li>• Further, describes power to impose duty on timber and other forest-produce and to make rules to regulate transit of forest-produce, and collection of drift and stranded timber. The act also has provision to impose penalties and procedures thereof.</li> </ul>	MoEF&CC  State level Environment and Forest departments  Implementing Agency
The National Forest Policy 1988	<ul style="list-style-type: none"> <li>• The policy was prepared with a national goal to have a minimum of 1/3 of the total land area of the country under forest or tree cover. Whilst in the hills and mountainous regions, to maintain 2/3 of the area under such cover to prevent erosion and land degradation and to ensure stability of the fragile eco-system.</li> <li>• The policy provides for maintenance of environmental stability through preservation, restoration of ecological balance impacted by serious depletion of forests, preserving natural forests with vast variety of flora and fauna, check erosions/ degradations, and to minimize pressure to existing forests.</li> </ul>	MoEF&CC, State level Environment and Forest departments
Forest Conservation Act 1980 and Amendment 1988	<ul style="list-style-type: none"> <li>• The act provides for conservation of forests and lays emphasis on restriction on de-reservation of forests or use of forest lands for non-forest purposes.</li> <li>• It also provides that any reserved forest can be reserved, any forest land may be used for non-forest purposes, any forest land could be assigned by way of lease or otherwise to any private person or to any authority, corporation, agency or any other organization, any forest land may be cleared of trees, which have grown naturally, for the purpose of reforestation.</li> </ul>	MoEF&CC, State level Environment and Forest departments

Law/ Policy	Description	Responsible Ministry/ Agency
The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006	<ul style="list-style-type: none"> <li>• The act, commonly known as 'Forests Right Act'.</li> <li>• The act seeks to recognize and bestow the forest rights and occupation in forest land among the forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations.</li> <li>• Two enabling rules namely, Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights.) Rules, 2008 &amp; Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights), (Amended) Rules, 2012 have been formed to facilitate implementation of the provisions of the act.</li> </ul>	Ministry of Tribal Affairs State Government
Wildlife (Protection) Act 1972 and Amendment 1993	<ul style="list-style-type: none"> <li>• This act provides for protection of wild animals, birds and plants, prohibition on hunting any wild animal specified in Schedule I, II, III and IV, prohibition on picking, uprooting, of specified plants, constitution of sanctuaries, national parks and closed areas, prohibition on trade or commerce of wild animals, in trophies, animal articles derived from certain animals.</li> <li>• The act also empowers certain officials to investigate and impose penalties.</li> </ul>	MoEF&CC, State Wildlife department
Biological Diversity Act 2002	<ul style="list-style-type: none"> <li>• This is umbrella legislation aimed at conservation of biological resources and associated knowledge as well as facilitating access to them in a sustainable manner and through a just process.</li> </ul>	National Biodiversity Authority, Chennai State bio-diversity board
<b>C. Water, Air and Pollution</b>		
Water (Prevention and Control of Pollution) Act 1974 and Amendment 1988	<ul style="list-style-type: none"> <li>• This act provides for prevention and control of water pollution and the maintaining or restoring of wholesomeness of water. For this purpose, it provides for establishment of boards, and confers them with powers and functions for the prevention and control of water pollution.</li> </ul>	Central and/or State Pollution Control Boards
Air (Prevention and Control of Pollution) Act 1981	<ul style="list-style-type: none"> <li>• This act provides for prevention, control and reduction of air pollution. The Act further provides for establishment of Boards, and assigning them with powers and functions towards prevention, control and reduction of air pollution.</li> </ul>	Central and/or State Pollution Control Boards
Rules and Notifications framed under the Environment (Protection) Act 1986	<ul style="list-style-type: none"> <li>• The Hazardous Waste (Management &amp; Handling) Rules, 1989 amended in 2000</li> <li>• The Manufacture, Use, Import, Export, Storage of Hazardous Microorganism, Genetically Engineered Organisms or Cells Rules, 1989.</li> <li>• The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989, amended in 2000.</li> <li>• The Environment Audit Notification, 1993</li> <li>• The Coastal Regulation Zone Notification, 1991</li> <li>• The Chemical Accidents (Emergency Planning, Preparedness &amp; Response) Rules, 1996</li> <li>• The Biomedical Waste (Management &amp; Handling) Rules, 1998</li> <li>• The Municipal Solid Wastes (Management &amp; Handling) Rules, 2000</li> <li>• Recycled Plastics Manufactures and Usage Rules, 1998 amended in 1999</li> <li>• Notification on Fly ash (14th September 1999)</li> <li>• The Noise Pollution (Regulation and Control Rules, 2000</li> <li>• Ozone Depleting Substance (Regulation) Rules, 2000</li> <li>• Batteries (Management &amp; Handling) Rules, 2001</li> </ul>	Central and/or State Pollution Control Boards
<b>D. Land, Resettlement and Tribes</b>		
The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013	<ul style="list-style-type: none"> <li>• This act provides for a humane, participative, informed and transparent process for land acquisition for the purpose of industrialization, development of essential infrastructural facilities and urbanization with the least disturbance to the owners of the land and other affected families.</li> <li>• This act ensures with consultation with institutions of local self-government and Gram Sabhas.</li> <li>• This act regulates land acquisition and lays down the procedure and rules for granting compensation, rehabilitation and resettlement to the affected families.</li> <li>• It ensures a just and fair compensation to the affected families whose land has been acquired or proposed to be acquired or are affected by such acquisition and makes adequate provisions for their rehabilitation and resettlement. It ensures cumulative outcome of</li> </ul>	Department of Land Resources, Ministry of Rural Development Ministry of Tribal Affairs

Law/ Policy	Description	Responsible Ministry/ Agency
	compulsory acquisition, and that affected persons become partners in development, thereby leading to improvement in their post-acquisition social and economic status.	
Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006	<ul style="list-style-type: none"> <li>• This act recognizes and bestows forest rights and occupation in the forest land to the forest dwelling scheduled tribes and other forest dwellers, who have been living in such forests for generations, but their rights could not be recorded.</li> <li>• Thus, the recognized rights include responsibilities and authority for sustainable use and conservation of bio-diversity and maintenance of ecological balance, thus strengthening the conservation regimes of the forests while ensuring livelihood and food security to the forest dwelling communities.</li> </ul>	Forest Department Ministry of Tribal Affairs
Scheduled Caste and Scheduled Tribes (Prevention of Atrocities) Act 1989	<ul style="list-style-type: none"> <li>• This act aims to prevent the offences of atrocities against the members of the Scheduled Castes and the Scheduled Tribes. The act also provides for special courts for the trial of such offences and for the relief and rehabilitation of the victims of such offences.</li> </ul>	Ministry of Social Justice and Empowerment Ministry of Tribal Affairs
National Policy on Safety, Health and Environment at Work Place	<ul style="list-style-type: none"> <li>• The Government of India is committed to regulate all economic activities for management of safety and health risks at workplaces and to provide measures to ensure safe and healthy working conditions for every working man and woman in the nation. This policy gives leverage to every ministry or department to work-out their own detailed policy relevant to their working environment as per the guidelines on the National Policy.</li> <li>• This policy is devised based on the directive principles and international instruments. The directive principles described in the Constitution are as follows: <ul style="list-style-type: none"> <li>➤ Securing the health &amp; strength of employees, men and women</li> <li>➤ Tender age of children are not abused</li> <li>➤ Citizens are not forced by economic necessity to enter any vocation unsuited to their age or strength</li> <li>➤ Just &amp; humane conditions of work and maternity relief are provided</li> <li>➤ Government shall take steps to secure participation of employee in the management</li> </ul> </li> </ul>	- The Ministry of Labor and Employment

Source: Compiled by JICA Survey Team (2016) based on information indicated below:  
Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India: <http://envfor.nic.in/>  
Department of Land Resources, Government of India: <http://www.dolr.nic.in>  
Department of Forest and Environment, Government of Odisha: [http://odisha.gov.in/forest\\_environment/index.htm](http://odisha.gov.in/forest_environment/index.htm)  
<http://labour.nic.in/sites/default/files/SafetyHealthandEnvironmentatWorkPlace.pdf>  
<http://tribal.nic.in/WriteReadData/CMS/Documents/201303131039493105468poaact989E4227472861.pdf>  
[http://www.odisha.gov.in/forest\\_environment/Forest\\_Act/Act\\_FE.html](http://www.odisha.gov.in/forest_environment/Forest_Act/Act_FE.html)  
<http://www.ospcboard.org/Notification.aspx?vchglinkid=79&vchplinkid=61>  
<http://ifs.nic.in/Dynamic/book/page8.pdf>  
<http://www.conservationindia.org/resources/ngt> - Praveen Bhargav, Everything you need to know about the National Green Tribunal (NGT)  
<http://envfor.nic.in/rules-regulations/national-green-tribunal-ngt>  
<http://www.greentribunal.gov.in/>  
[http://www.ilo.org/asia/WCMS\\_182422/lang--en/index.htm](http://www.ilo.org/asia/WCMS_182422/lang--en/index.htm)  
<http://www.indiaenvironmentportal.org.in/content/305027/national-policy-on-safety-health-and-environment-at-work-place/>  
<http://labour.nic.in/policies/safety-health-and-environment-work-place>

## 2) State Level

Many states in India have prepared their own laws, rules, regulations, and policies with respect to environment protection and social considerations. **Table 7.1.2** outlines the important and relevant laws, rules, regulations, notifications, guidelines, policies and standards for the State of Odisha for the key areas which shall be applicable for ESC with respect to this project, viz., environment protection and environmental impact assessment (EIA), forest (forest and wildlife protection and conservation), water, air and pollution (prevention and control of pollution), resettlement (land acquisition and involuntarily resettlement), and tribal and traditional forest dwellers.

**Table 7.1.2 State Level Legal Framework for Environmental and Social Considerations**

Law/ Policy	Description/ Outline	Responsible Ministry/ Agency
<b>A. Environment Protection and EIA</b>		
	<ul style="list-style-type: none"> <li>The State Government will adhere to the national laws, rules, and notifications pertaining to environment protection and EIA.</li> </ul>	Department of Forests and Environment
<b>B. Forest &amp; Wildlife</b>		
The Orissa Forest Act, 1972	<ul style="list-style-type: none"> <li>The act defines procedure for declaring reserved forest, protected forest and village forest.</li> <li>It also describes powers to impose duty on timber and other forest-produce and to make rules to regulate transit of forest-produce, and collection of drift and stranded timber. The Act also has provision to impose penalties and procedures thereof.</li> <li>Two forest acts were applied in the State of Orissa i.e. the Madras Forest Act, 1882 covering the Districts of Koraput, Ganjam and part of Phulbani districts (Baliguda and G.Udayagiri Taluks) and the Indian Forest Act, 1927 for the remaining area of the State.</li> <li>Generally, the sequence followed in this act is of the Indian Forest Act though this act has freely drawn from the Madras Forest Act 1882 and other existing State Forest Acts for convenience.</li> </ul>	Department of Forests and Environment
The Wildlife (Protection) (Orissa) Rules 1974	<ul style="list-style-type: none"> <li>The purpose of these rules is to carry out the provisions of the Wildlife (Protection) Act, 1972.</li> <li>The rule provides conditions for hunting wild animals, protection of specified plants, sanctuaries, national parks, and closed areas. It defines powers to protect and detect offences against wild animals and plants</li> </ul>	Department of Forests and Environment
The Wild Birds & Animals Protection Act, 1912	<ul style="list-style-type: none"> <li>This act applies to the birds and animals specified in the schedule of the act, when in their wild state.</li> <li>It is un-lawful to (a) capture or to kill such bird or animal, (b) to sell or buy, or offer to sell or buy, or to possess, any such bird or animal which has not been captured or killed if any plumage has been taken from any such bird captured or killed during such close time, to sell or buy or offer to sell or buy or to possess such plumage.</li> <li>The act imposes punishment with fine.</li> </ul>	Department of Forests and Environment
The Orissa Communal Forest and Private Lands (Prohibition of Alienation) Act, 1948	<ul style="list-style-type: none"> <li>The act prevents and bans landlord to sell, mortgage, lease or otherwise assign or alienate or convert into raiyati land any communal forest or private land or create occupancy rights therein, without the previous sanction of the collector.</li> </ul>	District Collector(s)
The Orissa Kendu Leaves (Control of Trade) Act, 1961 Orissa Act of 1961 [1. O. Exty. Gazette No.- D/3.1.1962 Notification No. 19, Legis D/3.1.1962]	<ul style="list-style-type: none"> <li>This act provides restrictions on the purchase of kendu leaves. It specifies that no person other than the government; or its authorized officer; or an agent can purchase or transport kendu leaves.</li> <li>Growers of kendu leaves are permitted to transport their leaves from any place within the unit, to any other place in that unit; for the purpose of sale to the government or authorized agent to purchase the same from him, otherwise will be considered violation of the provisions of this act.</li> </ul>	Department of Forests and Environment
The Orissa Forest Produce (Control of Trade) Act, 1981 [ Orissa Act 22 of 1981]	<ul style="list-style-type: none"> <li>The main objective of this act is to prevent smuggling of “forest produce” and to provide for State monopoly in specified forest produce.</li> <li>Forest produce includes: timber of any of the species, bamboos of all species, khair, catechu (katha) catechin (cutch), ganduli gum, dharua gum, khair gum, babul gum, sal resin, salai resin, rosha grass, rosia grass oil, lac in all forms, shela, mohua flowers, mohua seeds, chironi myrobalans, tassar, cocoons, sandal wood, tamarind, siali leaves, kusu, seeds, karanja seeds, siali fibres, sal seeds, hill brooms and such other produce as may be notified by the State Government from time to time.</li> </ul>	Department of Forests and Environment
The Orissa Village Forests Rules, 1985	<ul style="list-style-type: none"> <li>These rules were put together for management of village forests.</li> <li>For this purpose, the rules provide for establishment of village forest committees comprising of Sarpanch(s) of the concerned Grama Panchayat(s) and ward member(s) belonging to the village for which the village forest is notified, the forester(s) revenue inspector(s) concerned and such other selected persons; not less than 3 and not more than 5 in the said village.</li> </ul>	Department of Forests and Environment

Law/ Policy	Description/ Outline	Responsible Ministry/ Agency
	<ul style="list-style-type: none"> <li>• The village forest committees shall suitably demarcate the boundaries of the village forest with the help of forester and revenue inspector.</li> <li>• No person is permitted to cut, lop, injure appropriate or remove any tree.</li> </ul>	
Orissa Forest Sector Vision 2020	<ul style="list-style-type: none"> <li>• The Orissa Forest Sector Vision lays emphasis on forest planning and operations that are sustainable and balance the environmental services, for local use, and commercial extraction; recognition and protection of environmental services from forests; local subsistence and forest based livelihoods have the first charge on forests, especially in the scheduled areas based on strong incentives for local participation; protection of customary rights and usage; operations and procedures are made simple, transparent and effective, and regulatory and transaction costs are low.</li> </ul>	Department of Forests and Environment
The Orissa Forest (Grazing of Cattle) Rules, 1980	<ul style="list-style-type: none"> <li>• The Forest Department may declare any forests area to be “closed” to grazing from time to time, which will be notified in Oriya language at prominent places in the surrounding villages and also by proclamation by beat of drums in these villages, which will also notify the period of closure and the kind of animals to which the area is closed.</li> <li>• Grazing of cattle in protected forests shall be free without permit in protected forests except if forest area is closed to grazing.</li> <li>• Grazing of cattle in a reserve forests is not permitted, except in the open areas and in accordance with a permit. Goat or sheep are not permitted to browse in reserve forest, forests notified as per this act, and closed forest areas.</li> </ul>	Department of Forests and Environment
<b>C. Water and Air</b>		
Orissa Water (Prevention and Control of Pollution) Rules, 1983	<ul style="list-style-type: none"> <li>• This rule was created to provide for prevention and control of water pollution and the maintaining or restoring of wholesomeness of water. The State Pollution Control Boards have been conferred with powers and functions for the prevention and control of water pollution.</li> </ul>	Odisha State Pollution Control Board
Orissa Air (Prevention and Control of Pollution) Rules 1983	<ul style="list-style-type: none"> <li>• This rule was created to provide for prevention, control and reduction of air pollution. The State Pollution Control Board is conferred with powers and functions towards prevention, control and reduction of air pollution.</li> </ul>	Odisha State Pollution Control Board
<b>D. Land, Resettlement and Tribes</b>		
Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2015	<ul style="list-style-type: none"> <li>• The rule provides procedures to be applied in the State in accordance with the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (30 of 2013), and extends all provisions mentioned in the Act-2013 to the affected families.</li> </ul>	The State Government District Collector(s)
“The Orissa Government Land Settlement Act, 1962 [The Orissa Act 33 of 1962]”	<ul style="list-style-type: none"> <li>• This act provides for settlement of government land in the State of Orissa.</li> <li>• The act provides power to reserve land for communal and other public purpose, levy of Salami<sup>3</sup>, charging of rent, application fees and other fees and the authority to dispose of such applications are different according to the laws and rules in force in different parts of the State.</li> <li>• The present bill is therefore proposed to be enacted as a general legislation formulating a set of uniform principles regarding lease of government waste lands overriding provisions of various acts, rules, orders, customary practices and usage in force in various parts of the State instead of tinkering with the individual laws with the primary objective of governing the settlement of waste lands in a planned manner uniformly throughout the State.</li> </ul>	Revenue and Disaster Management Department

Source: Compiled by JICA Survey Team (2016) based on information indicated below:

Odisha State Pollution Control Board: <http://www.ospcboard.org/Default.aspx>

Odisha Forest Act 1972: [http://www.odisha.gov.in/forest\\_environment/Forest\\_Act/pdf/Acts/5TOFA\\_1972.pdf](http://www.odisha.gov.in/forest_environment/Forest_Act/pdf/Acts/5TOFA_1972.pdf)

[http://www.odisha.gov.in/forest\\_environment/Forest\\_Act/pdf/Acts/2TWBAPA\\_1912.pdf](http://www.odisha.gov.in/forest_environment/Forest_Act/pdf/Acts/2TWBAPA_1912.pdf)

<sup>3</sup> Salami, a Persian term, is a form of tax paid to the Government by the allottee

### 3) Other Relevant Regulations

The project will involve the local communities to work through their respective VSS in designated areas, thus the following labour laws, provided in **Table 7.1.3** maybe pertinent under the OFSDP Phase-II.

**Table 7.1.3 Labour Laws that maybe Pertinent to OFSDP Phase-II**

Law/ Policy	Description/ Outline	Responsible Ministry/ Agency
<ul style="list-style-type: none"> <li>• Article 24 of the Constitution of India</li> <li>• The Indian Penal Code (IPC), the Juvenile Justice (Care and Protection) of Children Act 2000</li> <li>• Child Labour (Abolition and Regulation) Act 1988</li> </ul>	<ul style="list-style-type: none"> <li>• The ‘Article 24’ prohibits child labour, but only in factories, mines or hazardous employment.</li> <li>• The IPC provides a basis in law to identify, prosecute and stop child labour in India</li> <li>• The Child Act prohibits the employment of children below the age of 14, and to prosecute the employers</li> </ul>	Executing agency (EA) / Implementation agency (IA), contractors
<ul style="list-style-type: none"> <li>• The Labours Act 1988</li> </ul>	<ul style="list-style-type: none"> <li>• The act ensures the health and safety of construction workers/ labour force</li> </ul>	EA/ IA, contractors
<ul style="list-style-type: none"> <li>• The Factories Act 1948</li> </ul>	<ul style="list-style-type: none"> <li>• The act ensures the health and safety considerations of the workers</li> </ul>	EA/ IA, contractors
<ul style="list-style-type: none"> <li>• Contract Labour (Regulation and Abolition) Act 1970</li> </ul>	<ul style="list-style-type: none"> <li>• The act ensures that the employers provide the basic welfare measures are made available to the contract workers engaged by them</li> </ul>	EA/ IA, contractors
<ul style="list-style-type: none"> <li>• The Building and other Construction Workers Act 1996</li> </ul>	<ul style="list-style-type: none"> <li>• The act ensures the safety measures at the construction work site and other welfare measures to be provided to the construction workers near their work place, such as canteen, first-aid facilities, ambulance, housing accommodation etc</li> </ul>	EA/ IA, contractors
<ul style="list-style-type: none"> <li>• Workmen's Compensation Act 1923</li> </ul>	<ul style="list-style-type: none"> <li>• The act mandates payment of Compensation to a workman for any injury suffered during the course of his employment or to his dependents in the case of his death. The act provides for the rate at which compensation shall be paid to an employee. This is one of many social security laws in India</li> </ul>	EA/ IA, contractors
<ul style="list-style-type: none"> <li>• Maternity Benefit Act of 1961</li> </ul>	<ul style="list-style-type: none"> <li>• The act ensures that any woman employee, who has worked in any establishment for at least 80 days during the 12 months immediately preceding the date of her expected delivery, is entitled to receive maternity benefits under the act. The employer is required to pay maternity benefits, medical allowance, maternity leave and nursing breaks.</li> </ul>	EA/ IA, contractors
<ul style="list-style-type: none"> <li>• Minimum Wages Act 1948</li> <li>• Payment of Wages Act 1936</li> </ul>	<ul style="list-style-type: none"> <li>• The Minimum Wages Act ensures minimum wages in all enterprises and in some cases those working at home. Central and State Governments can and do revise minimum wages at their discretion. Minimum wages are further classified by nature of work, location and numerous other factors at the discretion of the government. Although the central government stipulates minimum wage ranges between Rs. 143 and Rs. 1120 per day for the work, the State governments have their own minimum wage schedules.</li> <li>• The Payment of Wages Act regulates time frame, by when wages shall be distributed by the employers to employees. Further, the law also provides the tax withholdings the employer must deduct and pay to the central or state government before distributing the wages</li> </ul>	EA/ IA, contractors
<ul style="list-style-type: none"> <li>• Employees Provident Fund and Miscellaneous Provisions Act of 1952</li> </ul>	<ul style="list-style-type: none"> <li>• This act seeks to ensure the financial security of the employees in an establishment by providing for a system of compulsory savings. Minimum contribution by the employees shall be 10-12% of the wages, while the employee’s share will be equivalent to employer’s share. This amount is payable to the employee after retirement and could also be withdrawn partly for certain specified purposes.</li> </ul>	EA/ IA, contractors
<ul style="list-style-type: none"> <li>• Payment of Bonus Act of 1965</li> </ul>	<ul style="list-style-type: none"> <li>• This act, applies to an enterprise employing 20 or more persons, wherein the employer is required to pay a bonus to persons on the basis of profits or on the basis</li> </ul>	EA/ IA, contractors

Law/ Policy	Description/ Outline	Responsible Ministry/ Agency
	of production or productivity. The act was modified to include that a minimum bonus is paid by employer, despite suffering losses during the accounting year, which is currently 8.33% of the salary.	
• Payment of Gratuity Act of 1972	<ul style="list-style-type: none"> <li>• This act applies to all establishments employing 10 or more workers. Gratuity is payable to the employee if he or she resigns or retires. The Indian government mandates that this payment be at the rate of 15 days salary of the employee for each completed year of service subject to a maximum of Rs. 1,000,000.</li> <li>• Extends payment of gratuity to employees engaged in factories, mines, oilfields, ports, plantations, shops or other establishments and for matters connected therewith or incidental thereto.</li> </ul>	EA/ IA, Contractors

*Source: Compiled by JICA Survey Team (2016) based on information from respective acts*

### **7.1.2 Institutions Relevant to Environmental and Social Considerations**

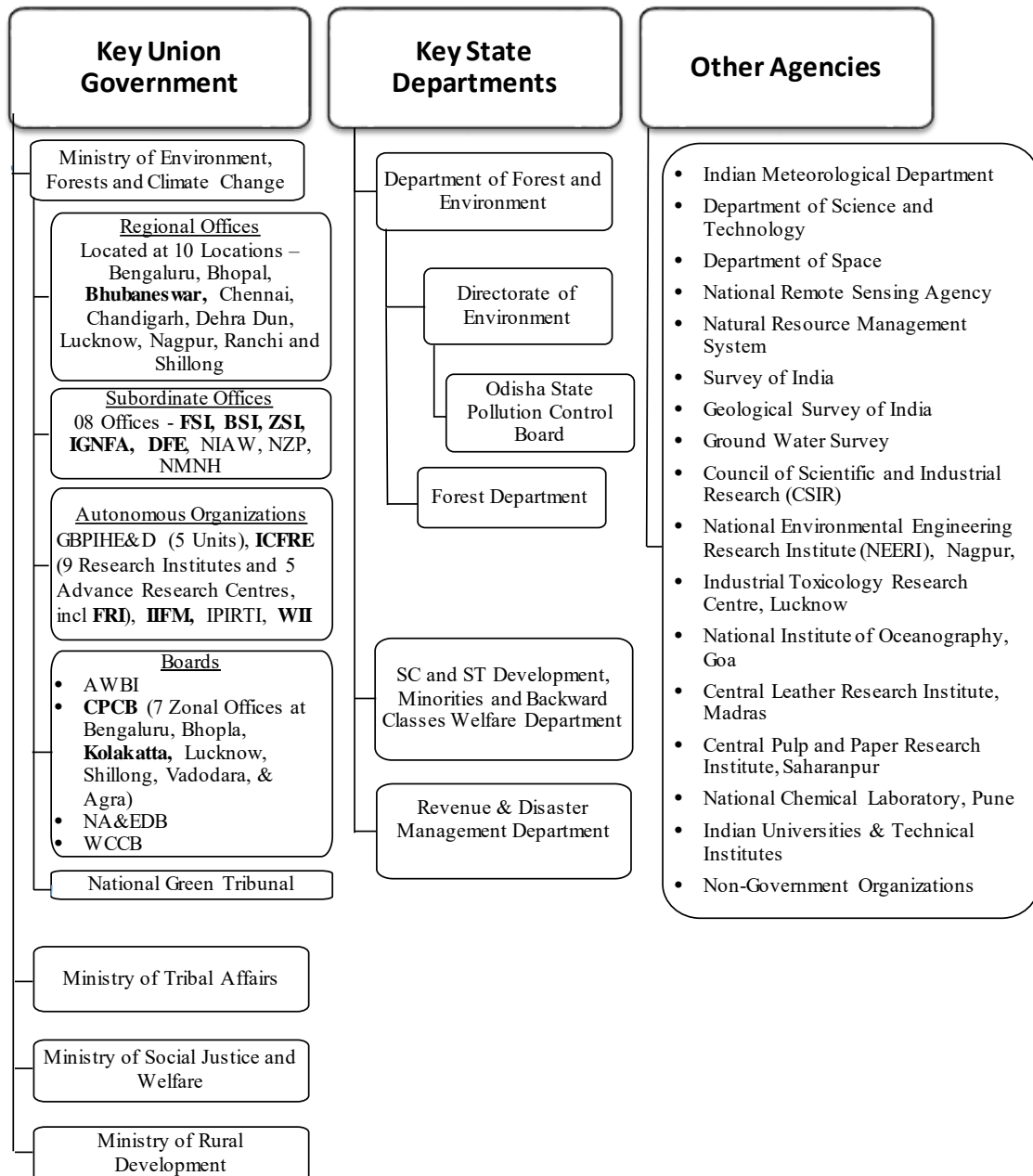
India has a vast network of environmental management, monitoring and surveillance institutions. The Ministry of Environment, Forests and Climate Change (MoEF&CC: renamed from ‘Ministry of Environment and Forests’ on 28-May-2014)<sup>4</sup>, Government of India is the highest body and central ministry in the country for regulating and ensuring environmental protection including planning, promotion, co-ordination and supervision of implementation of India's environmental and forestry policies and programs. The MoEF&CC including the Pollution Control Boards (CPCB: Central Pollution Control Board at the Union level and SPCBs: State Pollution Control Boards at the state level) together form the regulatory and administrative core of the sector.

**Figure 7.1.1** provides a generic overview of the major institutions involved in the environment and social considerations in the country.

The major institutions related to environment and social considerations at Union level as well as Odisha State level are depicted in **Attachment 7.1.2** along with their major roles and responsibilities.

<sup>4</sup> MoEF&CC initiated the Environmental Information System (ENVIS) in 1982 as a Plan Scheme for environmental information collection, collation, storage, retrieval and dissemination to policy planners, decision makers, scientists and environmentalists, researchers, academicians and other stakeholders. The Government has a network of 10 centers, concentrating on different sectors such as pollution control, toxic chemicals, energy and coastal ecology.





**Legend**

- FSI - Forest Survey of India,
- BSI - Botanical Survey of India,
- ZSI - Zoological Survey of India,
- IGNFA - Indira Gandhi National Forest Academy,
- DFE - Directorate of Forest Education,
- NIAW - National Institute of Animal Welfare,
- NZP - National Zoological Park,
- NMNH - National Museum of Natural History
- GBPIHE&D - Govind Ballabh Pant Institute of Himalayan Environment & Development
- ICFRE - Indian Council of Forestry Research and Education
- IIFM - Indian Institute of Forest Management
- IPIRTI - Indian Plywood Industries Research and Training Institute
- WII - Wildlife Institute of India
- AWBI - Animal Welfare Board of India
- CPCB - Central Pollution Control Board
- NAEDB - National Afforestation and Eco-Development Board
- WCCB - Wildlife Crime Control Bureau

Source: Created by JICA Supplemental Survey based on existing information

**Figure 7.1.1 Major Institutions involved in the environment and social considerations**

**7.1.3 Environmental Impact Assessment – Environmental Clearance**

In accordance with the relevant regulations in India, the proposed Project does not require Environmental Impact Assessment (EIA) studies or environmental clearance. This section describes overall EIA system, procedures and requirements in India.

## 1) EIA System and Requirements

In India, EIA started, in 1976, to examine the river valley projects from the environmental angle. Thereafter, EIA was introduced as an administrative measure in 1978 initially for river valley projects and thereafter industrial projects were also included in its ambit. Under the regulations of the Environment Protection Act 1986, EIA was not a prerequisite; the decision to grant environmental clearance (EC) was based on the discretion of the Ministry of Environment and Forest. EIA was a requirement only for large projects (also called mega projects), which were usually government undertakings. As a result, the system lacked an independent review process. Subsequently, on 27th of January 1994, EIA notification, under the Environmental (Protection) Act (1986), was issued, which made the process of EIA a “statutory requirement” rather than an “administrative requirement” for a number of projects/activities likely to have significant environmental impacts and health implications. Thereafter, the EIA notification has undergone several amendments, whereby the provisions for conducting “Public Hearing” has been incorporated, and several important projects/activities have been brought into the ambit of EIA, thus requiring an “Environmental Clearance” by MoEF&CC. The EIA Notification 2006 was issued with further improvements in the EIA procedure. In the draft notification (19<sup>th</sup> January, 2009), revised “threshold criteria”<sup>5</sup> have been introduced for different project categories. Further, an effort has also been made to make EIA procedure more transparent and to provide societal vigil of projects affecting the environment through “Public Hearing/ Consultation” by moving the environment protection agenda into public domain.

Different projects/ developmental activities have been divided into 8 major categories<sup>6</sup> requiring “Environmental Clearance” (EC) either from the Central Government (MoEF&CC) or at State Level from State Environmental Impact Assessment Authority (SEIAA). All projects and activities are broadly categorized into two categories - Category A and Category B, based on the size/scale of the concerned projects as well as spatial extent of potential impacts and potential impacts on human health and natural and man-made resources. The detailed stages prior to environmental clearance are highlighted below.

**Category ‘A’** projects/ development activities necessarily have to carry-out EIA studies along with conducting the “Public Hearing” as per the procedure stipulated in the notification, and the environmental clearance is needed from the Central Government or MoEF&CC.

**Category ‘B’** projects goes to the state authority as mentioned in EIA notification 2006 and decentralized procedure is done. The Government of India has constituted the State Expert Appraisal Committee (SEAC) and State Environmental Impact Assessment Authority (SEIAA) committee for decentralized procedure of environmental clearance. The category ‘B’ projects are further divided into category ‘B1’ (projects that require submitting an EIA report) and ‘B2’ project activities which don’t require EIA report.<sup>7</sup>

**Attachment 7.1.3** provides a list of projects or activities requiring prior environmental clearance.

## 2) Stages and Flow in EIA for Environmental Clearance

The Stages in the environmental clearance procedure as per EIA notification 2006 is described in **Table 7.1.4** and **Figure 7.1.2**. For convenience, stages of EIA have been divided into the following 6 stages in this report.

- |              |                            |
|--------------|----------------------------|
| 1. Screening | 4. Public Consultation     |
| 2. Scoping   | 5. Environmental Clearance |
| 3. EIA Study | 6. Monitoring Clearance    |

<sup>5</sup> Categories with threshold limit as described in Attachment 7.1.3.

<sup>6</sup> 1) mining, extraction of natural resources and power generation, 2) primary processing, 3) material production, 4) material processing, 5) manufacturing/ fabrication, 6) service sectors, 7) physical infrastructure including environmental services, and 8) building/construction projects/ area development projects

<sup>7</sup> EIA Notification 2006 and <http://www.sciencebeing.com/2012/10/eia-notification-and-its-implementation-in-india/>

**Attachment 7.1.4** provides details of stages in the environmental clearance as per the EIA Notification 2006. All details of environmental clearance application, public hearing details for upcoming and ToR approved, state wise is updated on the website of MoEF&CC.

**Table 7.1.4 Stages in Environmental Clearance Procedure as per EIA Notification 2006**

Stages in EIA	Actors	Project Proponent	IAA/ MOEF&CC	Consultant	SPCB	Public/ NGO
<b>1.Screening</b>		2)Decides the type of project after guidance by a consultant	4)Provides site clearance, if required	1)Guides the proponent in the initial screening	3)Provides site clearance	Not involved
<b>2.Scoping</b>		1)Provides Terms of Reference (optional)	3)Provides guidance if proponent requires	2)Establish if an EIA study is required	Not involved	Not involved
<b>3.EIA Study</b>		Conduct EIA studies	Not involved	Conduct EIA Studies	Not involved	Not involved
<b>3.1.EIA Studies</b>						
<b>3.2EIA Report</b>		1)Submit EIA report to SPCB	Not involved	1)Assist the proponent	2)Arrange for public hearing	3)Have access to Executive Summary
<b>4.Public Consultation</b>		3)Obligated to respond to issues raised during the hearing	Not involved	3)Assist the Proponent	1)Hold the Public Hearing and forward NOC and Minutes to MoEF& CC	2)Can provide oral/ written comments
<b>5.Environmental Clearance</b>		1)Submit EIA report to MoEF&CC	2)Reviews the project and accords clearance	3)Clarify queries from MOEF&CC	Not involved	Not involved
<b>6.Monitoring Clearance</b>		1)To adhere to the clearance conditions	2)To monitor progress	1)To assist Proponent	2)To monitor progress	Not involved

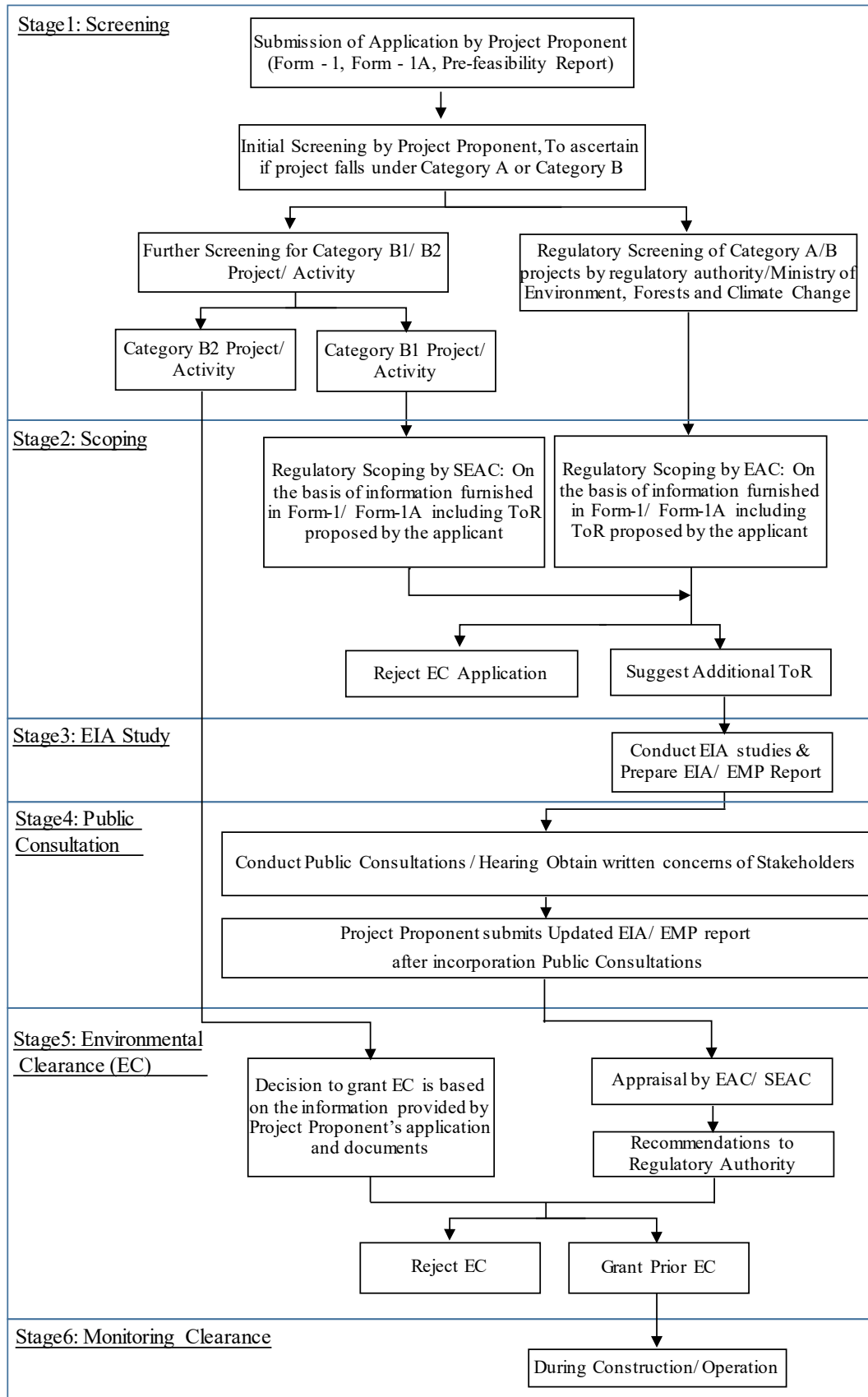
**Note:** IAA = Impact Assessment Authority; SPCB = State Pollution Control Board; NGO = Non-governmental Organization

\*The National Environment appellate authority is not included in this table as they come into picture only if there is any appeal against the Environmental Clearance

Numbers (i.e.” 1)” to “4”) indicated in the table describe indicative sequences of actions to be taken at the respective stages.

Source: *Compiled by JICA Survey Team (2016) based on information from*

*[http://shodhganga.inflibnet.ac.in/bitstream/10603/25724/11/11\\_chapter\\_03.pdf](http://shodhganga.inflibnet.ac.in/bitstream/10603/25724/11/11_chapter_03.pdf)*



Source: Compiled by JICA Survey Team (2016) based on information from EIA Notification 2016  
**Figure 7.1.2 Flow for Environmental Clearance Procedure as per EIA Notification 2006**

### 3) Forest Clearance Process

The proposed Project does not require any forest clearances, but, the general process of the forest clearance is described below for information.

Forest clearance from the statutory authority will be required if forest area is to be diverted for the project (including, notified roadside plantations). For this purpose, application is submitted to the state government, which in turn recommends the case to MoEF&CC:

- Up to 5 ha clearance issued by Regional Office (RO) of MoEF&CC
- 5 to 40 ha processed by RO, approved by MoEF&CC
- 40 ha processed and approved by MoEF&CC

The applicant is required to submit the following documents while submitting his application:

- Summary report of the Project
- Map showing required forest land, boundary of adjoining forests (1:50,000)
- Cost of project
- Justification for locating the project in forest area
- Cost benefit analysis (not applicable up to 20 ha in plains and 5 ha in hills)
- Employment likely to be generated
- Purpose wise breakup of total land required
- Details of displacement of people
- Requirement of Environmental Clearance
- Undertaking to bear the costs of Compensatory Afforestation (CA)
- DGPS map of the area under diversion and of the areas identified for CA

The process of forest clearance consists of 2 stages:, first stage clearance and second stage clearance.

In the first stage clearance, the application could be granted “In Principle Approval”, or it could be subject to fulfilment of conditions, if applicable, which could include: deposition of net present value of forest (@ INR. 4.38 to 10.43 lakhs/ha), money for compensatory afforestation, plantation of at least double the no. of trees felled, submission of a Plan for afforestation, certificate of compliance under FRA, etc. During this phase, no activity will be allowed until final clearance accorded and the state can stipulate additional conditions. <sup>8</sup>

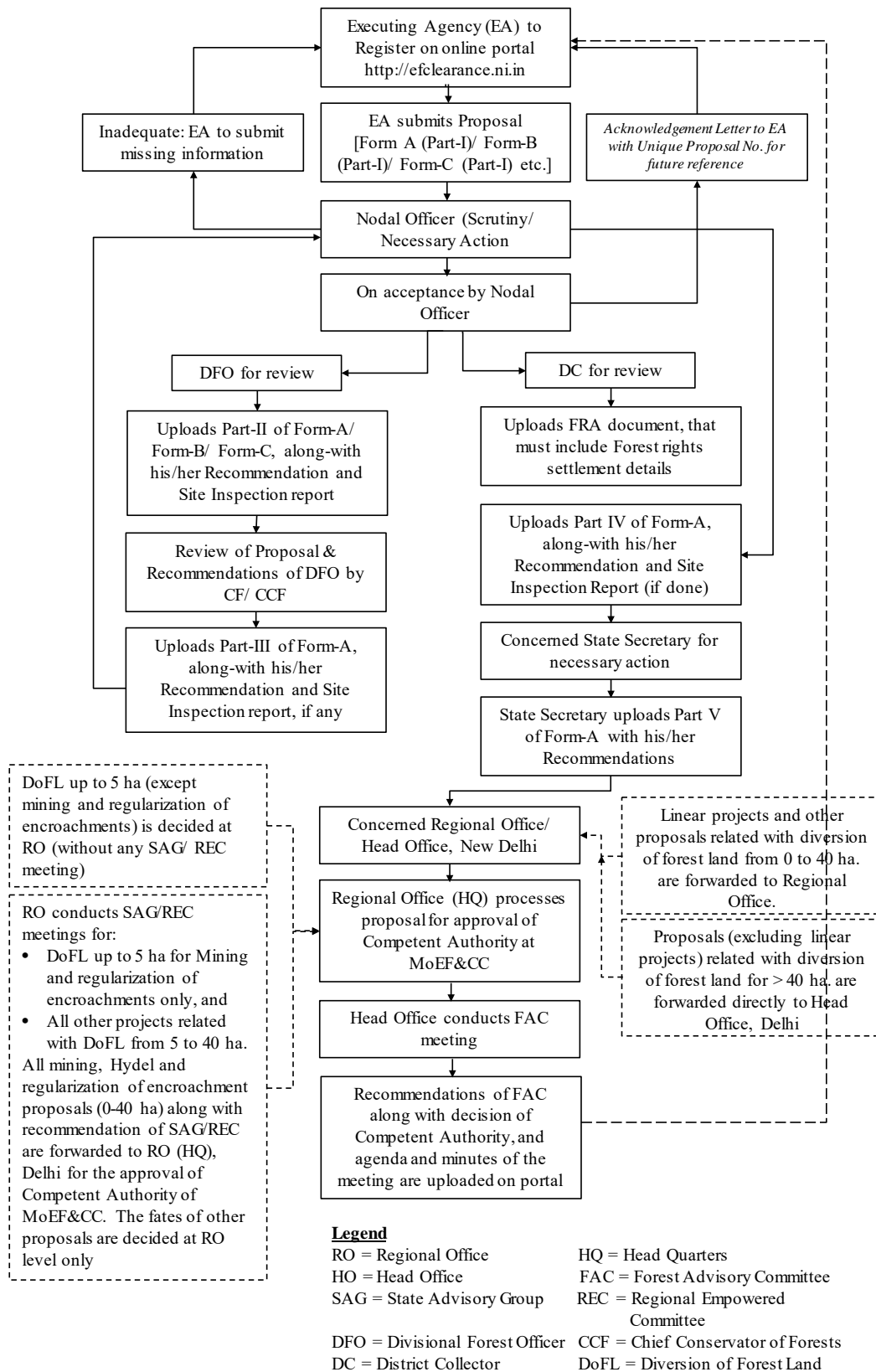
In the second stage clearance process, it will be ensured if the conditions prescribed have been fulfilled. The applicant will submit the following documents, if applicable, among others if required:

- Proof of depositing amount for compensatory afforestation
- Proof of depositing amount for net present value
- Proof of depositing amount for meeting other conditions - roadside plantations, compensation for damage/ dismantling of assets, etc.
- Undertakings for compliance on other generic and specific conditions
- Certificate from the district collector(s) on settlement of all rights under the Forest Rights Act, 2006

**Figure 7.1.3** depicts the process of forest clearance.

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<sup>8</sup> Source: [http://www.teriuniversity.ac.in/mct/pdf/new/environment/Infrastructure\\_development\\_and\\_environment.pdf](http://www.teriuniversity.ac.in/mct/pdf/new/environment/Infrastructure_development_and_environment.pdf)



Source: Compiled by JICA Survey Team (2016) based on information from MoEF&CC web-site <http://www.moef.gov.in/citizen/specinfo/forflow.html>

**Figure 7.1.3 Flow diagram depicting Forest Clearance process**

#### **4) Online Submission & Monitoring of Environmental, Forests and Wildlife Clearance (OSMEFWC) Portal**

Since the proposed Project does not require any environmental as well forest clearances, the online submission is also not required. The general process of the online submission for the environmental, forest and wildlife clearance is described hereunder.

To bring about more transparency and accountability in the process of environment, forests and wildlife clearances, the MoEF&CC has rolled out an “Online Submission & Monitoring of Environmental, Forests and Wildlife Clearance (OSMEFWC)” web-based portal for online submission and monitoring of proposals submitted by user agencies for seeking forests, environment and wildlife clearances. It automates the entire tracking of proposals which includes online submissions of a new proposal, editing/updating the details of proposals and displays status of the proposals and displays status of the proposals at each stage of the workflow.

User agencies can register through this link (<http://efclearance.nic.in>) and thereafter, project details can be submitted along-with all required documents, such as ToR, form 1, form 1A, etc. After submission, the system sends an email, to the user agency, with an acknowledgement letter containing unique proposal number, project sector, and other details, which may be used for future references.<sup>9</sup>

#### **7.1.4 Land Acquisition and Involuntarily Resettlement**

The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 [No. 30 of 2013] dated 26th September 2013 (hereinafter shall be referred to and read as “TRFCTLARR Act 2013”) and subsequent Rules adopted by the State of Odisha shall be the basis of elucidating the process of land acquisition and thereafter its compensation, and extending rehabilitation and resettlement assistance to the project affected families. The processes involved in land acquisition and involuntary settlement are depicted in **Figure 7.1.4** and **Figure 7.1.5** respectively.

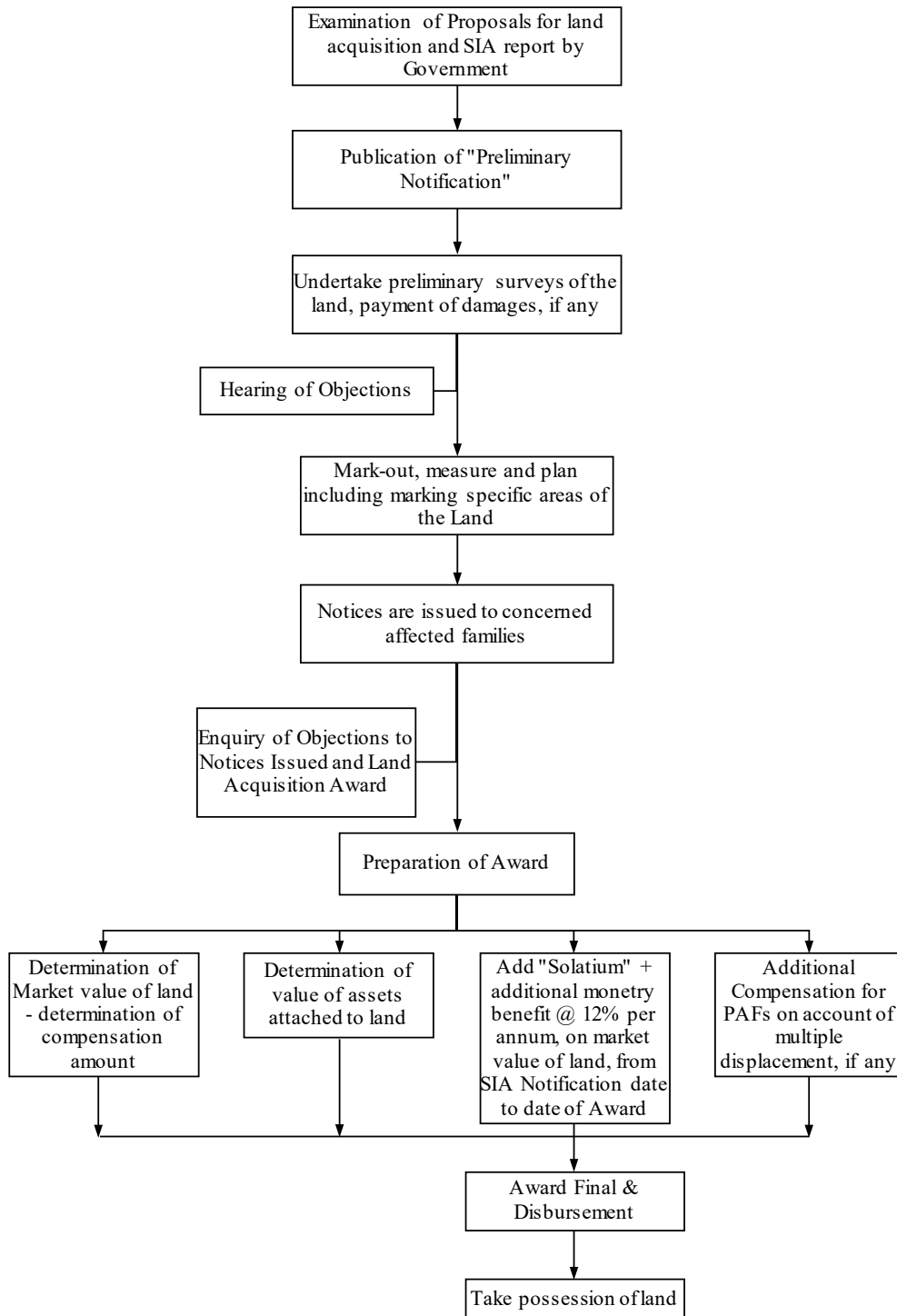
“TRFCTLARR Act 2013 ensures, a humane, participative, informed and transparent process for land acquisition for the purpose of industrialization, development of essential infrastructural facilities and urbanization, which is in consultation with the local self-government institutions and Gram Sabhas established under the Constitution. It further ensures least disturbance to the owners of the land and other affected families and provide a just and fair compensation to the affected families whose land has been acquired or proposed to be acquired or are affected by such acquisition and make adequate provisions for such affected persons for their rehabilitation and resettlement and for ensuring that the cumulative outcome of compulsory acquisition should be that affected persons become partners in development leading to an improvement in their post-acquisition social and economic status and for matters connected therewith”.<sup>10</sup>

**Attachment 7.1.5** provides details of requirements and systems related to land acquisition and involuntarily resettlement.

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<sup>9</sup> Source: [http://forestsclearance.nic.in/writereaddata/FAC\\_Agenda/User\\_Manual\\_UA.pdf](http://forestsclearance.nic.in/writereaddata/FAC_Agenda/User_Manual_UA.pdf)

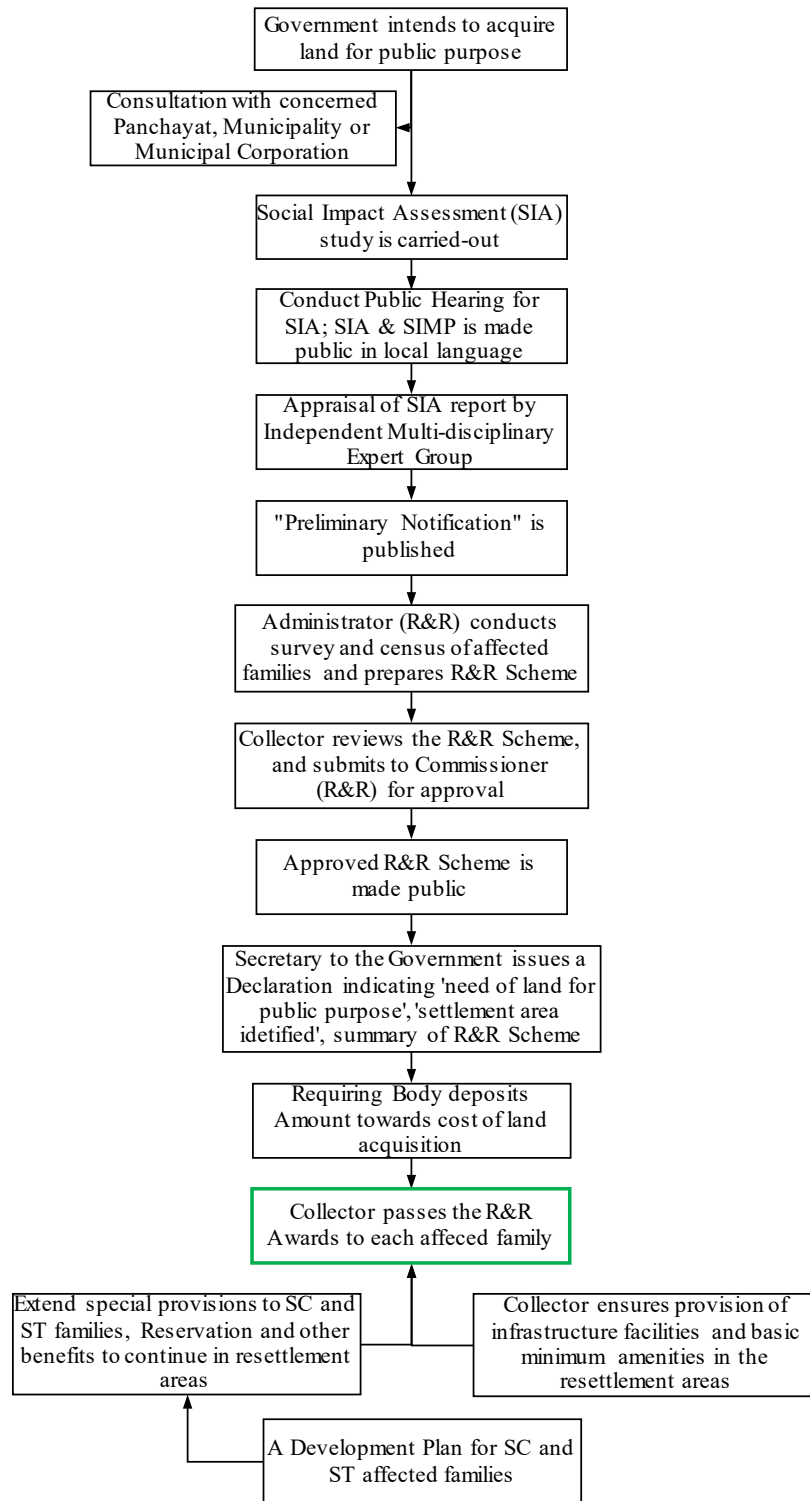
<sup>10</sup> The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 [No. 30 of 2013] dated 26th September 2013



Source: Compiled by JICA Survey Team (2016) based on information from TRFCTLARR Act 2013 and subsequent Rules

**Figure 7.1.4 Flow Diagram for Land Acquisition Process**





Source: Compiled by JICA Survey Team (2016) based on information from TRFCTLARR Act 2013 and subsequent Rules

**Figure 7.1.5 Flow diagram for Resettlement and Rehabilitation**

## 7.2 Draft Environmental and Social Management System Framework of the Project

### 7.2.1 Project Description and Draft Scoping Matrix

#### 1) Project Summary

The outline of the proposed Odisha Forestry Sector Development Project II (OFSDP-II) as per the DPR is described in **Table 6.1.1**.

#### 2) Draft Scoping Matrix for the Overall Project

As per the EIA Notification 2006 and subsequent amendments, forestry projects do not require EIA studies or environmental clearance from the MoEF&CC; the determined schedule does not include forestry projects for EIA.

As per the JICA Environmental and Social Guideline, the concerned projects need to prepare environmental check list for their appraisal. Though the Project design is not finalized at the time of the preparation of this report, a draft environmental checklist of the Project is prepared by the JICA Survey Team and shown in **Attachment 7.2.1**.

The purpose of scoping is to identify the potential environmental and social impacts caused by the project based on available secondary data and information, and preliminary site reconnaissance. This serves to prioritize subjects to be studied further in the Environmental and Social Considerations (ESC) study.

At first glance, the proposed OFSDP-II does not seem to have any deleterious impacts on the environment or the communities living in the forests. Nonetheless, it is anticipated that a few activities associated with a few sub-programs/ sub-project under the proposed Project may cause concerns in varying degree to the environment or communities.

In order to assess likely significant environmental and social impacts, conceivable adverse environmental and social impacts by the Project were preliminary identified based on the available Project description and overall environmental and social conditions in the surrounding area. The impacts of pollution, natural environment, social environment were classified as A to D in accordance with the following criteria;

- |                                                                       |                                 |
|-----------------------------------------------------------------------|---------------------------------|
| 1) A-: Significant Negative Impact                                    | A+: Significant Positive Impact |
| 2) B-: Some Negative Impact                                           | B+: Some Positive Impact        |
| 3) C: Impacts are not clear, need more investigation                  |                                 |
| 4) D: No Impacts or Impacts are negligible, no further study required |                                 |

The environmental and social impact assessment was conducted according to the scoping matrixes below for the impacts classified as A to D.

Tentatively, the scoping evaluation has been done for the following three project phases.

- 1) Pre-construction/ preparatory phase (Pre-CP),
- 2) Construction phase (CP),
- 3) Operation phase (OP),

**Table 7.2.1** shows preliminary results of scoping for pollution, natural environment, social environment, health and safety, and emergency risks, in pre-construction, during construction, and operation phases for the overall Project.

**Table 7.2.1 Preliminary Results of Scoping for Environmental and Social Impact Assessment**

Category	Impact Item	Evaluation			Reasons for Evaluation
		Pre-Construction Phase (Pre-CP)	Construction Phase (CP)	Operation Phase(OP)	
Pollution	Air Pollution	D	C	C	<b>Pre-CP:</b> During this phase, there is no significant impact to be considered because there is no activity to cause air pollution. <b>CP:</b> Not significant but emission of exhaust gas from operation of construction equipment, machinery, and vehicles and dust generation from construction/demolition activities such as vehicles movement in/out of the site, loading and unloading of construction materials and excavated soils, and demolition of old structures are anticipated to rise. <b>OP:</b> There is a possibility of air pollution due to increase in vehicular movement during execution of the Project.
	Water Pollution	D	B-	B-	<b>Pre-CP:</b> During this phase, there is no significant impact to be considered because there is no activity to cause water pollution <b>CP:</b> Soil erosion, construction runoff and drainage, oil spills, sewage effluent and domestic wastewater are possible water pollution sources. <b>OP:</b> There is possibility of water pollution in the surround water due to inadequate usages of fertilisers /pesticides for certain project activities. However, no significant serious impacts to water quality by the Project are predicted.. There may be some small-scale manufacturing facilities introduced by the project. However, associated effluent and effect on water sources/supply will be nil or negligible
	Solid Waste	D	B-	D	<b>Pre-CP/OP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Both non-hazardous and hazardous solid waste from land excavation, and constructions of building structures is anticipated to rise.
	Soil Contamination	D	C	C	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP &amp; OP:</b> No impacts are foreseen, but there is possibility of soil contamination due to inadequate usages of fertilisers /pesticides for certain project activities. Also there is possibility on soil contamination in case of .accidental spillage and oil leakage from machineries or oil storage facility.
	Noise and Vibration	D	B-	D	<b>Pre-CP &amp; OP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Noise and vibration from operation of construction machinery and on-site vehicles are anticipated.
	Ground Subsidence	D	D	D	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/ OP:</b> Excavation work and intake of underground water that cause subsidence are not anticipated.
	Offensive Odor	D	D	D	No significant impact is anticipated.
Natural Environment	Protected Area	D	B+	B+	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/ OP:</b> Even though national park and sanctuaries are included in the project area, all the proposed interventions are aimed at promoting sustainable/ scientific management of selected protected areas that would contribute to environmental conservation of the area. Thus certain positive impacts are anticipated from the Project.
	Flora and Fauna Ecosystem	D	B+/B-	B+/B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/OS:</b> Interventions are aimed at conservation and sustainable/ scientific management which contribute to improve flora and fauna. Therefore, positive impacts are anticipated. However, there are possibilities of negative impacts in case of inadequate construction activities and operation activities such as over usage of natural resources and damages caused by fires, planting of non-native species, etc.
	Hydrology	D	B+/B-	C	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> The Project has generally positive impacts on surrounding hydrology due to improvement of degraded forests including activities such as soil and moisture conservation (SMC) measures. Significant impacts to damage the hydrological cycle or regimes are not anticipated expect for negative impacts which may arise from inadequate construction activities. <b>OP:</b> No significant impact is anticipated. However, surface water and ground water wherever available will be used for watering purpose at nurseries and plantation sites. Therefore there are possibilities of adverse impacts when inadequate water usages are done

Category	Impact Item	Evaluation			Reasons for Evaluation
		Pre-Construction Phase (Pre-CP)	Construction Phase (CP)	Operation Phase(OP)	
	Topography and Geography	D	D	D	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Some soil erosion is anticipated during the construction of infrastructure facilities and other installations, preparing for soil conservation measures, plantation works. However, it is anticipated that this would be minimal and would not pose any major concerns. <b>OP:</b> There may be possibilities of erosions at forest treatment areas due to changes of drainage patterns, but anticipated impacts will be minimal.
	Management of Abandoned Sites	D	B+	B+	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/OP:</b> The Project contribute to improve forest/ tree covers. Therefore positive impacts are anticipated at degraded forest areas.
Social Environment	Involuntary Resettlement and Land Acquisition	D	D	D	The Project area is basically notified forest areas. Though settlements exist inside the proposed project area, resettlement associated with the Project is not anticipated.
	Local Economy (e.g., employment and livelihood)	D	B+	B+/B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Job opportunity for local people will be provided in some extent during construction phase. <b>OP:</b> Positive impacts are anticipated through increase the supply of wood fuel for domestic use, small timber for rural housing, fodder for livestock, and NTFP for local industries. The Project is expected to provide jobs for the unskilled workers and raise the standards of living and improve the quality of life of the rural communities. On the other hand, there may be possibilities for loss of customary/ traditional knowledge as communities are trained in formal forest management approaches, loss of customary land/ resources access and use, increased development induced dependence.
	Poor People	D	B+	B+/B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated, <b>CP:</b> Job opportunities may be enhanced at construction phase that lead the poor to increase their earnings. <b>OP:</b> Similar positive/ negative impacts indicated in the above "local economy" are anticipated.
	Indigenous and Ethnic People	D	B+	B+/B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Job opportunities may be enhanced at construction phase that lead the indigenous and ethnic people to increase their earnings. <b>OP:</b> Similar positive/ negative impacts indicated in the above "local economy" are anticipated.
	Land Use and Local Resources	D	D	B+	<b>Pre-CP/ CP:</b> During this phase, no significant impact is anticipated. <b>OP:</b> Land-use in the project area is not likely to change; however, the degraded forest areas and their resource are anticipated to be improved The population that is living in and around these forest areas depend on the forests for various resources, such as fuel-wood, fodder, NTFP, and other forest produce. The proposed is anticipated to provide for these resources through its various interventions.
	Water Usage	D	C	C	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/OP:</b> It is necessary to confirm water usage conditions especially for forest plantation and nursery activities
	Existing Social Infrastructures and Services	D	C	C	<b>Pre-CP:</b> During this phase, social infrastructure is not likely to be disturbed or relocated <b>CP:</b> There may be increases in traffic congestions and pollutions (air, noise, vibration) due to construction and traffic. <b>OP:</b> There may be positive impacts by the provision of proper services and infrastructure (e.g., road development). Also there may be possibilities of disturbance/ relocation of existing social infrastructure due to the Project.
	Uneven Distribution of Benefit and Damage	D	C	C	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/ OP:</b> Though no significant impact is anticipated, it is necessary to confirm uneven distribution of harm and benefit, especially at operation stage, as some would receive benefits from the project, while others may not benefit to that extent or may even get affected negatively.

Category	Impact Item	Evaluation			Reasons for Evaluation
		Pre-Construction Phase (Pre-CP)	Construction Phase (CP)	Operation Phase (OP)	
	Conflict of Interests within the Region	D	D	C	This Project will not induce any significant impact of conflict of interests within the region. However, there may be possibilities of a particular group's rights over its Common/ Community Property Resources (CPRs) may be curtailed and used by another groups from within/outside the community under this Project.
	Cultural Heritage	C	D	D	No significant impact to be anticipated, though there may be archeological, historical, cultural, and religious heritage sites within the Project area. In case sacred groves and other tribal cultural important sites are within the Project area, such sites shall be either avoided from the Project or introducing interventions related to conservation of such sites.
	Landscape	D	D	B+	<b>Pre-CP/CP:</b> During this phase, no significant impact is anticipated. <b>OP:</b> Improvement of forest cover and forest resources through the Project may increase the natural beauty of the landscape.
	Gender Discrimination	D	D	B+	The Project will not induce any significant adverse impact of gender discrimination.
	Children's Right	D	D	D	The Project will not induce any significant adverse impact to children's right. Child labourers to be excluded in the Project.
Health and Safety	Occupational Health and Safety	D	B-	B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/ OP:</b> Impacts on occupational health and safety during construction and plantation establishment/ maintenance works may occur if appropriate measures to ensure occupational health and safety will not be taken.
	Community Health and Safety	D	B-	B+/B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Impact on community health and safety (e.g. traffic safety, pedestrians' accidents by construction activities) may occur if appropriate measures to ensure community health and safety will not be taken. <b>OP:</b> There may be increases in negative impacts (e.g. traffic hazard, ambient air pollution by vehicles, water pollution, hazardous wastes, health risk, etc.) if efficient mitigation measures and considerations are not applied. Also there may be positive impacts (e.g. easier access to urban areas, health related facilities by the Project), if improved facilities and services by the Project will be available for general public so that it can contribute to community health care.
	Risks for infectious disease such as AIDS/HIV	D	C	D	<b>Pre-CP/OP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> There may be risks of infectious diseases by influx of workers.
	Accident	C	B-	B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated, but it is necessary to confirm accident risks during this stage. <b>DC:</b> There may be risks in increase of traffic accidents and construction site accidents. <b>OP:</b> There may be risks in increase of traffic accidents due to increase of river/ road traffic.
Emergency Risk	Flood Risk and Other Natural Disaster	D	B-	B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Risks such as heavy rain, cyclone, and tsunami which affect construction and forest treatment areas are anticipated with a fixed probability. <b>OP:</b> Risks such as heavy rain, cyclone, and tsunami which affect established infrastructure or disrupt implementation of activities are anticipated with a fixed probability.
	Risk for Fire	D	B-	B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Risk for fire is expected with a fixed probability. <b>OP:</b> Risk for fire is expected with a fixed probability.
Others	Climate Change	D	D	B+	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>DC:</b> Gas emission will be temporary and limited to the Project area thus significant impact to global climate change is not anticipated. <b>OS:</b> Certain positive impact due to forest restoration and carbon sequestration is anticipated

**Evaluation:** A-: Significant Negative Impact                                      A+: Significant Positive Impact  
 B-: Some Negative Impact                                                              B+: Some Positive Impact  
 C: Impacts are not clear, need more investigation  
 D: No Impacts or Impacts are negligible, no further study required

Source: Compiled by JICA Survey Team (2016)

### **7.2.2 Draft Environmental and Social Management System Framework for the Project**

As per the JICA Environmental and Social Guideline, the concerned projects need to prepare environmental check list for their appraisal. In addition to the draft environmental checklist of the Project (**Attachment 7.2.1**), a draft environmental and social management system (ESMS) check list is prepared by the JICA Survey Team and shown in **Attachment 7.2.2**.

The composition of the draft ESMSF prepared during the Survey is listed below and described in **Attachment 7.2.3**.

1. Salient Features of ESMSF
2. Summary of the Project
3. Environmental and Social Safeguard Policies of JICA
4. Clarifying Definitions and selection of safeguard frameworks
5. Target Groups of ESMSF
6. Existing Environmental and Social Management System
7. Environmental and Social Risks and Mitigation Measures.
8. Framework and Procedures/ Detail Procedures of ESMSF
9. Capacity Development Requirements for ESMSF Implementation.

If sub-projects which require the Environmental Management Plan (EMP) and the Environmental Monitoring Plan (EMoP) are identified, EMP/and EMoP should be prepared accordingly. For reference purposes, indicative EMP and EMoP as well as draft monitoring forms are attached in the draft ESMSF.

## **7.3 Draft Indigenous Peoples Plan Framework of the Project**

### **7.3.1 Indigenous Peoples Planning Framework**

The 'Indigenous Peoples Planning Framework (IPPF)' is devised for some projects that involve the preparation and implementation of annual investment programs or multiple sub-projects. In such cases, the 'screening' indicates that Indigenous Peoples are likely to be present in the project area, or have collective attachment to the project area; however, neither their presence nor their collective attachment can be determined until the programs or sub-projects are identified. In such circumstances the EA/ IA prepares an IPPF, which provides for the screening and review of these programs or sub-projects, that is coherent with the "World Bank OP 4.10 – Indigenous Peoples, Annex C - Indigenous Peoples Planning Framework"; the EA/ IA integrates the IPPF into the project design.

The IPPF seeks to ensure that indigenous people and tribal communities in the project area are informed, consulted, and mobilized to participate in the sub-project preparation and execution. This Framework is intended to guide selection and preparation of additional sub-projects under the Project to ensure better distribution of project benefits and promote development of Indigenous Peoples (IPs) in the project area. In cases where impacts on IPs are identified, this framework will be applied during preparation of additional subprojects, in accordance with the ESC of JICA.

The IPPF is based on the overall local and national development strategies and ESC. The main objectives are: (i) to ensure indigenous peoples affected by any additional project will receive culturally appropriate social and economic benefits from the project, (ii) to ensure that indigenous peoples participate in the entire process for the preparation, implementation and monitoring of project activities, and (iii) do not suffer any adverse impacts as a result of the project or sub-programs.

### 7.3.2 Overviews of Indigenous, Tribal, and Forest Dwellers

#### 1) Scheduled Castes, Scheduled Tribes and Other Backward Class in Odisha

The Scheduled Castes (SCs) and Scheduled Tribes (STs) are official designations given to various groups of historically disadvantaged indigenous people in India. The terms are recognized in the Constitution of India and the various groups are designated in one or other of the categories. The Scheduled Caste category, during the British rule in the Indian sub-continent, was known as the Depressed Classes. In the present day context, the Scheduled Castes are sometimes referred to as Adi Dravida or Dalits. On the other hand, the term Scheduled Tribes is used as an official term for Adivasis. Other Backward Class (OBC) is a collective term used by the Government of India to classify castes which are socially and educationally disadvantaged; the Constitution of India describes OBCs as "socially and educationally backward classes".

The Scheduled Castes and Scheduled Tribes comprised about 16.6% and 8.6%, respectively, of India's population, as per the 2011 census. According to a survey carried-out by the National Sample Survey Organization (NSSO), reported in the Times of India edition (TNN, 01-Sep-2007<sup>11</sup>), has put the OBC population at 40.94%.

The State of Odisha occupies significant position in the country, as far as Scheduled Tribe (ST) and Scheduled Caste (SC) population are concerned; it has a high concentration of ST and SC population. As per the latest 2011 Census of India, the State ranked 3rd in terms of ST population whereas it was 11th in terms of SC population in the country. ST and SC together constitute about 40% of the State's Total Population (STs 22.85% and SCs 17.13%), which is shown in **Table 7.3.1**. "The State Government does not have any specific data about the number of people belonging to socially and educationally backward (SEBC) category in Odisha".<sup>12</sup>

**Table 7.3.1 Scheduled Tribe and Scheduled Caste Population in Odisha**

Parameter	Numbers	Percentage	Communities
<b>Total State Population</b>	41,974,218		
<b>Scheduled Tribes (ST)</b>	9,590,756	22.85 %	62
<b>Scheduled Caste (SC)</b>	7,188,463	17.14 %	93

Source: Compiled by JICA Survey Team (2016) based on <http://www.stscodisha.gov.in/Aboutus.asp?GL=abt&PL=1>

In exercise of powers conferred by sub-paragraph 6 of the Fifth Schedule to the Constitution of India, the revised Presidential Order titled "The Scheduled Areas (states of Bihar, Gujarat, Madhya Pradesh & Odisha) Order 1977" has declared the full districts of Odisha as Scheduled Areas of the state: namely, Mayurbhanj, Sundargarh, Koraput, Kuchinda tahasil of Sambalpur district, Keonjhar and Telkoi tahasils of Keonjhar sub-division and Champua and Barbil tahasils of Champua sub-division of Keonjhar district, Khondamal tahasil of sub-division Kondamals, Balliguda and G.Udayagiri tahasil of Balliguda sub-division of Khondamal district, R.Udaygiri tahasil, and Gumma and Rayagada blocks of Parlekhemundi tahasil in Parlekhemundi Sub-division and Suruda tahasil (excluding Gazalbadi and Gochha Gram Panchayats), of Ghumsur sub-division in Ganjam district, Thuamul Rampur of Kalahandi tahasil, and Lanjigarh block falling in Lanjigarh and Kalahandi tahasils in Bhawanipatna sub-division in Kalahandi district and Nilagiri CD Block of Nilgiri sub-division in Balasore district. After reorganization of districts in the state, 6 districts fully and 11 districts partly are covered under the scheduled areas of the state and the current districts involved are shown in **Table 7.3.2**.

<sup>11</sup> <http://timesofindia.indiatimes.com/india/OBCs-form-41-of-population-Survey/articleshow/2328117.cms>

<sup>12</sup> Conveyed in a written reply by Mr. Lal Bihari Himirika, Minister for ST and SC Development, in response to a question from Mr. Dilip Ray (BJP) during the monsoon session of the Assembly which concluded on Saturday, reported by The Indian Express, 03-Oct-2016

**Table 7.3.2 Scheduled Areas in Odisha**

District (1977)	Current District	Sub-Division	Tehsil	Block	Status
Mayurbhunj	Mayurbhunj	-	-	-	-
Sundargarh	Sundargarh	-	-	-	OFSDP-II
Koraput	Koraput	-	-	-	OFSDP-I
	Raigada				OFSDP-I-
	Nawarangpur				-
	Malkhangiri				-
Sambalpur	Sambalpur	-	Kuchinda	-	OFSDP-II
	Deogarh				OFSDP-I
Keonjhar	Keonjhar	Keonjhar	Keonjhar	-	OFSDP-I
			Telkoi	-	OFSDP-I
		Champua	Champua	-	OFSDP-I
			Barbil	-	OFSDP-I
Boudh Khondamals	Khondamal	Khondamal	-	OFSDP-I	
		Balliguda	-	OFSDP-I	
		G. Udaugiri	-	OFSDP-I	
	Bhoudh				OFSDP-II
Ganjam	Gajapati	Paralekhemundi	R. Udayagiri	-	OFSDP-I
			Paralekhemundi	Guma	OFSDP-I
	Ganjam	Ghumsur	Surada (excluding Gazalbadi and Gocha Gram Panchayat)	Rayagada	OFSDP-I
				-	OFSDP-I
Kalahandi	Kalahandi	Bhawanipatna	Kalahandi	Thuamul Rampur	OFSDP-II
			falling in Lanjigarh and Kalahandi	Lanjigarh	OFSDP-II
	Nuapada				
Balasore	Balasore	Nilgiri	Nilgiri	Nilgiri	OFSDP-I
	Bhadrak				OFSDP-I

Note The Scheduled area in the State of Orissa was originally specified by the Scheduled Areas (Part A States) Order, 1950 (Constitution Order, 9) dated 23.1.1950 and the Scheduled Areas (Part B States) Order, 1950, (Constitution Order, 26) dated 7.12.1950 and has been re-specified as above by the Scheduled Areas (States of Bihar Gujarat, Madhya Pradesh and Orissa) Order, 1977, (Constitution Order, 109) dated 31.12.1977 after rescinding the Orders cited earlier in so far as they related to the State of Orissa.

Source: Compiled by JICA Survey Team (2016) based on information indicated at the Note.

### **The Scheduled Caste (SC):**

The Indian society, according to the Hindu beliefs assigns individuals a certain hierarchical status through its caste system. Traditionally, there are four main castes (that are further sub-divided into many sub-categories); however, one category of the society falls outside the caste system, and occupy the lowest rank in the ritual hierarchy of Indian society. This group was suffering from extreme social, educational and economic backwardness arising out of age-old practice of un-touchability, lack of infrastructure facilities and geographical isolation, and thus needed special consideration for safeguarding their interests and to accelerate their socio-economic development. These communities were notified as the SCs as per provisions contained in Clause 1 of Articles 341 and 342 of the Constitution of India and have been defined under clause 24 of Article 366 of the Constitution of India.

Within the SC community, there are many sub-divisions or sub-castes. Dalits are divided into leather workers, street sweepers, cobblers, agricultural workers, and manual "scavengers". Throughout the country, about 3/4 of the scheduled caste workforce is engaged in the agricultural sector. Moreover, these jobs rarely provide enough income for sustenance or provide education to their children, resulting they are impoverished, uneducated and illiterate, socially oppressed, culturally subjugated, and politically marginalized.<sup>13</sup>

<sup>13</sup> <http://navsarjan.org/navsarjan/dalits/whoaredalits>; <http://www.ncsc.nic.in/pages/view/73/68-introduction>; The Constitution of India



### **The Scheduled Tribe (ST):**

The Tribal peoples of Odisha are known as Adivasi (aborigine), Vanabasi (forest dweller) and Girijana (mountain dweller), and together constitute 22.13% of the population of the Odisha. The Government of India has notified 62 endogamous tribal groups of Orissa as Scheduled Tribes (refer **Attachment 7.3.1**). Further, the Government of India has classified and declared certain tribal groups as Primitive Tribal Groups (PTGs) on the basis of their low level of literacy, pre-agricultural level of technology and declining or stagnant; there are 13 PTGs (**Table 7.3.3**) in Odisha. The Primitive Tribal Group subsequently has been re-designated as “Particularly Vulnerable Tribal Groups”.

**Table 7.3.3 Primitive Tribal Groups in Odisha**

No	Name of Primitive Tribal Groups
1	Birhor
2	Bondo Poraja
3	Didayi
4	Dongria Khond
5	Juang
6	Kharia
7	Kutia Khond
8	Lanjia Soura
9	Lodha
10	Mankidia
11	Paudi Bhuyan
12	The Soura and
13	Chuktia Bhunjia

Source: Abhaya Narayan Nayak, *Primitive Tribal Groups of Orissa: An Evaluation of Census Data, 2007*

PTGs essentially sustain by food-gathering and hunting, comprise of a very small population size, possess pre-agricultural level of technology and mostly are pre-literate. Therefore, in the new strategy of development, they have been treated as a separate group and termed as Primitive Tribal Group in the 5th plan (1974-78) period. Thus, on the basis of acculturation, occupation, retention of tradition and geographical distribution, the tribal peoples of Odisha are divided into (i) general tribe and (ii) primitive tribe.<sup>14</sup> Based on the techno-economic base, the PTGs of Odisha can be divided into the following categories (**Table 7.3.4**):

**Table 7.3.4 Techno-Economic Stages of Primitive Tribal Groups in Odisha**

Techno-economic Stages	Name of Primitive Tribal Groups
Hunter – Gatherer	Birhor, Mankirdia, Hill-Kharia
Shifting cultivation	Bonda, Didayi, Dongeria Kondh, Kutia Kondh, Juang, Lanjia Saora, Paudi Bhuyan, Saora
Terrace cultivation	Saora, Lanjia Saora
Settled cultivation	Lodha, Chuktia Bhunjia

Source: [http://fra.org.in/document/FRA%20AND%20PTG\\_%20Final.pdf](http://fra.org.in/document/FRA%20AND%20PTG_%20Final.pdf)

Further, the PTGs are classified on the basis of their habitat, and present days districts/ block they occupy (**Table 7.3.5**).

<sup>14</sup> Abhaya Narayan Nayak, *Primitive Tribal Groups of Orissa: An Evaluation of Census Data*, Census Data Dissemination Workshop on “Status of Scheduled Castes and Scheduled Tribes in Orissa (Community Wise): Census 2001” organized by Directorate of Census Operations, Orissa and SC ST Research and Training Institute, Govt. of Orissa, at Bhubaneswar on 29 August, 2007

**Table 7.3.5 Major Habitats of Primitive Tribal Groups in Odisha**

No.	PTG Name	Habitat	District	Possible Presence in Project Area
1.	Bonda	Autochthones of Bonda Hills	Malkangiri	No
2.	Dongria kondh	Autochthones of Niyamgiri hill ranges	Rayagada	Yes
3.	Juang	Autochthones of sacred Gonasika hills	Keonjhar	Yes
4.	Chutkia Bhunja	Inhabitants of Sonabera Plateau	Nuapada	No
5.	Hill Kharia	Inhabitants of Similipal hills	Mayurbhunj	Yes
6.	Kutia Kondh	Inhabitants of Belghar – Lanjigarh highlands	Phulbani & Kalahandi	Yes
7.	Lanjia Saora & Saora	Inhabitants of highlands of Rayagada, Gajapati and Ganjam	Rayagada, Gajapati, Ganjam	Yes
8.	Paudi Bhuyan	Inhabitants of Bhuyan Pirh	Keonjhar, Sundergarh, Dhenkanal	Yes
9.	Lodha	Inhabitantan of Suliapada and Moroda Blocks	Mayurbhunj	Yes
10.	Didayi	Small hill tribe of Malkangiri	Malkangiri	No
11.	Mankirdia and Birhor	Tribe wandering in Similipal hills	Keonjhar and Mayurbhanj	Yes

Source: [http://fra.org.in/document/FRA%20AND%20PTG\\_%20Final.pdf](http://fra.org.in/document/FRA%20AND%20PTG_%20Final.pdf)

### **The Other Backward Classes (OBCs)**

The OBC is a collective term used by the Government of India to classify castes which are socially and educationally disadvantaged. According to a survey carried-out by the National Sample Survey Organization (NSSO), OBC population is reckoned at about 41% [Source: Reported in the Times of India edition TNN, 01-Sep-2007].

### **2) ST/SC, and OBC in Project Areas**

The project area is comprised of 33 forest divisions spread over 24 districts: namely, Mayurbhunj, Sambalpur, Subarnapur, Dhenkanal, Sundargarh, Bolangir, Boudh, Ganjam, Jhasuguda, Bargarh, Cuttack, Angul, Nayagarh, Kalahandi, Jagatsinghpur, Kendrapada, Deogarh, Keonjhar, Gajapati, Balasore, Bhadrak, Rayagada, Koraput and Kandamal. The total population in the prioritized project area is approximately 33.75 million, which is about 80.4% of the total population of the state. The STs and SCs population comprise about 24% and 17%, respectively of the population of in the prioritized project area. Compared to the total population of the State, the STs and SCs in the prioritized project area comprise 19.24% and 13.66% respectively.

The distribution of ST and SC populations in the forest divisions selected as the priority areas under the OFSDP – II is depicted in **Table 7.3.6**. the total population residing in the priority forest divisions reckons about 22.5 million. Of this population, about 17% is tribal while about 29% belong to the scheduled caste communities.

**Table 7.3.6 ST and SC Population at Forest Divisions of Prioritized Project Area**

No.	Forest Divisions	Population	SC Population		ST Population	
			No.	%	No.	%
1	Baripada Division	1,429,106	108,813	7.61	834,620	58.4
2	Karanja Division	323,293	20,345	6.29	214,368	66.31
3	Rairangpur Division	596,063	36,335	6.1	399,205	66.97
4	Sambalpur	462,373	111,519	24.12	150,911	32.64
5	Dhenkanal Division	1,086,387	216,519	19.93	157,402	14.49
6	Sundargarh Division	600,308	66,967	11.16	367,582	61.23
7	Subarnapur	1,077,609	230,188	21.36	180,146	16.72
8	Boudh Division	420,738	99,438	23.63	54,867	13.04
9	Ghumusar North Division	270,100	63,587	23.54	19,476	7.21
10	Jhasuguda	220,332	43,713	19.84	95,852	43.5
11	Baragarh Division	1,362,155	276,642	20.31	273,902	20.11

No.	Forest Divisions	Population	SC Population		ST Population	
			No.	%	No.	%
12	Athgarh Division	526,303	94,962	18.04	36,540	6.94
13	Athamallik Division	218,373	34,127	15.63	48,090	22.02
14	Nayagarh Division	729,326	109,049	14.95	45,646	6.26
15	Kalahandi North Division	674,788	120,060	17.79	193,040	28.61
16	Bolangiri	779,139	133,893	17.18	199,939	25.66
17	Rairakhol Division	215,035	40,777	18.96	36,267	16.87
18	Ghumusar South Division	884,407	166,181	18.79	34,687	3.92
19	Rajnagar WL	1,539,911	328,381	21.32	8,977	0.58
20	Bamara WL	261,115	34,364	13.16	149,969	57.43
21	Hiarakud WL	142,047	27,281	19.21	46,508	32.74
22	Deogarh Division	290,130	48,246	16.63	104,956	36.18
23	Keonjhar Division	1,023,385	83,197	8.13	578,155	56.49
24	Angul Division	661,947	136,520	20.62	58,528	8.84
25	Deogarh Division	129,806	19,968	15.38	50,892	39.21
26	Parlakhemundi Division	523,664	30,067	5.74	311,934	59.57
27	Roulkela Division	554,631	34,105	6.15	368,640	66.47
28	Balasore WL	2,093,447	451,692	21.58	258,492	12.35
29	Bhadrak WL	1,342,264	318,823	23.75	26,980	2.01
30	Rayagada Division	865,610	123,977	14.32	528,019	61
31	Jeypore Division	552,815	87,060	15.75	297,938	53.89
32	Phulbani Division	350,618	69,952	19.95	193,133	55.08
33	Bonai Division	323,223	24,339	7.53	219,122	67.79
Total		22,530,448	3,791,087	16.83	6,544,783	29.05

Source: Compiled by JICA Survey Team (2016) based on information from Census of India 2011

The district-wise SC/ST populations as well as breakdowns of forest division-wise SC/ST populations in the prioritized project area are described in **Attachment 7.3.2**.

### 7.3.3 Definition of Indigenous People and the Target of the Project

#### 1) WB OP 4.10

There is no widely accepted definition of indigenous peoples. The World Bank's official position is that "because of the varied and changing contexts in which Indigenous Peoples live and because there is no universally accepted definition of Indigenous Peoples, this policy does not define the term. Indigenous Peoples may be referred to in different countries by such terms as 'indigenous ethnic minorities,' 'aboriginals,' 'hill tribes,' 'minority nationalities,' 'scheduled tribes,' or 'tribal groups' (Operational Policy 4.10)."

However, the OP 4.10 describes Indigenous People in a generic sense to refer to a distinct, vulnerable, social and cultural group possessing the following characteristics in varying degrees:

- self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
- collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories
- customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
- an indigenous language, often different from the official language of the country or region.

Though the term "Indigenous Peoples" is not clearly defined in the Constitution and other relevant laws/ regulations of India, the ST appears to be more in the line with the "Indigenous Peoples"

described in the World Bank's generic definitions. However, degrees of social, cultural, ethnical, linguistically, institutional and geographical distinctions fluctuate among STs.

The tribal communities/ ST of Odisha, especially in the prioritized project divisions, based on their origins and habitat, have been known by various names: namely, *Adimajati* (primitive castes), *Janajati* (folk communities), *Girijana* (hill folk), *Vanajati* (forest dwellers), etc. Tribal communities differ from all others in many respects, their distinctive characteristics being clan organization and territorial exogamy, classless social structure, youth dormitory, colorful rituals and folk art, music and dance. Odisha has 62 tribal groups in various stages of economic and social development, of which, 13 have been classified as primitive tribal groups (**Section 7.3.2**).

Linguistically, these tribal communities belong to three major language groups, namely Dravidian Austric/ Munda and Indo-Aryan. Their literature is in general based on oral traditions comprising of songs, tales, myths, proverbs, riddles and invocations.

Their society is organized on the basis of kinship and they accept inheritance and authority through the male lineage. The rites of passage comprise birth, puberty, marriage and death, and these stages of life play a very important role in tribal society for which initiation and training are provided carefully. The system of marriage followed by these groups throws light on the evolution of the system and practices like winning of the bride by capture, purchase, service to the parent, elopement and negotiation. Over a period of time, negotiation as a system for marriage has become preferred. Bride-price is paid in various forms, but with modernization the system of dowry has become in-vogue.

The village headman, the priest, the shaman, and the haruspex, who has the ability to gaze into the stars and foretell the future, constituted the governing elite of the village. This council deals with inter-village disputes and other matters pertaining to the village as an entity; decisions are accepted and implemented successfully. However, this traditional system is now under stress owing to the introduction of the modern Panchayat system that is disturbing and dislocating the ancient ways of life.

The tribal communities of Odisha have many socio-economic similarities and they are distinguished from the more complex and advanced societies; they have remained outside the main historical current of civilization for centuries. Considering the general features of their eco-system, traditional economy, supernatural beliefs and practices, and recent impacts of modernization, the tribes of Odisha (Orissa) can be classified into six types: hunting, collecting and gathering type, cattle-herder type, simple artisan type, hill and shifting cultivation type, settled agriculture type, and industrial urban worker type. Each type has a distinct style of life which can be best understood in the paradigm of nature, man and spirit complex: namely., their relationship with nature, fellow men and the supernatural.

They are religious and believe in the super-natural; practicing religions like animism, animalism, nature-worship, fetishism, shamanism, anthropomorphism and ancestor-worship. Religion is the resultant of traditions and beliefs that have been passed-down from ancient times. Like the Hindus, the tribal communities are also polytheists; they believe in a supreme deity, who is believed to be the creator of the world and under whom there are a number of gods and goddesses. The communities depend on the village priests to please and appease their gods at the time of sickness, epidemics or even for good crop harvests and healthy livestock good progeny. Other community rites, ancestral rites, occult practices are decided upon by the village priest. The influence of Christian and Hindu religions has seen tribal communities celebrate Christian festivals like Easter, Good Friday and Christmas, and Hindu festivals like Raja, Gamha Pumima, Durga Puja and Laxmi Puja and the worship of Lord Jagannath (originally a Savara deity), Shiva and Parvati.

Art and crafts are a medium for continuity of tribal culture. These are simple yet artistic, comprising of baskets, head dresses, textiles, combs, necklaces, bangles, earrings and articles with artistic specialty for use by tribal communities.

Modernization is yet to touch these people in many respects, but it has not been successful in uprooting them from their simple, deeply cohesive patterns of life, which is so natural to them. However, should these communities be involved in the process of modernization, it has to be done in a sensitive and

participative manner, which has been carefully thought about and such approaches need to be made that will not produce cultural disorientation.<sup>15</sup>

## 2) The Forest (Recognition of Rights) Act 2006

The Forest (Recognition of Rights) Act 2006 defines “the Forest Dwelling Scheduled Tribes and the Other Traditional Forest Dwellers” as members or communities who primarily reside in and who depend on the forests or forest lands for bona fide livelihood needs (Section 2 Part c of the Act). It is noteworthy to mention that the term “Forest Dweller” has a specific meaning in the context of the Indian forest legislation.

## 3) Project Definition

In consideration of the World Bank’s OP 4.10, the Forest (Recognition of Rights) Act 2006, and the Indian/ Odisha contexts, the following categories of people who will be affected by project activities to be regarded as the target of IPPF for the Project.

- Scheduled Tribes (ST)
- Scheduled Castes (SC)
- Other Backward Classes (OBC) minorities
- Forest Dwellers and Other Forest Dependents

Basically, so called “Indigenous Peoples” as per the World Bank’s definition (i.e. STs), “Forest Dwellers” as per the Forest (Recognition of Rights) Act 2006, and other forest dependents are included since the proposed Project will be mainly implemented in the forest areas through community institutions which by nature are the forest dependent communities/institutions.

As the four categories of groups indicated above, the proposed Project regards both tribal and non-tribal communities who reside within and on the fringes of the forest areas to be the target of the IPPF as long as such people/communities are categorised in one of four target groups indicated above. Since the targets of IPPF for the Project are not only “Indigenous Peoples” but also “Forest Dwellers/ Dependents”, hereafter, the term “Scheduled Tribes and Forest Dependents Planning Framework (STFDPF)<sup>16</sup>” will be adopted instead of the “Indigenous Peoples Plan Framework (IPPF)”. For the preparation of STFDPF, in principle, STFDPF follows formats and requirements outlined in the World Bank’s OP 4.10 Annex C.

### 7.3.4 Legal and Policy Framework for Indigenous People/ Forest Dependents

#### 1) JICA

The ESC categorically states that in case there is any potential adverse impact of the project on the indigenous peoples, the activities should be avoided altogether if it is proven unfeasible. Contrarily, effective mitigations measures must be taken to minimize impacts and to compensate indigenous peoples for their losses. The measures must be prepared as an indigenous peoples plan that will be in line with the relevant laws and ordinances of the host country. Whilst preparing the indigenous peoples plan, FPIC and consultations must be made with the affected indigenous peoples in a manner, and language that are understandable to the people concerned. Further, it is desirable that the indigenous peoples plan include the elements laid out in the World Bank Safeguard Policy, OP4.10, Annex B.

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<sup>15</sup> Sources: <http://www.orissatourism.org/tribal-culture-of-orissa.html>; [http://www.indianetzone.com/9/tribes\\_orissa.htm](http://www.indianetzone.com/9/tribes_orissa.htm); [http://orissadiary.com/orissa\\_profile/tribal/index.asp](http://orissadiary.com/orissa_profile/tribal/index.asp); <http://www.orissa.gov.in/people/tribe/tribehome.htm>

<sup>16</sup> Tentatively adopted “Forest Dependents” to avoid unnecessary confusions and complications with the “Forest Dwellers” as per the Forest (Recognition of Rights) Act 2006.

## 2) Union/ State

The “Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006” recognizes and bestows forest rights and occupation in the forest land to the ST and other traditional forest dwellers (OTFDs), who have been living in the forests for generations. The Act provides a framework to record their rights and the nature of evidence required for such a recognition in respect of forest land. The Act confers on the forest dwelling ST and OTFDs with the responsibility and authority for sustainable use, conservation of biodiversity and maintenance of ecological balance, strengthening the conservation regime, and ensuring livelihood and food security.

The “Orissa Village Forest Rules, 1985” was enacted by the Government of Odisha, that recommended a Management Plan for every village forest and sought co-operation of the community for protection of these forests. In 1988, Thereafter the State Government had passed a resolution, in 1988 and formally introduced a Scheme for protection of peripheral Reserve Forest areas with the participation of adjoining villagers by forming Village Level Forest Protection Committees; the scope of this resolution was further extended in 1990 to include the Protected Forests as well. In order to make the forest people interface, more effective and transparent, the Government of Orissa in Forest & Environment Department issued a resolution dated 3.7.1993. This resolution dealt in a fairly exhaustive manner on the involvement of all local communities in protection of adjoining forests, formation of Van Samrakhyana Samiti (VSS: Joint Forest Management Committee), duties and responsibilities of the V.S.S. and their Executive Committees and the role of Forest Department and Gram Panchayats, preparation of Joint Forest Management plan, usufructory benefits for the VSS and provisions of MOU and related issues. Subsequently another Government resolution dated 30 September, 1996 tried to confer specific rights in favour of the Village Committees in respect of various products.

### 7.3.5 Draft Scheduled Tribes and Forest Dependents Plan Framework for the Project

The composition of the draft STFDPF prepared during the Survey is listed below and described in **Attachment 7.3.3**.

1. Definition of “Scheduled Tribes and Forest Dwellers” as “Indigenous People” and as Target of STFDPF
2. Safeguard Policies of JICA on ST and Forest Dependents
3. Legal and Policy Framework for ST and Forest Dependents
4. Environmental and Social Risks and Mitigation Measures
5. Framework and Procedures/ Detail Procedures of STFDPF
6. Capacity Development

## Chapter 8. PROPOSED INSTITUTIONAL FRAMEWORK AND RECOMMENDATIONS

### 8.1 Overview of Organizational Setup for Project Implementation

#### 8.1.1 Approach to Institutional Arrangement – Society Mode

The logical approach for the Project's institutional arrangement flows from the project goals, purpose/objectives and activities to be implemented. For efficient management of any time-bound project, an autonomous and dedicated administrative set-up is of paramount importance, otherwise desired results may not be satisfactorily achieved within given timeframe and thereby resources or may take a longer time, and thus implementation may also suffer delays. In this context, the "Society mode" will be adopted for OFSDP-II. This approach allows to make the fund flows more efficient and for timely submission of reimbursement claims as per JICA's loan policy, and to give adequate authority the personnel who are directly made responsible for managing the project activities.

If the Project is to be implemented in "departmental mode", seeking project funds by way of state budgetary provisions may provide less flexibility to Odisha Forest Department (OFD) to utilize or adjust fund allocations as per project requirements, and government treasury system needs to be followed for payments that usually require longer time to complete financial transactions.

The Societies Registration Act, 1860 is legislation in India which allows the registration of entities, generally for literary, scientific, charitable etc. purposes, and are given autonomy under the provisions of the Act to exercise authorities and function within overall framework of the government systems.

Based on lessons from completed and on-going JICA assisted forestry projects in the country that have been implemented adopting the society mode approach, and also considering the organisational structure of the OFSDP-I, institutional arrangements for OFSDP-II are being proposed with some modifications to the Society mode adopted during OFSDP-I. This delegation of power and authority will ensure the project management to take timely decisions, plan, execute and facilitate processes as envisaged.

#### 8.1.2 OFSDS Engagement for OFSDP-II

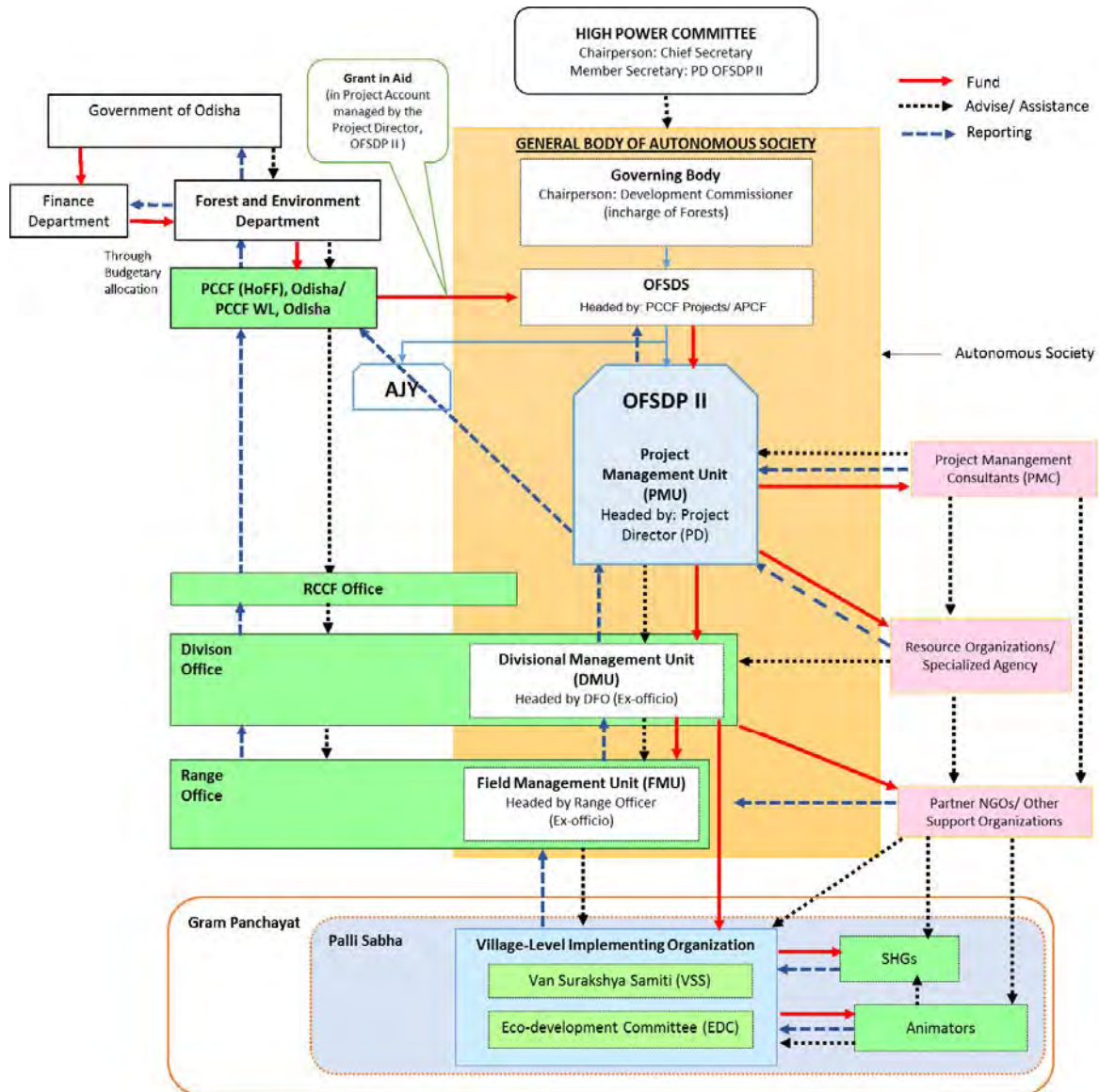
The current status and engagement of the Odisha Forestry Sector Development Society (OFSDS) are described in **Section 3.2** of this report.

Within the OFSDS, Project Management Unit (PMU) would be established to exclusively manage the JICA assisted OFSDP-II project. As per the Memorandum of Association (MOA) of the Society, Project Director (PD) of the project is Ex-officio Chief Executive Officer (CEO) of the Society.

#### 8.1.3 Proposed Institutional Arrangement for OFSDP II

The proposed arrangement is evolved from institutional framework of OFSDP-I and considers the requirements of the OFSDP-II as well. The institutional arrangements for OFSDP-II has been worked out within OFSDS that is still functioning after completion of OFSDP-I, out of which the CATP, programme is suspended due to non provision of programme fund. For implementation of the AJY dedicated officers are in position for smooth implementation of the scheme.

The figure below shows the detailed institutional arrangement envisaged for the implementation of the Project. Overview of the roles and responsibilities of various institutions within the arrangements is given in **Attachment 8.1.1**.



Source: JICA Survey Team (2016)

**Figure 8.1.1: Institutional Arrangements for OFSDP-II**

The Project Management Unit (PMU) of OFSDP-II would be made responsible to manage, coordinate, implement and monitor the activities. The PMU will exclusively work to implement proposed project activities following the project implementation schedule, annual plan of operations and envisaged processes.

The High Power Committee (HPC) created for OFSDP-I will continue to act as the state government level highest decision-making body for the OFSDP-II, but with considering the objectives and components of the Project secretaries from some key departments are proposed to be additionally included to the present structure. The Governing Body (GB) and General Body of OFSDS, created earlier, would be the Society's internal highest decision-making body for OFSDP-II within OFSDS as per the Society Registration Act, 1860. Necessary amendments would be made to ensure efficient and smooth implementation of the project.

To support project implementation at the field level, PMU of OFSDP-II will create and coordinate with two set of offices, Divisional Management Units (DMUs) and Field Management Units (FMUs). These units will be created within the existing division and range offices respectively, and will operate within



their respective jurisdictions. PMU would evolve mechanisms for tracking the project implementation, reporting and fund flow, for the interventions where DMUs/ FMUs are not created.

Resources organizations would be engaged from time-to-time by PMU of OFSDP-II to support DMUs, while partner NGOs would be engaged to support FMUs and VSSs/ EDCs in field implementation. Village level institutions would also be supported by animators, to be identified by VSSs/ EDCs from within the respective project villages.

PMU will have a comprehensive Operation Manual that would prescribe guidelines, policies, protocols, procedures and rules on finance, accounting, administration, management for smooth implementation of the Project. The Operation Manual will include gender policy and checklist to ensure gender mainstreaming in the project. The Operation Manual will convey the internal policy of the PMU of OFSDP-II to manage the project and would be approved first by the GB and subsequently by HPC during first year of operations of the project prior to adoption.

OFD and OFSDS will enter into a formal arrangement to vest the project management responsibilities to society/ PMU of OFSDP-II, and after completion OFD would own the assets and institutions created under the project to further support and maintain under routine forest department functioning.

#### 8.1.4 Creation of PMU, DMUs and FMUs for OFSDP-II

Odisha Forest Department (OFD) being main executing agency would first receive funds from the state government for OFSDP II through annual budget provisions, and will also be committed to support project implementation through various offices located at state, region/circles, divisions, range etc. as per administrative structure of the department. Accordingly, the number of offices would be designated under the OFSDP-II, as being depicted in the following table:

**Table 8.1.2 The Number of Offices to be created in the Project**

Office Name	Level		Units to be created	Description
PMU	State		1	Registered Autonomous Society; already exists
DMU	Division	Territorial	12	Established within existing Divisional Office of FD; one in each project division
		Wildlife	2	
FMU	Range	Territorial	50	Established within existing Range Office of FD; one in each priority range
		Wildlife	1	

Source: JICA Survey Team (2016)

To justify proposed human resources support at each level, viz., PMU, DMU and FMU, the precondition for creating full-fledged DMUs will cover at least 75~150 VSSs/ EDCs per DMU, and similarly around 20~25 VSSs/EDCs must be covered per FMU, for creation of full-fledged FMUs. This would also implicate that each DMU should select at least three in a division for project works.

The proposed institutional arrangements for OFSDP-II is being compared with the institutional arrangements of OFSDP-I in the following table.

**Table 8.1.1 Comparison of Institutional Arrangements**

Key elements of Institutional Arrangements	OFSDP-I	OFSDP-II
Budgets – annual allocations	From state government through OFD to OFSDS/ PMU	Same process; separate project account to be opened by OFSDS to receive grant-in-aid for the OFSDP II. This account should be managed by the Project Director, OFSDP II.
High Power Committee (HPC)	11 nos.; Chairperson: Chief Secretary	15 nos.; Chairperson: Chief Secretary; proposed with changed composition;
Governing Body (GB)	7 nos.; Chairperson: Additional Chief Secretary-cum-APC	7 nos.; Chairperson: Development Commissioner (in-charge forestry sector); proposed with change; PD, OFSDP II to be included as member
Project Management Unit (PMU)	12 key positions	13 key positions; with changed nomenclature of positions;
Divisional Management Unit (DMU)	7 key positions	5 key positions; with changed nomenclature of positions
Field Management Unit	4~6 key positions;	5 key positions; with changed nomenclature

<b>Key elements of Institutional Arrangements</b>	<b>OFSDP-I</b>	<b>OFSDP-II</b>
(FMU)		of positions
Regional Chief Conservator Forest (RCCF)	Involved;	Roles and responsibilities of RCCF enhanced and well defined; project support extended for monitoring, supervision review and grievance redressal
District Advisory Committee (DAC)	Chairperson: Collector;	Will be constituted for the OFSDP-II Project by notification. Not proposed; existing institutions at state, district and block levels would be utilized and coordinated for inter-sectoral linkages
Resource Organizations/ Partner NGOs	Engaged;	Same; to be engaged at PMU/ DMU and FMU levels
PMC	Engaged;	Same; to be engaged at PMU level
VSS/ EDC	Engaged;	Same; to be engaged at village level
Animator	One Animator engaged;	2 nos.; one female and one male animator to be engaged at VSS/EDC level

*Source: JICA Survey Team (2016)*

## **8.2 Key Managerial Features of Institutional Arrangement**

The following are key managerial features to be adopted and adhered by PMU of OFSDP II/ OFSDS and OFD/ state to make the institutional arrangement effective, and to function within the framework of government systems.

### **1) Budgetary Provision**

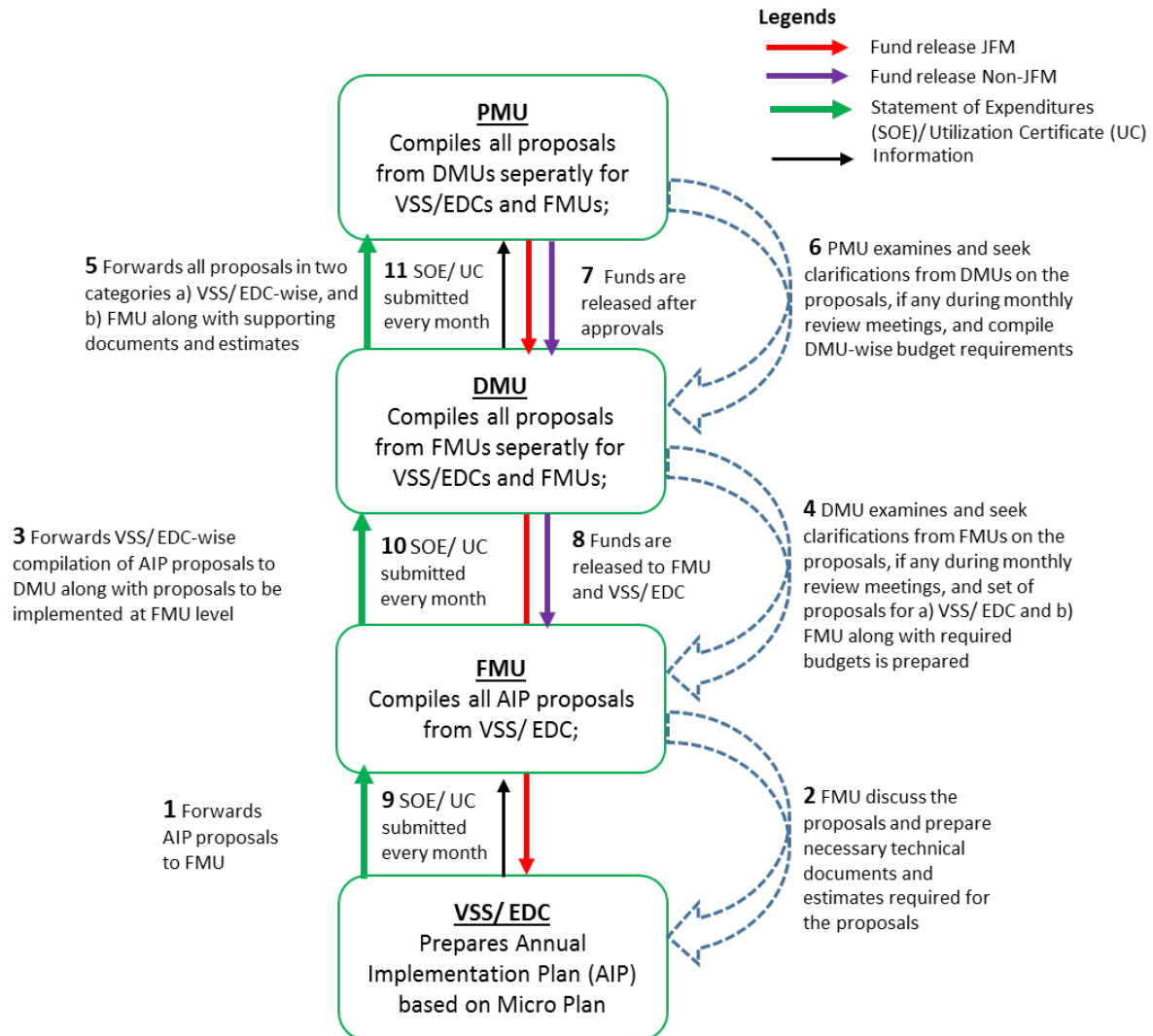
OFD will take all necessary steps to secure the funds flow i.e. the project cost including the state share, required for smooth implementation of the Project, which is crucial for smooth implementation of the Project. For this purpose, a sub-budget line will be created in the Forest and Environment Department by name of the project: viz., “Odisha Forestry Sector Development Project-II”.

### **2) Accounting Procedures**

The budget allocations will flow from the State Government to OFD to provide the funds without any delays to the Society as per the annual budget and plan approved by the GB and subsequently by the HPC. As per the institutional arrangement, the funds received by the OFD from the state will be allotted to OFSDS/ PMU of OFSDP-II as grants for each financial year and subsequently the PMU of OFSDP-II will further provide the funds to DMUs. OFSDS under no circumstances would divert fund received for Project for any other purpose.

OFSDS would open a bank account exclusively for OFSDP-II, and will be managed by the Project Director, OFSDP-II. The OFSDS would ensure to adopt a unified accounting procedure based on double accounting system at all levels i.e. PMU of OFSDP-II, DMUs and FMUs. OFSDS/ PMU of OFSDP-II would revisit accounting procedure and adopt it within first 6 months of its operation.

To receive OFSDP-II funds, DMUs, FMUs, and village implementing units viz., VSSs and EDCs would also operate separate bank account(s) in the nationalized banks for the purpose of the Project. The funds from the project account of PMU maintained for OFSDP-II will be electronically transferred to the designated bank accounts of DMUs as per annual plan of operation (APO) on monthly or quarterly basis following the guidelines and procedures documented in Operation Manual, and utilizing any of the available banking transaction options. DMUs would further provide the funds to FMUs, and VSSs/ EDCs without delays according to respective annual implementation plans (AIP) prepared considering the approved micro plans. Process of putting forward budget request, fund flow and submission of Statement of Expenditures (SOE)/ utilization certificates (UC) by various levels is depicted in the figure below.



Source: JICA Survey Team (2016)

**Figure 8.2.1 Budget Request, Fund Flow and submission of SOE/ Utilization Certificates**

### 3) Auditing

According to the existing financial procedure of the state government applicable to the state grants to any Society (like OFSDS) extended from the consolidated funds of state/ GOI are liable to Comptroller and Auditor General (CAG) audits. Thus, financial audits will be carried out for each financial year by the Comptroller and Auditor General (CAG). The Comptroller and Auditor General of India (CAG) derives his powers from the Constitution and the CAG's Duties, Powers and Conditions of Services (DPC) Act, 1971, and its subsequent amendments. Offices of the Accountants General in the states form the part of these formations.

Also, according to the Society Registration Act, a Society is required to have a statutory annual audit conducted by a Chartered Accountant (CA). Thus, annual statutory audits by CA would be carried out for the accounts of OFSDS/ PMU of OFSDP-II, DMUs, FMUs, VSSs and EDCs. To establish internal financial discipline and control, Internal/ Concurrent audits would also be conducted for accounts of PMU of OFSDP-II, DMUs and FMUs on quarterly or biannually basis.

#### **4) Compliances of General Financial Rules and General Rules of Business**

The JPD, Finance & Audit would be responsible for timely submission of Statement of Expenditures (SOEs) to JICA through Central Aids, Accounts and Audit Division (CAAA) under Ministry of Finance, Department of Economic Affairs (DEA) and Ministry of Environment, Forests and Climate Change (MoEF &CC), and to the state government. S/he will ensure better coordination with the state Finance Department for smooth project implementation, as well as with the CAAA, JICA and MoEF &CC for getting clearance on reimbursement claims in timely manner.

#### **5) Structural Integrity**

The basic purpose of creation of OFSDS in the year 2006 was for the implementation of the JICA assisted project, and thus there was, or is no intention of creating a dual administrative structure within the forestry sector in the state. The existing charges and authorities of OFD will remain intact regardless of the creation of OFSDS as autonomous Society. In case, the function of the OFSDS ceases after project completion, the assets/ infrastructure of OFSDP-I and OFSDP-II, and the community institutions (VSSs and EDCs) created under the OFSDP II will be transferred to OFD through provisions in its by-laws as well as following the Phase Out strategy agreed with the state government. This will ensure the organizational integrity of the OFSDS with OFD.

#### **6) Procurement**

Procurement of goods and services for the Project shall be implemented in accordance with “Guidelines for Procurement under Japanese ODA Loans” dated April 2012 and selection of consultants shall be in accordance with “Guidelines for Employment of Consultants under Japanese ODA Loans” dated April 2012. The PMU of OFSDP-II may make the use of the state procurement rules, but JICA’s guidelines shall overrule whenever such procurement rules are in conflict.

Quality and Cost based Selection (QCBS) method will be adopted by PMU that has the following stages of selection, viz., a) publication and invitation for Expression of Interest (EOI), b) screening of proposals and preparing short-list, c) inviting technical and financial proposals through Request for Proposal (RfP), d) technical evaluation of proposals, e) opening and evaluation of financial proposal based on the qualifying technical score, and f) inviting top ranked agency/ organization for negotiation based on the combined technical and finance score. Before, evaluation of technical proposals, sometimes presentation on the technical proposal is also requested by the Client, and accordingly reflected in the RfP.

The plan for procurement to be taken up during the first year of the project implementation has been suggested and indicated in the Project Implementation Plan. The procurement plan will be updated at least annually or as required, to reflect the actual project implementation needs and improvements in institutional capacity. Indicative procurement and implementation methods for OFSDP-II is summarised in **Attachment 8.2.1**.

As an austerity measure taken by the Odisha government, there is ban on purchase of new 4-wheel vehicles with effect from Mach 2001. Thus, in case vehicles are not procured, the allocations for purchase of vehicles could be utilized for hiring vehicles during the project implementation period.

### **8.3 Timeframe for Institutional Arrangement**

Soon after the pledge by the Government of Japan for the loan (expected to be in February 2017), the timeline agreed with JICA needs to be followed for efficient and smooth take-off of the project in terms of decision making, budgetary provisions and implementation. The indicative framework for the time bound action plan is given in the table below.

**Table 8.3.1 Indicative Time Bound Action Plan for Institutional Arrangements**

<b>Sl. No.</b>	<b>Action Required</b>	<b>Responsibility</b>	<b>Target Date (by when)</b>	<b>Indicator/ Remarks</b>
1.	Nomination of Project Director (PD)	State Govt.	February 2017	The present PD would be superannuating by start of next financial year
2.	Approval of MOA and By-laws	State Govt./ OFD/ OFSDS	February 2017	Government Orders /Notifications

Sl. No.	Action Required	Responsibility	Target Date (by when)	Indicator/ Remarks
3.	Constitution of HPC	State Govt.	March 2017	GO/ Amendments in Memorandum of Association (MOA) and By-laws of Society
4.	Constitution of GB	OFD/ OFSDS	March 2017	GO/ Amendments in Memorandum of Association (MOA) and By-laws of Society
5.	Deputation of staff to PMU as per institutional arrangements	State Govt./ OFD	April 2017	GO/ Office Order of FD
6.	Creation and deployment of staff at DMUs, FMUs as per MOU/ project's institutional arrangements	OFD	April 2017	GO/ Office Order of FD
7.	Instructions to concerned RCCF to supervise, monitor, review and assist DMUs	OFD	April 2017	GO/ Office Order of FD
8.	Operation Manual along with Finance & Accounting Procedures	OFSDS/ PMU of OFSDP-II	July 2017	Approval by HPC/Finance Department, and published
9.	Procurement of PMC	PMU of OFSDP-II	February 2018	Contract

Source: JICA Survey Team (2016)

#### 8.4 Details of Components of Institutional Setup for Project Implementation

##### 1) High Powered Committee (HPC)

High Powered Committee (HPC) was established within the State Government during implementation of the OFSDP-I, and forms the part of OFSDS created under the Society Registration Act, 1860 in year 2006 and having registration No.2321/49 of 2006-07.

HPC will act as the highest decision-making body for the OFSDP-II at the state level, wherein some modifications in its composition is suggested considering the components of the Project. If required, appropriate amendments in the Memorandum of Association (MOA) and Rules & Regulations of the OFSDS could be made. The composition of HPC is given in the following table:

**Table 8.4.1 Proposed Composition of High Powered Committee for OFSDP-II**

No.	Position	Designated Person	Remarks
1.	Chairperson	Chief Secretary	
2.	Vice-Chairperson	Development Commissioner (in-charge of forestry sector)	Proposed: earlier Additional Chief Secretary (ACS)-cum-Agriculture Production Commissioner (in-charge Forest), and this position is not filled now
3.	Member	Principal Secretary, Finance	
4.	Member	Principal Secretary, Forest & Environment	
5.	Member	Secretary Women & Child Welfare Department	Proposed
6.	Member	Principal Secretary, Health & Family Welfare	Proposed
7.	Member	Principal Secretary, Panchayati Raj	
8.	Member	Principal Secretary, Revenue & Disaster Management	
9.	Member	Principal Secretary, Rural Development	Proposed
10.	Member	Secretary Agriculture Department	Proposed
11.	Member	Principal Secretary, Tribal and SC/ ST Development	
12.	Member	PCCF (HOFF), Forest Department	
13.	Member	Chief Wildlife Warden/ PCCF (Wildlife), Forest Department	
14.	Member-Secretary	Project Director	

Source: JICA Survey Team (2016)

HPC will meet at least once in six months or more frequently if the situation arises, particularly during preparatory phase of the project. In case the members are not available on the day of the HPC meeting, they may nominate their representatives to the meetings, but not less than a senior rank officer in the Government of Odisha/ state department. As and when required, representatives of JICA, GOI/ MoEF & CC, Project Management Consultants (PMC) etc., may be invited to participate in the HPC meetings to share views or concerns in the interest of the project implementation as ‘Observers/ Special Invitees’ as and when felt necessary.

A minimum of eight members would form the quorum for the HPC meeting. Agenda of the meeting and Proposals should be circulated by the member-secretary well in advance to all members, at least seven days ahead of the meeting date. The proceedings of the HPC meetings should be circulated to all the members/ attendees within reasonable timeframe.

HPC will be responsible to facilitate coordination amongst various line departments of the state and other agencies to help achieving the project goals. Whenever necessary, HPC would give directions to PMU for ensuing smooth and efficient project implementation and will pursue the matters relating to policy with the state government, and also facilitate inter-departmental coordination and convergence.

The Operation Manual (including financial and accounting procedure) of the project, developed during OFSDP-I, will be revisited and revised in line with the OFSDP-II requirements. The Operation Manual for OFSDP-II will be approved by HPC, and adopted at all levels during project implementation. This Operation Manual for OFSDP-II could be reviewed by HPC at mid-term of the project (after 5th year), if required, and revised/ modified Operation Manual would be adopted by the project after seeking approval from HPC.

HPC will also approve annual plans and budgets of the project at the beginning of each financial year, and review the project progress every-six months on regular basis. HPC will accord administrative and financial approvals/ sanctions of all individual schemes, proposals or procurement of goods & services amounting to Rs.5 million and above.

## 2) Society for Project Management

The Odisha Forestry Sector Development Society (OFSDS) created earlier for OFSDP-I and located in the state capital Bhubaneshwar, will have overall responsibility to establish Project Management Unit (PMU) for OFSDP-II within the Society, and will receive funds from the state through OFD for project implementation.

Suitably, the Governing Body (GB) and General Body of the OFSDS, created earlier, would require change in composition, and accordingly amendment(s) in the Memorandum of Association (MOA) and Rules & Regulations of the Society could be made. Within the OFSDS, the GB will be the highest decision-making body for the OFSDP-II at operational level. The composition of the GB is shown in the table below:

**Table 8.4.2 Proposed Composition of Governing Body for OFSDS**

Sl. No.	Position	Designated Person	Remarks
1.	Chairperson	Development Commissioner (in-charge of forestry sector)	Proposed: earlier Additional Chief Secretary (ACS)-cum-Agriculture Production Commissioner (in-charge Forest), and this position is not filled now
2.	Member	Principal Secretary, Forest & Environment	also Chairperson, State Biodiversity Board
3.	Member	PCCF (HOFF), OFD	
4.	Member	Chief Wildlife Warden/ PCCF (Wildlife), OFD	
5.	Member	Special Secretary, Forest & Environment	
6.	Member	NGO representative	To be nominated by PD in rotation for a term of two years; PMU would pay travel and stay charges for attending meetings
7.	Member-Secretary	Project Director, OFSDP-II	Prepare agenda and proposals to be discussed and approved by the GB

Source: JICA Survey Team (2016)

As and when required, representative(s) of the Project Management Consultants, other renowned experts/ researchers may be invited to participate in the GB meetings as special invitees for providing insights or to share views or concerns in the interest of the project implementation.

The GB will meet at least once in a quarter (starting April), and will rigorously review the project progress vis-à-vis annual plans, and monitor the disbursement status. It will review the functioning of the PMU of OFSDP-II regularly and guide to prepare proposals for the HPC whenever necessary for the smooth implementation of the Project.

A minimum of five members would form the quorum for the GB meeting. Agenda of the meeting and Proposals should to be circulated by the Member-Secretary to all members, at least seven days ahead of the meeting date. Proceedings of the GB meetings should be circulated to all the members/ attendees within reasonable timeframe. The GB will accord administrative and financial sanctions of all individual schemes, proposals or procurement of goods & services amounting to Rs.2 million and above but not exceeding Rs.50 million.

### **3) Creation of Project Management Unit (PMU)**

Project Management Unit (PMU) of OFSDP-II would be established within the existing Society: viz., Odisha Forestry Sector Development Society (OFSDS). Project Director of OFSDP-II will function as the executer and administrator of PMU of OFSDP-II, and will be overall responsible for implementation of the project in a time bound manner. Project Director, OFSDP-II will be answerable to both GB as well as HPC.

### **4) General Body**

General Body will be a key decision making body of the OFSDS on organizational policies and important financial/ human resources matters. The General Body of the OFSDS will be consisting of the members of the Governing Body, PMU, Divisional Project Officers (DMUs) of all the divisions included in the Project, and Regional Chiefs Conservator of Forests (RCCFs) of all the identified Circles where the project activities will be undertaken. The General Body will meet once in a year, preferably during the State Annual Planning & Review Workshop of the project, to conduct the Annual General Meeting (AGM) of the Society separately. Proceedings of the AGM meetings should be circulated to all the members/ attendees within reasonable timeframe.

## **8.5 Proposed Structure of Project Management Units (PMU) of OFSDP-II**

To ensure regular generation of shared understanding on the project decisions amongst the key officials in PMU and for efficient functioning, the Project Director, OFSDP-II, as far as possible, will adopt consultative process and encourage collective decision making.

PMU would be headed by the Project Director (PD), preferably in the rank of PCCF/ APCCF and would be the member to the Governing Body, and also serve as the member-secretary to the High Power Committee (HPC). The Project Director will provide environment to all project officials/ staff for sharing proposals on any areas of project functioning, and will encourage the members to provide ideas, views, and concerns. The Project Director will keep track of the project implementation, and be responsible to guide and issue instructions, and establish and operate M&E, GIS/ MIS systems.

The Project Director will undertake periodic reviews of the project, adequately disseminate project information, and will also undertake field visits. He/she will designate one of the officers in the PMU to be the key person to prepare agenda and proposals for GB and HPC meetings. Systematic records of all meetings (HPC, GB and AGM) would be maintained by designated officer in PMU of OFSDP-II.

The Project Director will accord administrative and financial sanctions of all individual schemes, proposals or procurement of goods & services not exceeding Rs.2 million.

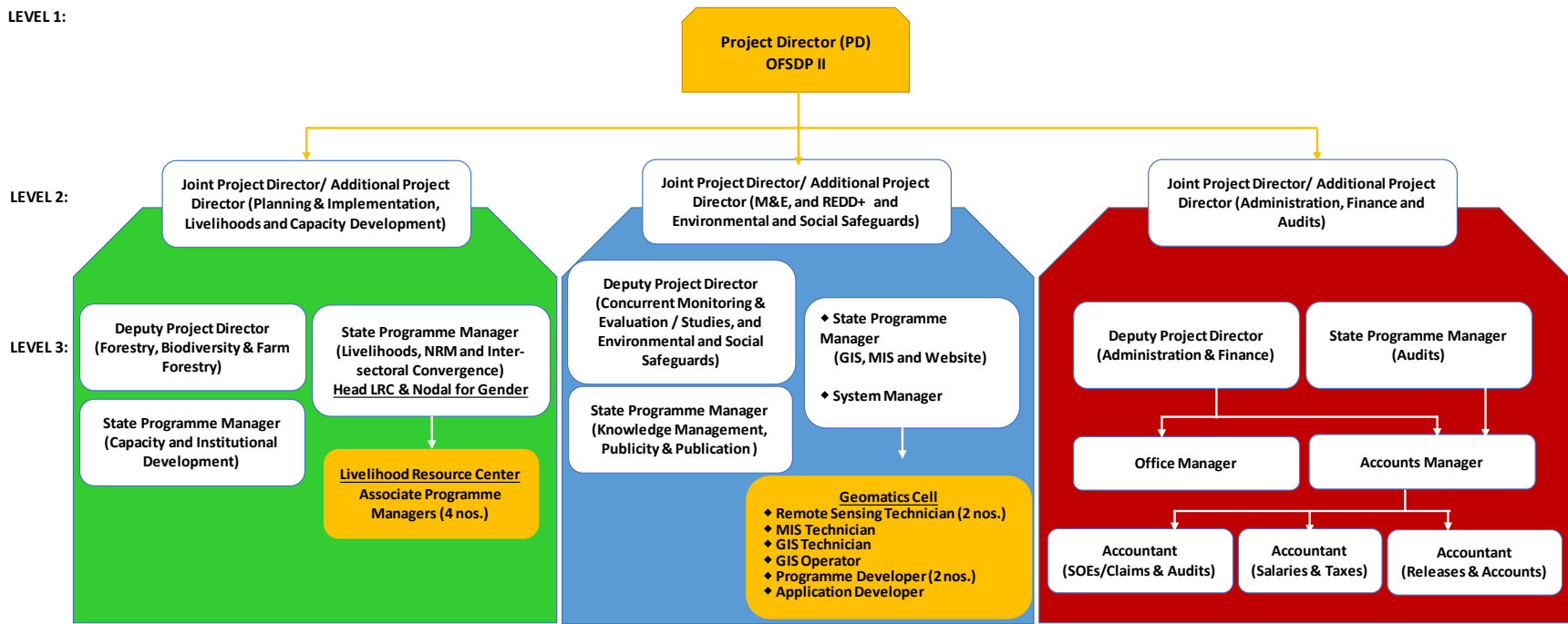
The Project Director will be supported by a team of officers that would include Additional Project Directors (APDs)/ Joint Project Directors (JPDs) in the rank of CCF/ CF, Deputy Project Directors (DPDs), State Programme Managers (SPMs) and other contractual staff hired from open market including MIS and GIS professionals, accountants and ministerial staff.

To pay specific focus on the livelihood interventions planned under the project, as well as to strengthen forest department capacities on NTFP based livelihood promotion, Livelihood Resource Centre (LRC) would be established within PMU at state level. The existing Geomatics Cell would also be strengthened and supported further. To augment various skill sets, PMU of OFSDP-II would further be supported by a team of experts constituting Project Management Consultants (PMC).

The PMU of OFSDP-II will collate and consolidate the expenditure statements from divisional and field offices, and prepare Statement of Expenditures (SOEs) for getting reimbursement of claims from JICA.

All the officers in PMU would be either on deputation from the Forest Department for minimum of four years (or as per existing deputation tenure specified in government rules) or hired from open market directly or recruited through a qualified and reputed placement/ govt. outsourcing agency. PMU of OFSDP-II would adopt the existing government orders for outsourcing staff to hire ministerial staff (steno/ computer operators, drivers, security/ utility persons etc.). Female candidates would be encouraged by PMU to join the project at different level of project implementation. The structure of PMU of OFSDP-II is given in the figure below.





Source: JICA Survey Team (2016)

Figure 8.5.1 Proposed Structure of PMU of OFSDP-II

The composition of the PMU will be as follows:

**Table 8.5.1 Proposed PMU Staffing**

Level	Rank	Position	Number	Source	Mode	Engagement
<b>Key Staff</b>						
Level 1	PCCF/APCCF	Project Director	1	State Forest Department	Deputation	Full Time
Level 2	CF/CCF	Joint Project Director/ Additional Project Director	3	State Forest Department	Deputation	Full Time
Level 3	DCF	Deputy Project Director	3	State Forest Department/ State Finance Department	Deputation	Full Time
Level 3	DCF equivalent	State Programme Manager	1	Open Market	Contract/ Chartered Accountant	Full Time
Level 3	DCF equivalent	State Programme Manager	1	State Forest Department/ Open Market	GIS/ MIS	Full Time
Level 3	DCF equivalent	State Programme Manager	3	Open Market	Contract	Full Time
Level 4		System Manager	1	Open Market	Contract	Full Time
Level 5		Accounts Manager	1	Open Market	Contract	Full Time
Level 5		Office Manager	1	Open Market	Contract	Full Time
Level 6	Clerical Staff	Accountants	3	Open Market	Contract	Full Time
<b>Total Key Staff</b>			<b>18</b>			
<b>Supporting Staff</b>						
Level 7	Clerical Staff	Personal Secretary	1	Open Market	Outsourcing	Full Time
Level 8	Clerical Staff	Personal Assistant	4	Open Market	Outsourcing	Full Time
Level 9		Stenographers	4	Open Market	Outsourcing	Full Time
Level 10		Computer Operators	12	Open Market	Outsourcing	Full Time
Level 10		Drivers	12	Open Market	Outsourcing	Full Time
Level 11		Other supporting staff exclusively for the Project	27	Open Market	Outsourcing	Full Time
<b>Total Support Staff</b>			<b>60</b>			
<b>Total PMU Staffing</b>			<b>78</b>			

*Note: Staffing of Livelihood Resource Centre and Geomatics Cell is not included, and would be separate  
Source: JICA Survey Team (2016)*

Tentative responsibilities for the key staff positions in the PMU of OFSDP-II is given in the following table.

**Table 8.5.2 Responsibilities of Key Staff in Project Management Unit (PMU) of OFSDP-II**

	Position	Rank	Nr	Key Responsibilities	Remarks
<b>Key Staff</b>					
1	Project Director	PCCF/APC CF	1	Overall technical, financial and administrative; ensure Time-Bound Action Plan, Project Implementation Plan; GB, HPC and Inter-sectoral convergence meetings; annual budgets, releases and Reimbursement Claims	Full Time; From FD on deputation for minimum 4 years
<b>A. Planning &amp; Implementation, Livelihoods and Capacity Development Unit</b>					
1	Joint Project Director/ Additional Project Director (Planning & Implementation, Livelihoods and Capacity Development)	CF/CCF	1	Overall planning & implementation of interventions; annual plan, livelihood promotion, inter-sectoral convergence, capacity building and trainings, guide & supervise DMUs and coordinate with RCCFs/ OFD	Full Time; From FD on deputation for minimum 3 years
2	Deputy Project Director (Forestry, Biodiversity and	DCF	1	Assist APD/ JPD in annual planning and implementation of JFM and Non-JFM Models and promotion of Farm Forestry models outside forest	Full Time; From FD on deputation for

	Position	Rank	Nr	Key Responsibilities	Remarks
	Farm Forestry)			areas; biodiversity annual planning and implementation; guide and supervise on SATOYAMA interventions, ecosystem health card, awareness creation in EDCs, creation of biodiversity register, coordinate with DMUs/ FMUs, design templates, guidelines and manual, monitoring & reporting and capacity building; coordinate with SPMs and other stakeholders	minimum 3 years
3	State Programme Manager (Livelihoods, NRM and Inter-sectoral Convergence)	DCF equivalent	1	Will lead Livelihood Resource Centre, and act a Nodal for Gender; Assist APD/ JPD in annual planning and implementation of livelihood and NTFP interventions; design small business/ enterprise for SHGs for income generation, cluster promotion; coordinate for inter-sectoral convergence; design templates, guidelines and manual, monitoring & reporting and capacity building, coordinate with DMUs/ FMUs; coordinate with SPMs/ DPD and other stakeholders; guide on promotion of small business/ enterprise, value chain and market analysis, facilitate rural financing, support cluster development, extend support to leverage funds;	Full Time; Open Market
4	State Programme Manager (Capacity and Institutional Development)	DCF equivalent	1	Assist APD/ JPD in annual planning and implementation; develop & execute capacity building plan, strategize gender mainstreaming and women/ vulnerable group empowerment, develop partnerships & networks, institutional capacity building, design templates, guidelines and manual, monitoring & reporting and capacity building; coordinate with DMUs/ FMUs, coordinate with SPMs/ DPD and other stakeholders	Full Time; Open Market
<b>B. M&amp;E, REDD Plus and Environmental and Social Safeguards Unit</b>					
1	Joint Project Director/ Additional Project Director (M&E, REDD+ and Environmental and Social Safeguards)	CF/CCF	1	Overall M&E, REDD+ and Environmental and Social safeguards activities; updates on MRV protocols; guidelines and capacity development on REDD+ and safeguards initiatives, study contract management, other capacity building and trainings, supervise & guide DMUs and coordinate with RCCFs/ OFD	Full Time; From FD on deputation for minimum 3 years
2	Deputy Project Director (Concurrent Monitoring & Evaluation / Studies, and Environmental and Social Safeguards)	DCF	1	Assist APD/ JPD on M&E activities, develop reporting templates and data formats, prepare quarterly and annual reports, develop and supervise ToRs for studies, develop guidelines and manual, capacity building, coordinate with SPM (GIS/MIS) for progress tracking and reporting on performance indicators, coordinate with DMUs/ FMUs; coordinate with SPMs/ DPD and other stakeholders. Conduct overall management of ESMSF monitoring and ESMSF related information for the Project.	Full Time; From FD on deputation for minimum 3 years
3	State Programme Manager (Knowledge Management, Publicity & Publication)	DCF equivalent	1	Assist APD/ JPD in project publicity and information dissemination, develop and implement communication strategy and plan; organize events/ workshops; develop knowledge material, publish newsletters, reports; design publicity and awareness campaigns, maintain digital library, reporting, coordinate with DMUs/ FMUs; coordinate with SPMs/ DPD and other stakeholders	Full Time; Open Market
4	State Programme Manager (GIS, MIS and Website)	DCF equivalent	1	Assist APD/ JPD in GIS based M&E, maintain GIS systems and equipment, software inventory & maintenance, procurement of imageries and spatial analysis, map production for planning & decision making, monitoring & reporting; establish GIS operations at all levels – PMU, DMU and FMU; coordinate with GIS Lab in OFD; coordinate with DPD for progress tracking and reporting; coordinate with SPMs/ DPD and other stakeholders	Full Time; Open Market/ Deputation
5	System Manager	Manager	1	Assist SPM (GIS/ MIS), maintain systems, equipment and networks, system administrator, MIS operations	Full Time; Open Market

	Position	Rank	Nr	Key Responsibilities	Remarks
				at all levels – PMU, DMU and FMU, computer generated analytical MIS reports, website and digital repository, software inventory & maintenance; coordinate with SPMs/ DPD and other stakeholders	
<b>C. Administration, Finance and Audits Unit</b>					
1	Joint Project Director/ Additional Project Director (Administration, Finance and Audits)	CF/CCF	1	Overall supervision, administration & finance aspects; managing contracts - human resources, outsourcing, procurement of goods & services; annual budget & releases, expenditure; claims and fund disbursement, facilitate statutory and concurrent audits; RTI and Grievance redressal issues	Full Time; From FD on deputation for minimum 3 years
2	Deputy Project Director (Administration & Finance)	DCF	1	Assist APD/ JPD, prepare agenda for EC, GB, HPC, AGM meetings, initiate communications & meeting letters, document and maintain proceedings & all records and contracts, supervising Accounts Manager, coordinate with DMUs/ FMUs; coordinate with SPMs/ DPD and other stakeholders	Full Time; From FD on deputation for minimum 3 years
3	State Programme Manager (Audits)	DCF equivalent	1	Assist APD/ JPD in establishing financial control systems, establish financial management and project accounting systems, monitoring financial progress and expenditures, facilitate Statutory Audits, conduct/ supervise Internal/ Concurrent Audits, filing tax returns, capacity development of stakeholders, coordinate with DMUs/ FMUs, coordinate with SPMs/ DPD and other stakeholders	Full Time Chartered Accountant; Open Market
4	Office Manager	Manager	1	Assist APD/JPD; logistics and protocols; O&M of vehicles, office, equipment, security, store; organizing meetings & events	Full Time; Open Market
5	Accounts Manager	Manager	1	Assist DPD, ensure timely budget/ releases, utilization and SOEs/ claims; reconciliation of funds and assist audits, supervise Accountants	Full Time; Open Market
6	Accountants (SOEs/ Claims & Audits)	Clerical Staff	1	Assist Accounts Manager for day-to-day accounting activities; preparation and maintain SOEs; submit claims to CAAA/ JICA; reconciliation of annual budgets and disbursements; facilitate and assist audits	Full Time; Open Market
7	Accountants (Salaries & Taxes)	Clerical Staff	1	Assist Accounts Manager for day-to-day accounting activities; preparation and maintain salary/ remunerations details and payments; computation and deposit of taxes; assist audits	Full Time; Open Market
8	Accountants (Releases & Accounts)	Clerical Staff	1	Assist Accounts Manager for day-to-day accounting activities; releases of funds to DMUs, seeking Utilization Certificates and reconciliation of budget, releases, and assist audits	Full Time; Open Market
	<b>Total Key Staff</b>		<b>18</b>	<b>Deputation/ Direct Hire</b>	<b>Full Time</b>
	<b>Total Support Staff</b>		<b>60</b>	<b>Outsourcing</b>	<b>Full Time</b>
	<b>Total PMU Staff</b>		<b>78</b>		

Source: JICA Survey Team (2016)

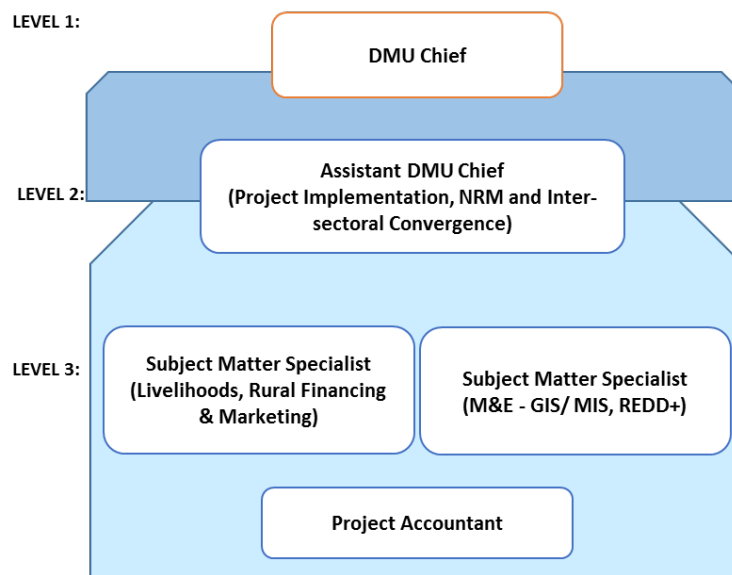
## 8.6 Proposed Structure of Divisional Management Unit (DMU)

**Divisional Management Unit (DMU)** will be created within the divisional forest office and will function as the dedicated extended wing of the PMU of OFSDP-II for project implementation but not as subordinate office of the OFSDS/ PMU of OFSDP-II. DMU would be headed by DMU chief (Ex-officio DFO) responsible to implement and supervise field operations.

DMU will be supported by Assistant DMU chief (full-time) in the rank of ACF on deputation from the forest department, and the subject matter specialists for supervising and guiding project implementation as well as the works carried out by Partner NGOs and resource organisations, and facilitate convergence at the district level. Furthermore, SMS (GIS/ MIS) will be responsible for the effective data processing and monitoring, which is also required for REDD+ and support MIS/ GIS requirements. DMUs would also have other positions and support staff to manage and implement project activities. The FD staff

deployed for the project would work exclusively on the project having no additional responsibility from FD under normal conditions. Project Accountant will maintain the project accounts adopting double-entry accounting system and using customized accounting software, and will be responsible for timely preparation SOEs for onward submission. Female candidates would be encouraged to join the project at various positions.

For the implementation of the project interventions DMUs will receive project funds from the PMU of OFSDP-II as per annual plan of operation, and accordingly disburse it to the project implementers viz., FMUs, and village level implementing units - VSSs and EDCs. The DMUs will guide and supervise the activities of the project implementers and assist the PMU of OFSDP-II in planning, fund management, implementation, work progress monitoring and documentation at the field level. DMUs will submit progress reports to PMU of OFSDP-II directly, and would also report to RCCF as per the current system and administrative structure of the forest department. DMU chief would exercise its administrative and financial authority as per existing FD rules and/or as envisaged in the Operation Manual of OFSDP II. The structure of DMU is given in the figure below.



Source: JICA Survey Team (2016)

**Figure 8.6.1 Proposed Structure of DMU of OFSDP-II**

The composition of the DMU will be as follows:

**Table 8.6.1 DMU Staffing (Proposed – Deputation/ Direct Hire/ Outsourcing)**

Level	Rank	Position	Number	Source	Mode	Engagement
<b>Key Staff</b>						
Level 1	DCF	DMU Chief	1	State Forest Department	Ex-Officio	Part-Time
Level 2	ACF	Assistant DMU Chief	1	State Forest Department	Deputation	Full Time
Level 3		Subject Matter Specialist	2	Open Market	Contract	Full Time
Level 4	Clerical Staff	Project Accountant	1	Open Market	Contract	Full Time
<b>Total Key Staff</b>			<b>5</b>			
<b>Supporting Staff</b>						
Level 5		Stenographers	1	Open Market	Outsourcing	Full Time
Level 6		Computer Operator	1	Open Market	Outsourcing	Full Time
Level 6		Driver	1	Open Market	Outsourcing	Full Time
Level 7		Peon	2	Open Market	Outsourcing	Full Time
<b>Total Support Staff</b>			<b>5</b>			
<b>Total DMU Staffing</b>			<b>10</b>			

Source: JICA Survey Team (2016)

Tentative responsibilities for the key staff positions in the DMU is given in the following table.

**Table 8.6.2 Responsibilities of Key Staff in Divisional Management Unit (DMU) of OFSDP-II**

	Position	Rank	Nr	Key Responsibilities	Remarks
	<b>Key Staff</b>				
1	DMU Chief	DCF	1	Overall technical, financial and administrative, annual plan, SOEs, and project reviews & reporting; facilitate inter-sectoral convergence at district level	Part-Time; Ex-Officio
2	Assistant DMU Chief (Project Implementation, NRM and Inter-sectoral Convergence)	ACF	1	Assist DMU Chief in annual planning; supervise, guide and review SMSs, implementation of JFM and Non-JFM Models and promotion of Farm Forestry models outside forest areas; facilitate inter-sectoral convergence; coordinate and guide FMUs, monitoring & reporting and capacity building	Full Time; From FD on deputation for minimum 4 years
3	Subject Matter Specialist (Livelihood, Rural Financing and Marketing)		1	Assist ADMU/ DMU Chief in annual plan and implementation; guide on livelihood and NTFP interventions; small business/ enterprise plan, inter-sectoral convergence; cluster promotion; promote SHGs for small business/ enterprise, assist in value chain and market analysis, rural financing, support cluster development, extend support to leverage funds, progress monitoring & reporting and capacity building; FMUs, SMSs and other stakeholders	Full Time; Open Market
4	Subject Matter Specialist (M&E – GIS/ MIS, REDD+)		1	Assist ADMU/ DMU Chief in monitoring annual plan; MIS/ GIS data compilation, progress monitoring based on MIS and GIS, survey and demarcation of assigned and treatment areas, assist in biomass assessment surveys, updates on MRV protocols; reporting and capacity building; coordinate with FMUs, SMSs and other stakeholders	Full Time; Open Market
5	Project Accountant		1	Assist ADMU/ DMU Chief in budgets & releases, expenditure tracking, utilization certificates, SOEs, tax filing, audits etc.; coordinate with FMUs for financial progress	Full Time; Open Market
	<b>Total Key Staff</b>		<b>5</b>	<b>Deputation/ Direct Hire</b>	<b>Part/ Full Time</b>
	<b>Total Support Staff</b>		<b>5</b>	<b>Outsourcing</b>	<b>Full Time</b>
	<b>Total DMU Staff</b>		<b>10</b>		

Source: JICA Survey Team (2016)

### 8.7 Proposed Structure of Field Management Unit (FMU)

**Field Management Unit (FMU)** will be created within the office of the range officer (RO) to take charge of project implementation at the range level and would extend all technical inputs and guidance at field level on day-to-day basis. FMUs would be headed by FMU chief (Ex-officio Range Officer) and would be responsible for project implementation at VSS/ EDC or field level. FMU will be supported by Assistant FMU chief (full-time) in the rank of Forester on deputation from the forest department, and other contractual and support staff to manage project activities. Female candidates would be encouraged to join the project at various positions. FMU would be further supported by partner NGO particularly for community mobilization and social processes.

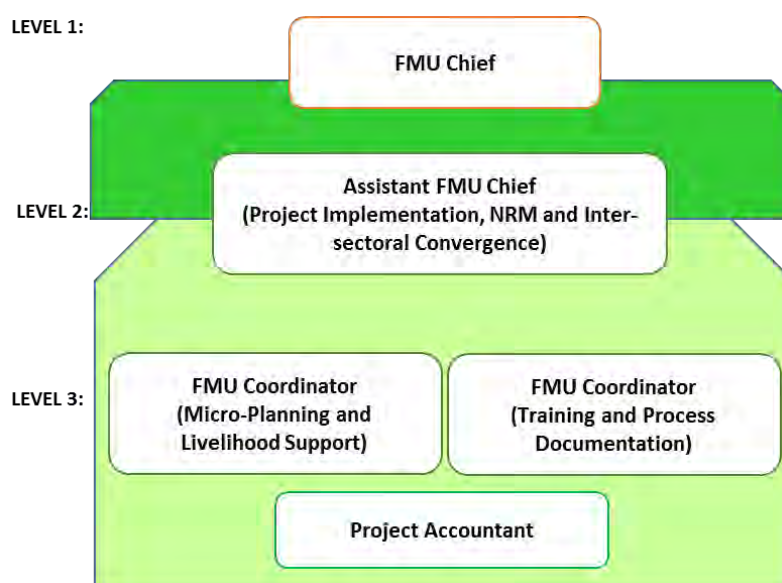
FMU will closely work with the community level institutions and will lead to take responsibilities in micro-planning, livelihood support, training and process documentation. FMU Coordinator (Micro-Planning and Livelihood Support) will guide the partner NGOs and resource organisations during micro planning and SHG formation/ reconstitutions/ small IGAs. FMU Coordinator (Training and Process Documentation) will act as a resource person for the VSS/ EDC/ SHG on institutional capacity building, and to facilitate and execute the training activities for the community level institutions. S/he would also coordinate with fellow FMU Coordinator as well as partner NGOs to understand specific training needs, and accordingly plan for capacity development initiatives.

FMU Coordinators will also be responsible for progress monitoring, documentation/ reporting including data collection and compilation, and updating information onto the project MIS, as well as



coordinate and seek guidance from DMU/ SMS. Project Accountant will maintain the project accounts adopting double-entry accounting system and using customized accounting software, and will be responsible for timely preparation SOEs for onward submission.

FMU will receive project funds from DMU to execute the works planned at range level/ sites, and would not be involved to channelize funds to VSSs/ EDCs. FMU will make the site specific development plans, facilitate VSSs/ EDCs in micro-planning and estimations, undertake the works and document/ report the physical and financial progress. FMU Chief would exercise its administrative and financial authority as per existing FD rules and/or as envisaged in the Operation Manual of OFSDP-II. The structure of FMU is given in the figure below.



Source: JICA Survey Team (2016)

**Figure 8.7.1 Proposed Structure of Field Management Unit (FMU)**

The composition of the FMU will be as follows:

**Table 8.7.1 FMU Staffing (Proposed – Deputation/ Direct Hire/ Outsourcing)**

Level	Rank	Position	Number	Source	Mode	Engagement
<b>Key Staff</b>						
Level 1	Ranger	FMU Chief	1	State Forest Department	Ex-Officio	Part-Time
Level 2	Forester	Assistant FMU Chief	1	State Forest Department	Deputation	Full Time
Level 3		FMU Coordinator	2	Open Market	Contract	Full Time
Level 4		Project Accountant	1	Open Market	Outsourcing	Full Time
Level 5		Computer Operator	1	Open Market	Outsourcing	Full Time
<b>Total Key Staff</b>			<b>6</b>			

Source: JICA Survey Team (2016)

Tentative responsibilities for the key staff positions in the FMU is given in the following table.

**Table 8.7.2 Responsibilities of Key Staff in Field Management Unit (FMU)**

	Position	Rank	Nr	Key Responsibilities	Remarks
<b>Key Staff</b>					
1	FMU Chief	Ranger	1	Overall technical, financial and administrative, annual plan, SOEs, and project reviews & reporting, facilitate inter-sectoral convergence at block level	Part-Time; Ex-Officio
2	Assistant FMU Chief (Project)	Forester	1	Assist FMU Chief in annual planning; implementation of JFM and Non-JFM Models	Full Time; From FD on deputation

	Position	Rank	Nr	Key Responsibilities	Remarks
	Implementation, NRM and Inter-sectoral Convergence)			and promotion of Farm Forestry models outside forest areas; facilitate inter-sectoral convergence; supervise and guide FMU Coordinators, assist in biomass assessment surveys, monitoring & reporting and capacity building;	for minimum 4 years
3	FMU Coordinator (Micro-Planning and Livelihood Support)		1	Assist AFMU/ FMU Chief in annual plan and implementation; guide and facilitate micro planning, livelihood and NTFP interventions; small business/ enterprise plans, inter-sectoral convergence; cluster promotion; monitoring & reporting and capacity building; coordinate with VSSs and other stakeholders	Full Time; Open Market
4	FMU Coordinator (Training and Process Documentation)		1	Assist AFMU/ FMU Chief in annual plan and implementation; execute capacity building plan, gender mainstreaming; assist to develop partnerships & networks, act as resource for institutional capacity building; monitoring & reporting; coordinate with VSSs and other stakeholders	Full Time; Open Market
	<b>Total Key Staff</b>		<b>4</b>	<b>Deputation/ Direct Hire</b>	<b>Part/ Full Time</b>
	<b>Total Support Staff</b>		<b>2</b>	<b>Outsourcing</b>	<b>Full Time</b>
	<b>Total FMU Staff</b>		<b>6</b>		

Source: JICA Survey Team (2016)

## 8.8 Community Institutions

### 1) Van Surakshya Samiti (VSS)/ Eco Development Committees (EDC)

VSSs/ EDCs would be selected in the project adopting well announced selection criteria processes, and would be involved after seeking willingness of these institutions. Thereafter, following JFM Resolution, 2011, MoU will be signed between VSSs/ EDCs and DMU. The MoU will spell out the size of assigned area with geo-coordinates, roles & responsibilities of both parties in detail along with benefit/ usufructs sharing arrangement between the parties. To elaborate the MoU provisions, modification in Form-5 of the JFM Resolution, 2011 would be necessary.

Survey and demarcation exercise would be done prior to MoU signing, by involving the VSS members. A joint survey along with the Revenue Department at Tehsil would necessary, in case areas classified as Revenue forests are assigned to VSS for JFM activities under the project. The assigned areas to VSSs for JFM would be properly demarcated with geo-coded boundary pillars.

Signing of MoU, geo-coded boundary pillars around assigned areas, and GIS based map (or paper maps) to be utilized during micro-planning would be pre-requisite for initiating plantation activities.

The VSSs or EDCs would receive funds directly from the DMU in VSSs/ EDCs project account as per the annual implementation plan to be prepared for every financial year on the basis of approved Micro-Plans, and would be responsible for planning, implementation, monitoring and reporting at the lowest level as per the MoU arrangements. The direct fund transfer from DMU to the VSS/ EDC project accounts would bring in efficiency to provide requisite funds on time, whereas FMUs would play role to place the requests with DMU for VSSs/ EDCs based on the annual implementation plans.

Joint Forest Management Resolution, 2011 to be read along with the amendment brought in year 2015, and the project guidelines and manuals would be the key guiding documents for the office bearers of the VSS/ EDC Executive Committee to manage and implement the project activities. However, for long term sustainability and empowerment of the VSS/ EDC, it would be better if the Project could ignore amendment of JFM Resolution brought in year 2015, and adopts the provisions of JFM Resolution 2011 only, preferably during phase-out period of the project or 4 years after plantation, whichever is earlier.



## **8.9 Other Implementing/ Facilitating Institutions**

### **1) Partner NGOs**

Partner NGOs will be engaged at range level to support and guide VSSs/ EDCs/SHGs for the field level implementation of the project activities. The geographical distribution of the VSSs/ EDCs/ SHGs would be taken into account for deploying the partner NGO staff teams. The works of the partner NGOs will be supervised by FMU chief assisted by Assistant FMU chief who will guide the partner NGOs and ensure that the works are performed as per the Terms of Reference (ToR). PMU would take lead role in selection of the partner NGOs involving RCCF and DMU chief, and contracting could be tripartite amongst PMU, concern DMUs and partner NGOs as per the stakes. Female staff of partner NGOs would be encouraged to join the project at various positions. ToR of partner NGO along with the selection process is given in **Attachment 6.6.1**.

### **2) Animator**

Apart from the partner NGOs and FMU staff, VSSs/ EDCs would be supported by two animators, who would be educated persons identified by community/ Executive Committee from within the VSS/ EDC village. Female candidates would be encouraged to join the project as one of the animators.

The selection of the animators would be done by consensus in a General Body meeting of VSS/ EDC having at least 50% attendance, and names of Animators selected in the meeting would be recorded in the VSS/ EDC Proceeding Register. For replacements of animators, similar process would be adopted. FMU would ensure that announcement and sharing of the guidelines on selection process and eligibility criteria for Animators is done well in advance before the General Body meeting.

The animators will be responsible for assisting and supporting Executive Committee officer bearers as well as VSS/ EDC members in their functions and documentation works (refer **Attachment 6.6.4** for ToR). For initial four years of the project implementation, monthly honorarium for the Animators will be budgeted in micro plan; however, mechanism for mobilizing funds to continue Animator support during remaining period of the project and beyond needs to be worked out by VSSs/ EDCs from 3<sup>rd</sup> year onwards of receiving animators support.

### **3) Regional CCF offices**

Circle offices of the forest department having their jurisdiction in the project divisions will supervise and review the project implementation along with their respective regular and designated overseeing responsibilities, and would provide vital link between the project and regular departmental activities. The RCCFs will also be responsible for cross-checking project works vis-à-vis financial and physical progress reporting, and would participate in project events. RCCFs would also be the centre for grievance redressal under the project as per the project M&E system. Though a government/ office order, The RCCF would be entrusted to supervise and support project activities in routine manner within their jurisdictions.

### **4) Project Management Consultants (PMC)**

As a part of the project design and institutional arrangements, a team of project management consultants (PMC) will be deployed at state level to assist PMU in managing the project, and extending required technical guidance for 48 months during initial years. The team composition of PMC would carry skill set and experience to assist PMU, and to complement / supplement PMU initiatives for the project. PMC will provide technical support in revising/ preparing project guidelines and procedures as well as provide an independent views on project implementation.

### **5) Specialised Agencies/ Resource Organisations**

Skill training required for SHGs and cluster level enterprises would be undertaken by the specialized and credible organisations having proven history of delivering the technical training programmes to the similar type of community institutions. The services of the specialised agency/ resource organisations

will be procured by PMU through a local competitive bidding process, conforming to the applicable procurement guidelines.

**6) Inter-sectoral Linkages**

Inter-sectoral linkages would be ensured through the existing institutions in place at state, district and block level, a District-level Advisory Committee (DAC) would be constituted for facilitating inter-sectoral convergence.

Adopting the system in place for inter-sectoral linkages PMU at state level will coordinate with the Planning & Convergence Department, whereas at the district level DMU chief through the DAC and the Steering Committee chaired by District Collector. The Steering Committee is created to assist District Planning Committee (DPC) for preparing draft district plan considering the development plans prepared by each Block level Planning Committee for all Panchayat Samities within their jurisdictions. Similarly, FMU Chief will coordinate with Block-level Planning Committee whose Member-Secretary is Block Development Officer. An elaborate system on inter-sectoral linkages is provided in M&E system section of the project document.

## Chapter 9. PROPOSED PROJECT IMPLEMENTATION SCHEDULE

Assuming that the loan agreement (L/A) would be signed during fourth quarter of Year 0, a project implementation schedule is tentatively been planned between the second quarter of Year 1 and goes till third quarter of Year 9. However, some of the activities would get initiated from first quarter of Year 1 on a retroactive reimbursement basis given an understanding between the JICA and the state government. The project duration is 10 years, starting from year 2017/18. The key project activities will be carried out in 4 batches at varying timeline.

During fourth quarter of Year 0 (before L/A), PMU and its implementing Units (DMUs and FMUs) would be constituted within the existing society (OFSDS) through a Government Order. OFD would start identifying key personnel to be deployed in PMU, DMUs and FMUs accordingly to the institutional arrangements. Project Director would be the first appointment at PMU, and would take lead to complete all necessary amendments and GOs required as per the Time Bound Action Plan soon after Pledge has been made. Notice for procuring of Consulting Services would also be floated soon after signing of the L/A.

The preparatory phase is assumed for around one and a half year starting from Year 1, however utilizing the past experience of project implementation of earlier JICA assisted project, PMU will expedite and advance on the planned activities as much as possible. It would be necessary for the PMU to ensure that while expediting initial activities, envisaged steps and processes do not get diluted.

During first quarter of Year 1, PMU would start preparing the tenders and contracts to be floated for procuring required goods & services, and for initiating construction/ extension of civil works as well. PMU would follow the procurements guidelines and processes envisaged as per the Minutes of Discussions (MoD).

PMU would also start working on the revision of Operation Manual on the basis of earlier documents and experiences. PMU may also start working on revisiting and revising of existing guidelines and manuals. Project Guidelines and Manuals would be most critical and important activities including orientation of the key project staff on the project processes. Thus, timely hiring of the Consulting Services would be of immense importance. The duration of the Consulting Services would be 48 months, and is tentatively planned from May 2018.

Besides setting up offices, building construction – extension/ renovation, purchase of vehicles, furniture and fixtures, human resources – direct hiring as well as outsourcing, focus of the PMU would also be on identification of target VSSs, and will prepare the exhaustive list at the earliest. Survey and demarcation works would get initiated after MoU has been signed with the VSSs. Soon after getting approvals on the demarcated boundaries and assigned areas, mapping of the VSSs areas would also get initiated. This activity would get aligned with the selection and identification of VSS batches.

Selection and orientation of the partner NGOs would be important and must get initiated during first quarter of Year 1 so that the teams of partner NGOs could get deployed at each FMU from third quarter of Year 1. Micro-planning exercise should not get initiated prior to the deployment of the partner NGOs. After approvals of the micro plans, animators would be identified and engaged by VSSs, but prior to initiation of the activities for a batch. Two animators (one female and one male) would assist each batch of VSSs for three years, and in addition for one more year, one of the animators would be engaged for follow-up activities.

PMU will make efforts to complete all critical and important preparatory activities that are linked with the initiation of JFM and Livelihood interventions, and would be prerequisite for plantation works as well. Other component activities would get aligned with the pace of the preparatory phase progress. It would also be important to initiate the capacity development interventions as scheduled to prepare the project staff and other stakeholders well to execute the planned interventions. A summary of the proposed project implementation schedule has been prepared and is being presented below. Draft detailed project implementation schedule is given in **Attachment 9.1.1**.

**Table 9.1.1 Summary of Proposed Project Implementation Schedule**

Items	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Yr 11	Yr 12
	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27		
	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4		
<b>L/A Period</b>	[Red arrow spanning from Year 0 to Year 12]												
<b>Project Period</b>	[Blue arrow spanning from Year 0 to Year 10]												
<b>Project Implementation Period</b>	[Purple arrow spanning from Year 0 to Year 10]												
Appraisal	[Red arrow from Q1 Year 0 to Q1 Year 1]												
Pledge	[Red arrow from Q1 Year 0 to Q1 Year 1]												
Signing of L/A	[Red arrow from Q1 Year 0 to Q1 Year 1]												
Pre-Qualification of Consulting Services	[Black bar from Q1 Year 0 to Q1 Year 1]												
Consulting Services	[Black bar from Q1 Year 1 to Q4 Year 5]												
<b>Component 1: Preparatory Works</b>	[Yellow background]												
1.1 Constitution of PMU, DMU, FMU and deployment of Staff	[Black bar from Q1 Year 1 to Q1 Year 1]												
1.2 Deployment of NGOs for Community Development and SFM	[Black bar from Q1 Year 1 to Q4 Year 8]												
1.3 Procurement of PMC	[Black bar from Q1 Year 1 to Q1 Year 1]												
1.4 Orientation for PMU/ DMU/ FMU by PMU	[Black bar from Q1 Year 1 to Q1 Year 1]												
1.5 Identification of VSSs (By PMU/ DMU/ FMU)	[Black bar from Q1 Year 1 to Q1 Year 1]												
1.6 Survey and Demarcation	[Black bar from Q1 Year 1 to Q4 Year 5]												
1.7 Review and Revision of Project Manuals/ Training materials	[Black bar from Q1 Year 1 to Q1 Year 1]												
1.8 Engagement of VSS/ EDC Animators	[Black bar from Q1 Year 1 to Q4 Year 8]												
1.9 Micro Planning	[Black bar from Q1 Year 1 to Q4 Year 8]												
1.10 Revisiting Micro Planning (after 4th year)	[Black bar from Q1 Year 4 to Q4 Year 8]												
1.11 Annual Planning	[Black bar from Q1 Year 1 to Q4 Year 8]												
1.12 Social and Environmental Consideration	[Black bar from Q1 Year 1 to Q1 Year 1]												
<b>Component 2: Sustainable Forest Management</b>	[Yellow background]												
2.1 JFM-Mode	[Black bar from Q1 Year 1 to Q4 Year 8]												
2.2 Non JFM Mode	[Black bar from Q1 Year 1 to Q4 Year 8]												
2.3 Farm Forestry	[Black bar from Q1 Year 1 to Q4 Year 8]												
<b>Component 3: Sustainable Biodiversity Management</b>	[Yellow background]												
3.1 Sustainable Biodiversity Management incorporating concept of SATOYAMA model	[Black bar from Q1 Year 1 to Q4 Year 8]												
3.2 Establishment of Scientific Monitoring System at Bhitarkanika	[Black bar from Q1 Year 1 to Q4 Year 8]												
<b>Component 4: Livelihood Improvement</b>	[Yellow background]												
4.1 Community Development Fund	[Black bar from Q1 Year 1 to Q4 Year 8]												
4.2 Promotion of IGAs	[Black bar from Q1 Year 1 to Q4 Year 8]												
4.3 NTFP Based Livelihood Interventions	[Black bar from Q1 Year 1 to Q4 Year 8]												
4.4 Livelihood Resource Centre (LRC)	[Black bar from Q1 Year 1 to Q4 Year 8]												
4.5 Annual Partner NGOs Review Meeting	[Black bar from Q1 Year 1 to Q4 Year 8]												
<b>Component 5: Capacity Development</b>	[Yellow background]												
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<b>Component 6: REDD+ Readiness</b>	[Yellow background]												
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Source: JICA Survey Team (2016)

## Chapter 10. OPERATION AND MAINTENANCE

The operation and maintenance framework for the Project is described below.

**Table 10.1.1 Operation and Maintenance Framework**

Item/ Institutions	Operator	Maintenance Mechanism
VSS Assigned Area	VSS	<ul style="list-style-type: none"> <li>VSS will utilize the interests collected from the SHG revolving fund to maintain the assigned areas to VSSs with technical guidance provided by OFD.</li> </ul>
Community Development Fund	VSS/ EDC	<ul style="list-style-type: none"> <li>As per the operation manual prepared by OFSDP-II</li> <li>Fund will be used according to the micro plan/ annual plans prepared by VSS/ EDC</li> <li>Inventory of the assets created will be kept by VSS/ EDC and OFSDP-II/ OFD; guidelines for construction supervision and procurement of contractors to be developed and shared with VSS/ EDC</li> <li>Maintenance will be undertaken by VSS/ EDC using the interest collected from the SHG revolving fund and also funds obtained from other sources.</li> <li>Monitoring by OFSDP-II during the tenure of the Project and thereafter by the Range Forest Office.</li> </ul>
SHG Revolving Fund	VSS/ EDC	<ul style="list-style-type: none"> <li>As per the operation manual prepared by OFSDP-II</li> <li>The loan application from SHGs must be scrutinised and approved by the respective VSS/ EDC.</li> <li>The VSS shall be responsible for recovering the loan from SHGs.</li> </ul>
LRC Corpus Fund including IGA and Cluster Infrastructure Development Fund	LRC	<ul style="list-style-type: none"> <li>As per the Operation Manual prepared by OFSDP-II</li> <li>OFSDP-II Project Director will be responsible for the Operation and Maintenance of the Corpus Fund. LRC will follow the Operation Manual to facilitate the transaction.</li> <li>The responsibility for operation and maintenance of the corpus fund after the completion of the project or LRC becomes a self-sustaining body, shall be decided by OFSDP-II PMU.</li> <li>Records will be kept by LRC and monitored by OFSDP-II.</li> </ul>
GIS and GIS Cell	OFSDP-II PMU/ OFD	<ul style="list-style-type: none"> <li>OFSDP-II will be responsible for the maintenance of the infrastructure and retention of the human resources.</li> <li>During the Phase-Out stage of the project, PMU/ OFSDS will discuss with OFD on the operation and maintenance of the GIS and GIS cell.</li> </ul>
MIS	OFSDP-II PMU/ OFD	<ul style="list-style-type: none"> <li>OFSDP-II will be responsible for the maintenance of the infrastructure and retention of the human resources.</li> <li>During the Phase-Out stage of the project, PMU/ OFSDS will discuss with OFD on the operation and maintenance of the MIS.</li> </ul>
Cluster CFCs	Cluster Level Organisations	<ul style="list-style-type: none"> <li>The infrastructures created during the project for the cluster level organisation shall be transferred to it.</li> <li>CLO will set aside the funds for operation and maintenance of the facilities out of the profit of the business (i.e. 60-70% of the profit shall be set aside for the operation and maintenance of the facilities.)</li> </ul>
Infrastructures created by using IGA Infrastructure Development Fund	SHGs	<ul style="list-style-type: none"> <li>The assets created for SHGs shall be handed over to VSS/ EDCs who will also be responsible for the maintenance.</li> </ul>
Infrastructures created by using Community Development Fund	VSS/ EDC	<ul style="list-style-type: none"> <li>VSS/ EDC will utilize the interest earned from the SHG Revolving Fund.</li> <li>User's fees may also be levied depending on the infrastructure.</li> </ul>
LRC	Self/ OFD	<ul style="list-style-type: none"> <li>LRC Operates as per the OFSDP Operation Manual.</li> <li>Once it becomes a self-sustaining entity, it will operate as per its own work plan.</li> </ul>
Office Buildings and Assets (PMU/ DMU/ FMU)	OFD	<ul style="list-style-type: none"> <li>During the project, Office Buildings and assets will be maintained by OFSDP-II PMU.</li> <li>Inventory of asset and buildings created to be maintained and shared with OFD after securing completion certificate</li> <li>Once the project is completed, they will be transferred to OFD, which would take responsibilities of maintenance.</li> </ul>
OFSDP-II PMU	OFD	<ul style="list-style-type: none"> <li>As per the memorandum of association and the decision taken by the General Body of OFSDP-II/ OFSDS.</li> </ul>

Source: JICA Survey Team (2016)

# **Attachments**

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**Attachment 2.4.1 Budget Allocation for Wildlife and Biodiversity related Activities  
(2014-15 & 2015-16)**

Scheme	Plan type	Main Objective	Initiated	Budget Allocation (Million Rs.)
Eco-Tourism Development	State	Develop infrastructure facilities in potential sites. Create income generating opportunities for local communities	2009-10	10.00 (2014-15) 10.00 (2015-16)
Grants to State Medicinal Plant Board	State	Promote medicinal plant cultivation with participation of farmers/ JFMCs		12.00 (2014-15) 12.00 (2015-16)
Conservation of Sacred Groves	State	Document sacred groves, signage development; indigenous species plantation.		5.70 (2015-16)
Wildlife Protection & Conservation Measures	State	Manage degradation and fragmentation of habitat Conservation of blackbucks and fresh water turtles; Strengthening anti-poaching measures, Manage and mitigate human-wildlife conflicts All wildlife divisions and few selected territorial divisions		150.00 (2015-16)
Protection and Conservation of Olive Ridley Sea Turtles	State	Protect and conserve Olive Ridley Sea Turtles. Rajnagar Wildlife & Berhampur Divisions		7.00 (2014-15) 7.00 (2015-16)
One Time ACA for Promotion of Eco-tourism in Wildlife Areas	State	Facilitate better eco-tourism and learning experience in wildlife areas	2005-06	20.00 (2015-16)
Elephant Management Project	State	Reduce man-elephant conflict, adopt anti-poaching strategy, take steps for habitat improvement and securing the corridors	2009-10	40.00 (2015-16)
Management and Development of Elephant Corridor	State	Improve corridors and capacity building of people & FD Staff; Improve basic infrastructure /equipment 14 elephant corridors	2012-13	50.00 (2014-15) 50.00 (2015-16)
Nature Conservation	CZA & State	Take up construction other than animal housing in Nandankanan Zoo.		2.00 by State (2015-16) 4.00 by CZA (2015-16)
Odisha Wetland Development Authority	State	Conserve and protect important wetland ecosystems of the State with all its genetic diversity	2010-11	10.00 (2014-15) 10.00 (2015-16)
Establishment of Odisha	State	Constitute BMCs and prepare of PBR and	2015-16	5.00 (2015-16)

<b>Scheme</b>	<b>Plan type</b>	<b>Main Objective</b>	<b>Initiated</b>	<b>Budget Allocation (Million Rs.)</b>
Biodiversity Board		awareness about conservation of biodiversity		
Integrated Development of Wild Life Habitats	Central & State	Improve management of National Park & Sanctuaries		32.90 by Centre (2015-16) 10.00 by State (2015-16)
Satkosia Tiger Reserve	NTCA & State	Protect and manage tigers and their habitats		25.00 by State 60.65 by NTCA (2015-16)
Similipal Tiger Reserve	NTCA & State	Protect and manage tigers and their habitats		35.00 by State 95.35 by NTCA (2015-16)
Conservation of Natural resources and Eco-system (Wetland)	Central	Conserve and manage wetlands of the State.	2015-16	22.00 (2015-16)
Integrated Development of Wildlife Habitat	Central	Protect and manage protected areas (PAs) and adjoining areas of 13 PAs		60.00 (2014-15) 60.00 (2015-16)
Elephant Management Project	Central	Facilitate free movement of elephants across large areas		30.00 (2014-15) 30.00 (2015-16)
Similipal Bio-sphere Reserve	Central	Conserve and manage genetic resource, species ecosystem and landscape		40.00 (2014-15) 40.00 (2015-16)
Conservation & Management of Mangroves	Central	Develop bio-shield using mangrove forests in coastal belts		20.00 (2015-16)

*Source: Compiled by JICA Survey Team (2016) based on the information provided by OFD*

### Attachment 2.4.2. Gender Segregated Data for Forester Position

Recruitment	Training	Age Class	Gender		Total
			Male	Female	
Direct	Trained	25-30 yrs	71	18	89
		30-35 yrs	53	6	59
		35-40 yrs	56	6	62
		40-45 yrs	14	1	15
		45-50 yrs	4	1	5
		50-55 yrs	8	0	8
		55-60 yrs	15	0	15
		<b>Total</b>	<b>221</b>	<b>32</b>	<b>253</b>
	Untrained	25-30 yrs	133	53	186
		30-35 yrs	68	24	92
		35-40 yrs	34	12	46
		40-45 yrs	10	1	11
		55-60 yrs	1	0	1
		60 yrs	1	0	1
<b>Total</b>		<b>247</b>	<b>90</b>	<b>337</b>	
Promotee	Trained	25-30 yrs	1		1
		35-40 yrs	1		1
		40-45 yrs	3		3
		45-50 yrs	11		11
		50-55 yrs	31		31
		55-60 yrs	81		81
		60 yrs	2		2
		<b>Total</b>	<b>130</b>		<b>130</b>
	Untrained	30-35 yrs	2	0	2
		35-40 yrs	12	1	13
		40-45 yrs	34	2	36
		45-50 yrs		0	21
		50-55 yrs	36	1	37
		55-60 yrs	113	0	113
60 yrs		3	0	3	
<b>Total</b>		<b>221</b>	<b>4</b>	<b>225</b>	
No Info	Trained	40-45 yrs	2	0	2
		45-50 yrs	54	14	68
		50-55 yrs	223	24	247
		55-60 yrs	109	13	122
		<b>Total</b>	<b>388</b>	<b>51</b>	<b>439</b>
	Untrained	45-50 yrs	1	1	2
		50-55 yrs	1	2	3
		55-60 yrs	2	0	2
		<b>Total</b>	<b>4</b>	<b>3</b>	<b>7</b>

Source: Compiled by JICA Survey Team (2016) based on the data provided by OFD

### Attachment 2.4.3 Implementation of National Afforestation Programme (NAP) in Odisha

#### 1. Lender Safeguard Policies/ Guidelines

The National Afforestation Programme, the scheme otherwise known as FDA is being implemented in Odisha since 2001-02 with a focus on regeneration, afforestation or reforestation of degraded forests with people's participation. It is operated by the National Afforestation and Eco-Development Board (NAEB), under the Ministry of Environment and Forests (currently the Ministry of Environment, Forests and Climate Change) as a centrally sponsored scheme. The 'Operational Guidelines 2009' lays down a three-tier institutional set-up, namely State Forest Development Agency (SFDA) at the State level, Forest Development Agencies (FDAs) at the Forest Division level, and Joint Forest Management Committees (JFMCs) or Eco-development Committees (EDCs) at the community level for implementation of the Scheme<sup>1</sup>. The objectives of the scheme are:

- Sustainable development and management of forest resources with people's participation, with focus on improvement in livelihood of the forest-fringe communities, especially the poor.
- Increase and/or improve Forest and Tree Cover through rehabilitation of degraded forests and plantation in other areas with participatory forest management approach.

FDAs will sign a Memorandum of Understanding (MoU) with the JFMCs/ EDCs implementing the Scheme indicating mutual obligations, rights and roles. The MoU should include the right of FDAs to stop and withdraw funding from a JFMC/ EDC if their performance is found to be unsatisfactory, along with the procedure to be adopted in such cases. The FDAs, in turn, would also sign a similar MoU with the SFDA.

The components and model cost norms of NAP as prescribed in the 'Guideline, are indicated in the table below.

**Table 1: Components and Model Cost Norm for Implementation of NAP**

S. No.	Component	Model Cost
(i)	Strengthening of JFM	
	(a) Constitution of JFMC (per JFMC)	Rs. 5,000/-
	(b) Micro-planning (per JFMC)	Rs. 5,000/-
(ii)	Awareness Generation	1% of the Planting Cost
(iii)	Micro-planning	2% of the Planting Cost
(iv)	Planting/ Regeneration	Cost norm for each model has been estimated by NAEB, however the rate varies from year to year based on wage rates. Plantation Cost Norms for 2016 has been approved by Odisha Forest Department with prevailing price.
	a) Aided Natural Regeneration (200 plants/hectare)	
	b) Artificial Regeneration. (1,100 plants/hectare)	
	c) Pasture Development/ Silvi-pasture (400 plants /hectare)	
	d) Bamboo plantation (625 plants/hectare)	
	e) Planting of canes (625 plants/hectare)	
	f) Mixed Plantations of trees having MFP and medicinal value (1,100 plants /hectare)	
g) Regeneration of perennial herbs and shrubs of medicinal value (2,000 plants/hectare)		
(v)	Fencing	5% of the Planting Cost
(vi)	Soil & Moisture Conservation	15% of the Planting Cost
(vii)	Entry Point Activities (per Hectare)	Rs. 4,000/-
(viii)	Training & Capacity Building	Rs. 1,000,000 per FDA
(ix)	Value Addition and Marketing of Forest Produce	Rs. 2,000,000 per FDA
(x)	Concomitant Monitoring & Evaluation	2% of the Planting Cost
(xi)	Overheads	10% of the Planting Cost
(xii)	Treatment of Problem Lands	25% of the Planting Cost
(xiii)	Use of Improved Technology	25% of the Planting Cost

Source: Compiled based on NAP Revised Operational Guideline 2009

1. <sup>1</sup> National Afforestation Programme Revised Operational Guidelines- 2009, National Afforestation & Eco-development Board, Ministry of Environment, Forest & Climate Changes, Government of India

The State Forest Development Agency, Odisha was constituted in June 2010 under the Societies Registration Act, 1860, with the PCCF, Odisha as chairperson and CCF (PP&A) as the member secretary and Chief Executive. The chairpersons and member-secretaries of all FDAs of the State are members of SFDA, Odisha. Out of 50 forest and wildlife divisions of the State, 46 divisions have formed FDAs excluding Chilika (Wildlife), Sunabeda (Wildlife), Mahanadi (Wildlife), and STR (Baripada) divisions. Each FDA has a number of the JFMCs (VSSs/EDCs) for carrying out rehabilitation, plantation and ancillary activities under the scheme<sup>2</sup>.

The proposals formulated by the FDAs are forwarded to the SFDA, which in turn, scrutinize and approve the proposals. A State level summary statement of all approved FDA project proposals is submitted to the NAEB, which finally approve the SFDA's Work Plan.

After the approval of work plan by the NAEB, FDAs undertake formation of JFMC (VSS/EDC) / reconstitution and / or awareness raising activities, followed by PRA-based Micro-planning in each project village. The awareness campaign by the FDA highlights the features of JFM resolution of the State, especially benefit sharing, roles and responsibilities of partners, and the need for participatory planning. The micro-planning is started with preparing base-line information about the condition of the forests under the charge of the VSS / EDC. The micro-plan is an integrated plan for both village and forest development. During the preparation of micro-plans, the community identifies the Entry Point Activities (EPA) to be taken up during the project and the mode of its maintenance. Creation of durable community assets to support improved livelihood, especially to the marginalized sections of the JFMC (e.g. landless, poor women, primitive tribes, Schedule Caste etc.) are given preference.

## 2. Achievements under NAP:

As of 2016, the scheme has been implemented in 3,918 VSS/EDC<sup>3</sup>. The area treated under different forestry activities and expenditure incurred is described in the following table.

**Table 2: NAP Achievements and Expenditure of NAP**

Year	Advance Work ha	Plantation ha	Maintenance ha	Expenditure million INR
Up to 2009-10		106,865		983.624
2010-11	1,500	2,784	42,222	77.303
2011-12	7,410	1,995	38,851	75.029
2012-13	1,875	7,410	16,638	93.891
2013-14	4,910	1,875	11,985	70.568
2014-15	6,535	4,910	11,170	Not available
2015-16	1,980	6,455	14,085	160.038
2016-17	8,135	1,980	13,240	Under Compilation
2017-18 Proposed	13,345	8,135	7,570	

Source: based on notes from the PCCF office, OFD

## 3. Future Plans/Provisions of NAP:

NAP is continuing in respective divisions for which work plans have been approved. Each work plan is for a period of 5 years and hence, if approved will continue for the entire period. New proposals are also submitted to the NAEB for approval.

However, from the year 2015-16 the scheme is operated through 60% central assistance and 40% state plan fund, which was originally 100% central assistance. Funds for village development activities have not been released during last two years. The amount required for awareness generation, micro-planning, fencing, soil & moisture conservation, monitoring & evaluation, overheads, etc has been reduced from 35% to 10%. Some of these activities are being undertaken with convergence from CAMPA and MGNREGS.

<sup>2</sup> Notes from the PCCF office, OFD

<sup>3</sup> Highlights of Odisha Forestry Sector, 2016, Pr. C. C. F. Odisha

### Attachment 2.4.4 CAMPA Fund Utilisation in Odisha

Under the provisions of the Forest (Conservation) Act, 1980, when clearances are granted for non-forest use of forest land, certain levies are imposed on the project proponents by the Government to compensate for the loss of forests. This includes the cost of Compensatory Afforestation (CA) on equivalent area, Net Present Value of Forests (NAV), cost of implementing site specific wildlife management plans, etc. To streamline the management of these funds, the “Compensatory Afforestation Fund Management and Planning Authority” (CAMPA) has been set up at the national and state level to monitor, assist and evaluate compensatory afforestation activities in the respective states. States used to formulate Annual Plan of Operation (APO) and submit to national authority for release of funds.

From 2009, State CAMPAs are getting 10% of funds form National CAMPA to use for afforestation, forest conservation, wildlife management and allied activities. The principal amount lying to the credit of State of Odisha as on December 2015 stands at Rs.47,339 million and thus the state is entitled to get about 4,733.9 million (or more if spill over balance is due) for 2015-16. The corpus increases each year.

The state CAMPA, Odisha which came into existence on 14 August, 2009 has formulated 6 Annual Plan of Operations (APO) with the following financial outlay and expenditure. The APO funds released for a year is utilized in the next financial year.

#### Upto Date Allocation and Expenditure

Unit: Rs. in million

APO	Outlay	Fund received from National CAMPA	Expenditure incurred
2009-10	2,383.98	1,310.60	1,241.20
2010-11	1,401.75	1,401.80	887.20
2011-12	1,698.91	1,698.90	1,202.40
2012-13	2,652.69	2,058.20	1,718.50
2013-14	2,145.58	1,800.00	1,819.20
2014-15	4,295.80	3,220.00	781.80
<b>TOTAL</b>		11,551.50	7,650.30

Source: Odisha State CAMPA Annual Plan of Operation, 2015-16; Forest Department, Government of Odisha

Guidelines prescribe the type of activities and percentage of funds for preparation and implementation of Annual Plan of Operations. The outlay for 2015-16 is as under:

#### Annual Plan of Operation 2015-16 (Implementation Year 2016-17)

Component	Outlay of APO 2015-16 (Rs. in million)	Percentage
Implementation of Compensatory Afforestation, etc.	529.5	1 <sup>st</sup> Charge
Working Plan prescription and Plantation	2,329.4	Core Activities (86.89%) >70%
Forest Protection	347.5	
Ama Jangala Yojana	224.1	
Wildlife Protection and Management	1,047.0	
Sacred Groves	60.9	
Unnat Chulah	22.5	
Infrastructure Development	548.4	Non Core Activities(13.11% ) < 30%
Maintenance of Research garden and other research activities	20.0	
Strengthening of GIS Cell	40.0	
<b>TOTAL</b>	5,169.3	

Source: Odisha State CAMPA Annual Plan of Operation, 2015-16; Forest Department, Government of Odisha

The provision for Ama Jangala Yojana (AJY) includes the following works to be taken up with convergence of CAMPA fund:

- Survey and demarcation of assigned areas to VSS
- Capacity building of VSS and SHG
- Selection of sites, preparation and approval of Plan & Estimates of CMC measures
- Implementation of SMC measures
- Micro plan and treatment map preparation
- Silvicultural operations under ANR
- Setting up of nursery and maintenance

CAMPA fund will continue to be a long term resource base for conservation and management of Forests.

## Attachment 2.4.5 Note on Ama Jngala Yojana (AJY)

### 1. Objectives

The main objectives of the scheme are listed below<sup>1</sup>:

- To conserve and restore degraded forests through forest restoration initiatives.
- To arrest further degradation of forests through participatory forest conservation and management strategy
- To empower forest dependent communities by building up their capacity to participate in the sustainable forest management
- To improve the livelihood opportunities of the forest dependent communities so as to reduce their dependence on forests

### 2. Description

The project envisages covering 7,000 VSS/EDC in 30 Territorial and Wildlife Divisions of the state over a period of three years commencing from 2016-17 and another three years from 2019-20 for maintenance of plantations. It proposes to assign 50 ha of degraded forests to each VSS/EDC, out of which 10 ha will be maintained as the 'Control Plot', 5 ha will be the 'Demonstration Plot' and the remaining 35 ha will be treated under Aided Natural Regeneration (ANR) with gap planting @ 200 plants/ ha. In about 500 VSS/EDC, where suitable land for ANR is not available, an area of 10 ha will be covered under block plantations. Activities such as silvicultural cleaning, thinning, climber cutting, fire line tracing & maintenance will be carried out in ANR component. In gap and block plantations, indigenous and site specific timber, firewood, bamboo and Non-Timber Forest Product (NTFP) species will be planted. The design for Block plantation will be prepared based on the soil and moisture condition of the area. The plantation design is to be made in such a manner that the closure of canopy can be achieved within the scheme period. The subsidiary silvicultural operations (SSO) will be carried out from the 5th year onwards as per the requirement of the crop and management prescriptions prepared with the help of experts. Soil and moisture conservation (SMC) works as required will be carried out in both ANR and block plantation models<sup>2,2</sup>

The year wise area to be treated under the ANR and block plantation is given below:

<b>Planned Treatment Area for ANR and Block Plantation under AJY</b>				
<b>Year</b>	<b>No. of VSS</b>	<b>Area in Ha</b>		
		<b>ANR with Gap Plantation</b>	<b>Block Plantation</b>	<b>Total Area Treated</b>
2016-17	2,000	70,000	2,500	72,500
2017-18	2,500	95,000	1,250	96,250
2018-19	2,500	95,000	1,250	96,250
2019-22	2019-20 to 2021-22 three years maintenance of Plantations			
<b>Total</b>	<b>7,000</b>	<b>260,000</b>	<b>5,000</b>	<b>265,000</b>

*Source: Course Material- Capacity Development Programme on Implementation of Ama Jangala Yojana (AJY), Odisha Forestry Sector Development Society*

<sup>1</sup> Course Material- Capacity Development Programme on Implementation of Ama Jangala Yojana (AJY), Odisha Forestry Sector Development Society

<sup>2</sup> Ditto



Besides, the scheme will implement the following activities:

- 1) Engagement of NGO for community mobilization and institution building
- 2) Survey and demarcation of JFM area
- 3) Organising VSS/EDC meetings @ Rs. 1500/- per annum
- 4) Capacity building of village community by imparting trainings
- 5) Engagement of Animator for each VSS/EDC of Rs. 1000/- per month
- 6) PRA & Micro-plan preparation
- 7) Preparation of Vegetation and Land-use maps
- 8) Entry Point Activity (EPA) @ Rs. 1.0 lakh per VSS/EDC
- 9) Theme based trainings and demonstrations to the VSS and SHG members on various site specific forestry, income generating and livelihood options
- 10) Facilitate SHGs for income generating activity (IGA)
- 11) Construction of a VSS building for organizing meetings, record keeping and storage of SHG products @ Rs. 1.50 lakh per VSS/EDC
- 12) Publicity and Communication
- 13) Support services for DMUs and FMUs
- 14) Infrastructure, logistics and mobility support for PMU, DMU and FMUs

#### **Major Progresses**

Year	Activities Undertaken	Divisions Covered	No of VSS	Micro Plan Prepared
2015-16	VSS selection, community mobilization, NGO deployment, Training, Survey & demarcation			
2016-17	Training, Preparation of Micro plan, SMC	24	2,346	459

Source: Discussion with respective functionaries of OFSDS, CAMPA and MGNREGS

### 3. Project Funding:

The Government of Odisha has approved the total Project cost at Rs. 11,700.3 million for a period of six years from 2016-17 to 2021-22 vide their letter dated 30 September 2015.

The project cost is proposed to be met from the following sources:

#### **Planned Treatment Area for ANR and Block Plantation under AJY**

Sl. No.	Scheme	Relevant Activities	Rupees in Million		
			Total Proposed	Amount Released in 2015-16	Amount Approved for 2016-17
1	CAMPA	ANR, Plantation	5,113.10	186.20	1,483.30
2	State Plan	Staff salary, NGO, Animator, Capacity building	2,853.50	112.00	563.50
3	MGNREGS	SMC, EPA, Road	3,221.80	-	150.00
4	NRLM	IGA, Livelihood development	511.90	-	140.30
<b>Total</b>			11,700.30	-	-

Source: Discussion with respective functionaries of OFSDS, CAMPA and MGNREGS

### **Attachment 2.9.1 Poverty Reduction in Odisha**

According to the Economic Survey Report 2015-16 of Odisha the overall poverty level has reduced from 60.80% to 35.69% between 2004 and 2011-12 whereas for the STs it has marginally reduced from 84.40% to 63.52% and for SCs, it has reduced from 67.90% to 41.39%. Odisha has reduced poverty by 24.6% between 2004-05 and 2011-12. Per capita income in real terms has increased from Rs. 14,862 in 1999-2000 to Rs. 25,415 in 2012-13. The tax revenue has increased by 17.43% and non-tax revenue by 10.40%.

The faster poverty reduction has been made possible because of higher growth rate achieved by the State Government. The Government claims that it is striving consistently and continuously to achieve sustainable and inclusive higher economic growth, and reduction of regional, social and gender disparities. The state economy has been growing at higher rate since 2002-03. The economy grew at an annual real average rate of 8.82% at 2004-05 prices during the 10th plan period and at 7.05% in the 11th plan period. The growth rate during 2014-15 has been 8.78%. The industry and service sectors have emerged as main drivers of growth. The consistent growth rate confirms to the inclusive growth objective of the State. The State has taken lot of efforts to address issues in fiscal deficits and debt burden and measures for institutional strengthening, fiscal correction, consolidation and efficient management, which has led to significant turnaround in State finances.

The State's development approach and strategies have been mentioned below:

#### Approach

- Odisha's economy needs to grow faster than the national average over a long period of time in order to catch up with the nation.
- Agriculture and allied sectors need to grow at higher rates over a long period of time.
- Sustained efforts are needed to mitigate adverse impacts of natural calamities and other shocks on Odisha's economy and people.
- Special attention needs to be given to depressed regions, marginalised classes including ST, SC and women in order to substantially reduce regional, social and gender disparities and to promote substantially their human development indicators.
- With a view to addressing the problem of unemployment and under-employment, particularly among educated and uneducated young persons, special efforts are required to improve their employable skills, education and other soft skills to harness opportunities that may come up for them both in and outside Odisha.
- Infrastructure including roads, ports, railways and irrigation facilities need to be adequately augmented and improved.
- As Odisha has a high incidence of poverty, special efforts are needed to reduce poverty at a faster pace.

#### Strategy

- Emphasis on building rural and urban productive infrastructure.
- Strengthen the momentum already gained in mobilizing rural poor with emphasis on women and vulnerable groups.
- Strengthening social security system to reduce IMR, MMR, provide food security, and increase female literacy etc.
- Focused efforts for reducing poverty and achieving Millennium Development Goals (MDG).

- Improving governance and service delivery mechanisms.
- Promoting broad-based growth, encouraging private investment, public private partnership (PPP), and public private community partnership (PPCP).
- Emphasis on creation of adequate self-employment / employment opportunities.
- Enhancing and promoting Convergence at District level across large number of Government programmes through strengthening Integrated District Planning to achieve the Millennium Development Goals (MDGs).
- Focus on household based Micro-Planning to provide support for livelihoods of most vulnerable groups in different parts of the State with special emphasis to KBK region.
- Improved monitoring of outcomes of key human development indicators.

Odisha had/has been receiving supports from DFID, IFAD, WFP, JICA and the World Bank for various livelihood improvement projects (OTELP, WORLP, NRLP, TRIPTI, OFSDP, OCTMP etc.). Some of the programmes/ projects/ schemes (Externally aided, Central Sector and State Sector) contributed to faster poverty reduction are Odisha Rural Livelihoods Mission/ JEEBIKA/ SGSY, WORLP, OTELP, RLTAAP, MGNREGS, IAY, Food Security Schemes (TPDS, AAY, MDM, EFP, SNP), Jananidhi - promoting private Lift Irrigation Points, Increase in purchase price of Kendu Leaves benefiting 0.8 million KL pluckers, Integrated Livestock Development programme (Kalyani), Coverage of fishermen in Group Accident Insurance Scheme, Mamata Yojana providing partial wage compensation for pregnant and nursing mothers, Bhima Bhoi Samarthya Abhijan, benefiting persons with disability, Madhubabu Pension scheme for social security, Grama Sabha Sashaktikaran Karyakarma for effective participation of people in development process, Rastriya Swasthya Bima Yojana covering 3.3 million BPL families, Revision of minimum wage for all categories of workers, Provision of rice at Rs.1 per kg, rural housing and rural electrification, Biju KBK Yojana etc.

Affordable Housing Scheme, Odisha Property Rights to slum dwellers, Promotion of Public Private Partnership in street lighting, solid waste disposal, city bus services etc., and placement linked skill training programmes for urban youth, introduction of Odisha Urban Street Vendor Policy, preparation of slum free city plans and urban sanitation plans have contributed to poverty reduction in Urban Areas.

Odisha has distributed land rights to more than 0.378 million forest dwelling tribal families under the Forest Rights Act, 2006 and out of them 0.23 million were supported for land and other infrastructure development for livelihood enhancement.

State Youth Policy has prioritized skill development and employment generation for the youth. Mission Shakti in order to empower the women, has targeted nearly 5.8 million women in the rural and urban areas through 0.45 million women SHGs.

The National Food Security Act 2013 is being implemented in the State from November 2015 targeting 8.483 million families including 31.833 million beneficiaries under Priority Household (PHH) and Antyodaya Anna Yojana (AAY). Food grains to the tune of 0.148 million tonnes rice and 25.36 thousand tonnes wheat are being supplied every month to the most vulnerable sections of the society @ Re.1 per kg. Under this programme each priority household is entitled to avail 5 kg. of rice or wheat or combination of both per person per month @ Re. 1 per kg. Each AAY Family gets 35 kg. of rice @ Re. 1 per kg. per month.

Aahaar is another programme to address the hunger issue of urban poor, was initially launched in five Municipal Corporation of the State in April 2015. The objective of the programme is to provide

cooked hot meals to the poor and needy people at affordable cost of Rs. 5 per meal. The beneficiaries are mostly patients, attendants of the patients, construction workers, labourers, rickshaw pullers, auto drivers, street children, needy students, destitute etc. Currently the programme is implemented in 73 towns of all 30 districts through 110 outlets covering 66,650 beneficiaries per day.

In spite of implementation of various programmes, projects and schemes and huge spending in the backward areas of the state, poverty reduction is slow and the incidence of poverty is higher in southwest and northwest region of the State. According to The District Development and Diversity Index report for India and Major States, 2015 published by US India Policy Institute, eight districts of Odisha - Malkanagiri, Nuapada, Nawarangapur, Boudh, Mayurbhanj, Gajapati, Kandhamal and Kalahandi are featured in the list of most backward 50 districts of the country.

**Attachment 2.13.1 List of Externally Aided Projects (Annual Plan of Odisha 2016-17)**

Sl.no.	Name of the Sector/Project	Donor Agency/Executing Department	Year of Commencement /Year of Completion (contemplated)	Latest Estimated Project cost	Outlay for 2015-16	Outlay for 2016-17
<b>I</b>	<b>IRRIGATION &amp; FLOOD CONTROL</b>					
1	Odisha Integrated Irrigated Agriculture & Water Management Investment Project	<u>ADB/OFID</u> Water Resources Department	2008-2009/ 2017-2018	26,892.00	22,000.00	13,500.00
2	Odisha Community Tanks Management Project	<u>WORLD BANK/</u> Water Resources	2008-2009/ 2015-2016	39,672.00	12,000.00	5,000.00
3	Dam Rehabilitation and Improvement Project(DRIP)	<u>WORLD BANK/</u> Water resources	2012-13/ 2017--2018	14,776.60	3,800.00	6,100.00
4	Rengali Irrigation Project (LBC)	<u>JICA/</u> Water Resources	2014-15/ 2022-2023	225,530.00	18,000.00	14,500.00
<b>II</b>	<b>ENERGY</b>					
5	Odisha Transmission System Improvement Project	<u>JICA/</u> Energy	2016-17/ 2020-2021	128,900.00		10,000.00
<b>III</b>	<b>TRANSPORT</b>					
6	Odisha State Roads Project	<u>WORLD BANK/</u> Works	2008-2009/ 2016-2017	143,119.00	26,200.00	17,500.00
<b>IV</b>	<b>GENERAL ECONOMIC SERVICES</b>					
<b>V</b>	<b>SOCIAL SERVICES</b>					
7	Odisha Integrated Sanitation Improvement Project (Cuttack and Bhubaneswar city)	<u>JICA, Japan</u> Housing & Urban Development	2008-2009/ 2016-2017	297,466.00	14,078.00	20,000.02
8	Odisha Urban Infrastructure Development Fund (OUIDF)	<u>KFW, German</u> Housing & Urban Development	2012-13/ 2016-17	46,400.00	7,000.00	2,000.00
9	Rehabilitation of Urban Slums in Berhampur City (Odisha Disaster Recovery Project)	<u>WORLD BANK/</u> H & UD	2013-14/ 2018-19	21,000.00	7,000.00	4,000.00
10	# Innovative Municipal Financing	<u>ADB</u> H & UD	2016-17/ 2019-2020	65,800.00		8,500.00
11	Odisha Girls Incentive Programme(OGIP)	<u>DFID</u> ST & SC Development.	2012-2013/ 2016-2017	7,440.00	4,200.00	2,583.00

Sl.no.	Name of the Sector/Project	Donor Agency/Executing Department	Year of Commencement /Year of Completion (contemplated)	Latest Estimated Project cost	Outlay for 2015-16	Outlay for 2016-17
12	Odisha Tribal Empowerment and Livelihood Programme (OTELP)	IFAD	2003-04/2015-2016	41,598.00	800.00	10.00
13	Odisha PVTGs Empowerment and Livelihood Programme	IFAD	2015-2016/ 2022-2023	79,541.00		1,000.00
14	Odisha Skill Development Project	ADB/ SD& TE	2015-2016/ 2019-2020	105,100.00	10,500.00	10,000.00
15	#Strengthening of Higher Education in Odisha	WORLD BANK/ H.E	2016-17/ 2020-2021	101,970.00		8,875.00
16	# Odisha Craft Skill Development & Rural Employment " Utkarsh " Project	WORLD BANK/ HT & H	2016-17/ 2021-2022	45,000.00		7,000.00
VI	<b>GENERAL SERVICES</b>					
17	Construction of 30,000 Cyclone damaged houses in Ganjam & Puri Districts and around Chilika lake( Odisha Disaster Recovery Project)	WORLD BANK/ Revenue & DM	2013-14/ 2018-19	115,047.00	42,000.00	32,000.00
	<b>Total Allocation</b>				<b>167,578.00</b>	<b>162,568.02</b>
	<b>Odisha Modernizing Economy Governance</b>				<b>3,000.00</b>	
	<b>Administration</b>				<b>21,000.00</b>	
	<b>Total Allocation</b>				<b>191,578.00</b>	

#Projects in Pipeline

\* Includes Rs.3,000 lakh for Odisha Modernizing Economy Governance & Administration (OMEGA), Rs.21,000.00 lakh for Cyclone proofing of power infrastructure (Odisha Power Sector Emergency Assisted Project) and Rs.11,078.00 lakh (Rs.10,278.00 lakh for Odisha Integrated Sanitation Improvement Project and Rs.800.00 lakh for Odisha Tribal Empowerment and Livelihood Programme) provided in Supplementary Budget during 2015-16

### **Attachment 3.2.1 Catchment Area Treatment Plan (CATP)**

The Catchment Treatment Plan (CATP) is under implementation through the Odisha Forestry Sector Development Society (OFSDS) for sustainable management of catchments of Upper Kolab hydro electric project and Upper Indravati multi-purpose river valley project. The Upper Indravati Project (UIP) extends over an area of around 264,013 ha and is located in Koraput, Kalahandi, Rayagada and Nabarangpur Districts covering 10 CD blocks. The Upper Kolab Project (UKP) extends over an area of around 162,499 ha and is located in Koraput District covering 7 CD blocks. The forest area within the catchment is getting degraded due to heavy biotic interference thus causing high sedimentation of the reservoirs. This part of the state is characterized by uneven distribution of rainfall leading to frequent floods and droughts. The Project aims at treating an area of 139,000 ha in UKP and 228,000 ha in UIP over a period of 7 years at an investment of about Rs. 6,000 million.

The objectives of the scheme are as follows<sup>1</sup>:

- Soil and moisture conservation in the catchment area and reducing silt accumulation in the reservoir and reduction in surface run-off
- Conservation of bio diversity and increase in bio-mass production
- Diversified agriculture (integrated farming system) and productivity enhancement
- Promotion of livelihood diversity and also to reduce biotic pressure on natural resources
- Promotion of sustainable participatory and community based natural resource management
- Poverty reduction

The important components of the project are - afforestation, soil and moisture conservation (SMC) measures in the catchment, entry point activities, institution buildings, capacity building of stake holders, different income generation activities and livelihood improvement programmes for the Scheduled Caste and Scheduled Tribe population living in the catchment areas<sup>2</sup>.

The execution of the scheme was designed as per the ‘Common Watershed Guidelines, 2011’ issued by Government of India. Accordingly, Project Implementing Agencies (PIA) were constituted at district level with a 4-member Watershed Management Team (WMT) for facilitation and implementation. In each Micro Watershed covering an area of 500 -1,000 ha, ‘Watershed Committees’ were formed associating the VSS. Some technical experts and administrative staff were engaged. Orientation training programmes and interface workshop meetings were organized<sup>3</sup>.

Though the DPR for 204-15 was approved for Rs. 54.51 million, only 12.01 million was released, which was utilised for staff salary. Subsequently 78 ha plantation has been taken up in 4 clusters of UKP with funds received from MGNREGS. SMC works have been done by utilizing CAMPA funds<sup>4,3</sup>

Due to fund constraint the scheme is virtually non-operational. The experts are withdrawn/ getting transferred from the Project Implementing Agencies. Now, either CATP has to be closed or has to strive for funds from other sources such as MGNREGS and/or state CAMPA to carry out activities further.

In the meantime, the Government of India has launched a new project “Pradhan Mantri Krishi Sichayee Yojana” (PMKSY) amalgamating some ongoing schemes including ‘Integrated Watershed Management Programme’ (IWMP). The activities to be implemented in IWMP are as follows<sup>5</sup>:

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<sup>1</sup> Note prepared by State Nodal Unit, OFSDS, Bhubaneswar

<sup>2</sup> Highlights of Odisha Forestry Sector, 2016, Pr. C. C. F. Odisha

<sup>3</sup> Information based on discussion with concerned officers

<sup>4</sup> Information based on discussion with concerned officers

<sup>5</sup> <http://pmksy.gov.in/>

- Water harvesting structures such as check dams, nala bund, farm ponds, tanks etc.
- Capacity building, entry point activities, ridge area treatment, drainage line treatment, soil and moisture conservation, nursery raising, afforestation, horticulture, pasture development, livelihood activities for the asset-less persons and production system & micro enterprises for small and marginal farmers etc.
- Effective rainfall management like field bunding, contour bunding/trenching, staggered trenching, land levelling, mulching etc.

The PMKSY has an allocation of Rs. 500 billion for 5 years starting from 2015-16. The activities proposed in the Catchment Area Treatment Plan can dovetailed with PMKSY.



### Attachment 3.3.1 Summary of Situation Analysis in Five Proposed Wildlife Divisions<sup>1</sup>

WL Division	PA	Existing Management Plan period	Conservation Significance	Conservation - People Interface	Remarks
Hirakud	Debrigarh	Existing management plan is for the period between 2016-17 and 2025-26	Good population of bison, sambhar, chital, leopard and elephant. Hirakud reservoir and its island provide wintering ground /congregation of aquatic birds	Resource related pressure from more than 100 villages in south-western border, especially for bamboo; elephants living in sanctuary cause conflicts with people in neighbouring Bargadh Territorial Division Settlement of four forest villages- two in the core area. One of the villages in core area is almost ready to relocate. Under FRA, 72 no. of individual claims were settled. Only one EDC is functioning; earlier engaged in eco-tourism activities; good opportunity for eco-tourism promotion	Although have very good biodiversity conservation value, threats are limited; potential for enhancing ecotourism and nature interpretation values are high. <u>Review:</u> Can be considered under the Project only for enhancing ecotourism and nature interpretation values.
Bamra	Badrama WLS and Khalasuni WLS	Existing management plan of 2007-08 to 2016-17 period has expired. Management Plan is under revision	Good population of Elephants; Part of Elephant reserves and also elephant corridor	Settlement of 30 villages inside the sanctuary and around 140 villages on the fringe areas; Severe human-elephant conflict in villages inside and outside sanctuaries. A total 27 EDCs are created (24 in Badrama WLS and 3 in Khalasuni WLS); members are part of different protection squads;	Conservation significance is very high but challenges are linked with human-elephant conflicts in both within and adjoining villages. <u>Review:</u> Can be considered under the Project
Mahanadi	Baisapalli WLS and Satkosia Gorge	Part of Satkosia Tiger Reserve; conservation plan is under revision and review	Good population of elephant and reports of tiger presence; good crocodile population in Mahanadi river	Settlement of 60 villages in and around sanctuary; Poaching of animals and timber; Human-wildlife conflicts are frequent; 15 EDCs are currently functioning; engagement in Eco-tourism activities; village youths are part of different protection squads; LWE activities are reported;	Conservation significance is very high as part of Satkosia TR. But area have security concerns and challenges are more directly linked with poverty management of local population. Enough support for ecotourism and habitat improvement work. <u>Review:</u> Can be dropped from the Project.
Keonjhar	Hathgadh	Currently managed with 2010-11 to 2019-20 management plan; Proposal has been moved to include this under Simlipal Tiger Reserve and thus will get new management /conservation thrust	Having forested connectivity with Simlipal tiger reserve and thus support good population of tiger, elephant, sambhar, chital; Hathgadh reservoir provides support to aquatic wildlife including birds	Total ten villages inside the Sanctuary- two are in core area; Practice of hunting and poaching are reported commonly; timber poaching is also common; regular events of fire; mining activities in the surrounding areas; Livestock grazing is common occurrence; Under FRA, pattas are given to villagers in few villages In the Sanctuary no EDCs are constituted so far. Village youths are part of different protection squads.	Conservation values are very high and soon going to be included in Simlipal tiger reserve; <u>Review:</u> Can be dropped from the Project.

Source: JICA Survey Team (2016) based on the site visits.

<sup>1</sup> Out of five WL Divisions proposed under DPR, Sunabeda WL division was unanimously considered 'not fit' for project because of higher security concerns owe to LWE activities.

## Attachment 3.4.1 Case Observations and Findings of Infrastructure Development in OFSDP-I

### 1. Arjunabila VSS

#### 1.1 Basic Information

Date/Time	19.9.2016
Venue	Village: Arjunabila Gram Panchayat: Gadadharpur Block: Ghatagaon District : Keonjhar
Objective	To understand forestry related activities

Arjunabila is a village in Gadadharpur of Ghatagaon block of Keonjhar District. During visit, the president and secretary of VSS explained about the VSS activities conducted during OFSDP-I. After the meeting, moved to JFM area of Arjunabila VSS which is approximately 80ha of forest protected by VSS under the JFM activity.

Majority of the village population are tribals. Most of them possess less than 0.5 ha of land. They are all traditional cultivators. They do not have shops or markets. The nearest bank is about 25 -30 km away. The economy of the Arjunabila village is dependent on paddy cultivation and forest produces.

The village economy is active in the event of a good harvest but when the harvest fails, the economy is flaccid. The economy is also dependent on the seasons. In the dry season most of the wet rice fields become unproductive. This enforces many villagers to move to the town in search of new jobs. As a result, the village economy becomes inactive. In contrast, the onset of the wet season brings back the villagers to their homes to commence agricultural and allied work. Those who return from the towns bring with them the money, which is used to buy seed, fertilizer, etc. The lack of financial institutions in the village, had forced the villagers to depend on the services of moneylenders for years.

Hence, the villagers unanimously decided and involved in plantation activities through JFM. A VSS committee was formed in the year 2010 consisting of active members to look after the plantation activity and existing forest protection.

80 ha of land was protected by villagers though VSS. The VSS Committee has soldered its responsibility to maintain since five years in close collaboration with forest department along with potential Self-Help Groups (SHGs contributing labour for the construction of water harvesting structure (WHS) and other SMC works. Due to this, people found there is a tremendous growth in forest for soil and moisture conservation and wild animals started coming to the WHS for drinking water.

#### 1.2 Major Findings

##### Soil Moisture Conservation Structure:

Loose Boulder Check Dams (LBCD) and Continuous Counter Trenches(CCT) was done in this VSS for which they have spent Rs. 71,428/- from available budget. Initially they were not aware of LBCD. OFSDP staff conducted practical training along with exposure for the villagers prior to taking up SMC work. Exposure was organised to Bolangir and Deogarh divisions for soil moisture conservation activities conducted by the watershed department. Due to the exposure and training people understood and realised SMC work is important for them to retain soil moisture for forestry development. As per VSS due to resource constraint they were able to do few structures in their forest area.



**JFM activity - Loose Boulder Check Dam ( LBCD) in Arjunabila VSS, Keonjhar District**

- The Lose boulder structures are approximately 1 to 1.5 m length. All the structures are more than two years old and stabilized with soil.

- Only challenges they faced in SMC work that approximately 20% structures damaged which they could not repair it due to non availability of maintenance fund.
- Average cost they spend was Rs. 5,000/- for 10'x 10' x5' size of LBCD and this was estimated @ Rs. 150/- per day labour rate. It needs revision as per the latest labour rate for future intervention.

In the JFM area also found few continuous contour trenches of 1m length in hilly/sloppy areas. Since this particular SMC measure will be required to be taken up on hill slopes of various degrees along the contour lines. The cost norms provided for CCT in sloppy areas is 130 man-days for the total earthwork of 187.50 cu.m per ha. The total cost of earthwork was Rs. 19,500/- and expenditure was there Rs. 105/- per running meter. For digging of continuous contour trenches (CCT) for one running meter length would be required 0.70 man-day.

One WHS, a part of biodiversity component, was constructed inside the forest area of Arjunbila JFM area. As per the president and secretary of VSS it is very effective for plantation, ground water recharge, sanitation use and wildlife drinking.

The beneficiaries opined that due to these structures the formation gully has been checked and soil moisture retention is there due to which forest species growth visible.

People explained, it is primarily beneficial for land reclamation, rejuvenation of Nallah/Gully and forest.

Long ago villagers were constructed a cross earthen bund over the Nallah/gully which was every year washed away by flash flood.

Benefits from this project:

- It has provided rural employment
- Got supplementary moisture conservation
- Reduced the soil erosion
- Created moister region around the project and helpful for plantation in forest
- Enhanced the growth of plantation

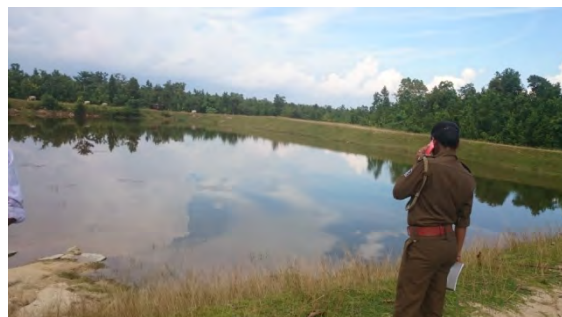
The VSS President of Arjunbila village who died but he could construct a series LBCD in JFM area. He got an exposure and on field training through OFSDP-I and realized LBCD is a useful structure for forestry development. In the process, he took initiative for LBCD taking confidence to all VSS committee members. Within one year people got the result that soil has been arrested and moisture retention started.

The gully has been stabilized within two years comparing to earlier and the beneficiaries expressed for the long term sustainability they should take their own initiative to construct more number of structures. Loose boulder structures in series with vegetative support where a large quantum of silt deposition depicts effective soil conservation measures.

At last VSS members suggested if maintenance cost will be supported by project to raise the height of stabilized LBCD, more soil retention and moisture conservation possible in the JFM area.



**Loose Boulder Check Dam ( LBCD) in  
Arjunbila VSS, Keonjhar District**



**Non - JFM activity - Water Harvesting  
Structure ( WHS) in ArjunbilaVSS**

## Other Infrastructure:

### VSS Training Hall:

During OFSDP-I to build capacity of VSS, support was provided to this VSS to have a VSS building to keep records, conduct meetings and use it as a multiple centre such as information centre, place for organisation of awareness camps etc. As per VSS members, many workshops were organised for VSS members in VSS level during the project to discuss about project implementation components along with activities. VSS level manual, guidelines were discussed with each VSS members for smooth functioning of VSS and proper implementation of the project. VSS building is the information dissemination hub for the beneficiaries as well as members of the village.

The length of the VSS meeting hall was 27' and width 16'. This was constructed in a common place in VSS area which is accessible to all villagers. The Project contribution was Rs. 108,000/- and VSS contribution Rs.18,000/- in terms of material and labour. This is constructed with brick and cement with normal stone foundation. The roofing material used as asbestos sheet which is locally available. This building has two rooms out of which one office and a meeting hall. This amount was approved by the department as per the schedule rate of 2008-09. The cost of labour was Rs. 70/- only. In future, construction of these structures need to be revised by the latest cost norms and labour rate.



VSS Training Hall in Arjunbila village of Gadadharpur Grampanchayat, Keonjhar District

## 1.3 Other Findings:

The team members discussed about the forest issues in the meeting. There are some views from Villagers:

- Due to regeneration of forest, herbivorous animals population increased and their dung helps regeneration.
- People said they get lot of benefit out of the Jungle.
- There are some species planted like Harida, Bahada, Amla which would help next generation
- Regarding maintenance of forest, they do watch and ward but some outside VSS people comes and cut trees. The villagers informed them not to enter in to 80ha jungle which is now protected and maintained by us. No legal action taken against them so far.
- Periphery area of the forest is affected due to outsiders intervention.
- Mostly all female go to forest to collect mushrooms in rainy season and once in a week for fuel wood.

## 2. Murgapahadi VSS

### 2.1 Basic Information

Date/Time	19.9.2016/3 PM
Venue	Village: Murgapahadi GramPanchayat: Gadadharpur Block: Ghatagaon District : Keonjhar, Odisha
Objective	To understand forestry related activities

## 2.2 Major Findings

### SMC and Forest Management Structure:

Loose Boulder Check Dams:

There are 220nos LBCD works done in forest area. In the hilly areas due to excessive soil erosion the gullies formed in different areas. In this area which is less than 10% slope the loose boulder check dam works taken up in the JFM area. The total expenditure was Rs. 144,252/- in soil moisture conservation work. There are staggered contour trenches also done in village area which has arrested soil as well as moisture retained for the plant growth. The plantation activities taken up in the downstream of the trenches for which growth of plantation is visible and after rain moisture remains for a longer time due to availability of water inside small trenches. Cost norms followed as per OFSDP and PWD 2014 schedule of rate. For future use need revision as per the latest labour rate.

### Other Infrastructure:

Renovation of Gramadevipitha & Sacred Place compound wall:

The Gramadevipitha (Platform), Culvert renovation and Sacred place compound wall structures was constructed as one of entry point activities during the project period of OFSDP-I.

The detail specifications were not available at village level for review. As per the VSS members got the information that this has been done during entry point activity in 2009-10.

The villagers were always facing the problem of Sacred place compound wall and a platform near village deity throughout the year. After prolonged discussion with the community in the meeting it was decided that there is a need of Sacred place compound wall and a platform near village deity in this village. Continuous effort given by OFD officials for construction of Sacred place compound wall and a platform near village deity under EPA program to mobilize community prior to implement OFSDP-I in the village with people's participation. This has resulted well and motivated people to take the project further.

Cluster Godown:

In this village cluster, godowns are constructed in this village. The length of the godown is 75'10'' and width 10'. This building costs Rs.1, 318,000/- and it caters to the cluster for storing of non timber forest products for the marketing in future to fetch better price. The value addition of products is also taken place here manually as well as with machines.

## 3. Pitanaua village inside Hadgrah Sanctuary

### 3.1 Basic Information

The Pitanaua village is situated inside the Hadgarh Sanctuary.

Date/Time	20.9.2016/ AM
Venue	Village: Pitanaua Gram Panchayat: Hadagada Block: Hatadihi District : Keonjhar
Objective	To understand forestry related activities



### 3.2 Major Findings

#### SMC and Forest Management Structure:

There were no SMC works taken up in this area except for sanctuary management related activities.

#### Other Infrastructure:

In this wildlife sanctuary, watch towers were constructed inside the reserve forest. The cost of construction of the watch tower of the photo was Rs.500,000 and details were not available.



**Watch Tower in Hadgarh Sanctuary**

#### Other Findings:

The issues related to resettlement is prevailing in this village and discussion is on with villagers and FD department.

As per the discussion with people, original village Malliposi evacuated due to construction of Hadagada irrigation project during the year 1966-67. Some of them (approx. 50HH) migrated to Pitanaua village and now approximately 200 HHs are living there. There are 87 forest cases filed against them, while they resettled inside this forest. All people applied record of rights under forest rights protection act. Majority received less than one acre land and two to three numbers of people got rights for more than one acre land. People are engaged in agriculture, NREGS and leaf stitching work. They get Rs.400/- per family against leaf stitching work. They also do wage labour work and get Rs. 250/- per day. They pay Rs. 50/- to vehicle for transportation from village to worksite and rest Rs. 200/- keep for their expenses.

- All the villagers belong to tribal community like Saunta and Bathudi.
- Currently they fetch more money from Kanguroot ( Anantamula) and Char.
- Everybody has goat varies from 2-12 nos and some chickens
- The village people are always trying to help forest department to protect forest.
- Most of they grow vegetables like okra, brinjal etc and fruit crops like banana, pineapple, coconut, mango, jackfruit etc.
- Issues are lack of communication, school, hospital, etc
- Mostly they buy salt, kerosene and salt from outside the village.

They got exposure to Jashipur of Mayurbhanj District resettled village to get clarity on evacuation. They also understood the benefits received from govt. The 50% agreed households are waiting for government response on this issue.

Issues	Findings
<ul style="list-style-type: none"> <li>● Pitanaua is a Resettled village since 1967</li> <li>● About five decades passed, still living in forest</li> <li>● Relocation motivation is a challenge for OFD officials</li> <li>● Village is lack of communication , school and primary health centres</li> </ul>	<ul style="list-style-type: none"> <li>● Livelihoods depends on NTFP products</li> <li>● They have small piece of land for cultivation</li> <li>● More than 87 forest cases are there against villagers</li> <li>● Partly motivated for the relocation to plain areas</li> </ul>

## Attachment 3.4.2 Findings of General Infrastructure Development in OFSDP-I

### 1. Strengthening of EB

#### PMU, DMU & FMU extension and renovation of buildings;

During OFSDP- I, the PMU, DMU and FMU extension and renovation of buildings were done. As per discussion with the OFD officials, due to extension and renovation of buildings at PMU level the work efficiency enhanced and professionals from open market got an enabling environment for working with OFD. The detail specifications and quantities are not available but visibility of extension and renovation is there. At DMU and FMU level renovation and extensions were made and created the working environment. The space like working office rooms and stores were created during phase1.

PMU and district level training centres renovated to accommodate more number of trainees for capacity building of department officials. The PMU state forest training and research institute renovation work was done and many parts left due to budget constraint.

### 2. Capacity Building of VSS

#### VSS Meeting Hall

Support was provided to each VSS to have a VSS building to keep records, conduct meetings and use it as a multiple centre such as information centre, place for organisation of health check up camps, awareness cams etc. Sensitization of workshops were organised for VSS members in VSS level at the beginning of the project to discuss the project strategies, structure and functions of VSS and project components along with activities. VSS level manual, guidelines were discussed with each VSS members for smooth functioning of VSS and proper implementation of the project. VSS building is the information dissemination hub for the beneficiaries as well as members of the village.

The details of cost and specifications as follows

Infrastructures	Size	Cost (In Rupees)	Location	Observations
Meeting Hall of VSS	Length 27' & width 16'	126,000	Any common place in VSS area. Project contribution Rs. 108,000/- and VSS contribution Rs.18,000/-	Maintenance is not there. As discussed in field with the VSS members, Maintenance support expecting from OFD. Local materials used for building which is easily maintainable.

Source: Estimates print copy collected from FMU office, Keonjhar – Field Visit

#### Drying Yard and Sal Leaf Godowns

Drying yard and sal leaf godowns constructed during phase1 in many clusters. There are approximately 42 godowns constructed in different locations at FMU level. More than 100 clusters created but due to non availability of common/govt land the structures could not be established till end of the projects. Identification of proper non controversial locations is important factor to develop this facility at field level.

The specification and cost norms for drying yard and godowns are as follows;

Infrastructures	Size	Cost (In Rupees)	Location	observations
Drying Yard	35"X35'	60,050	Available Space in Village	Less than 50% cluster levels structures were created during phase1. Availability of space is a concern at field level.
Sal Leaf Cluster Godown	75'10"X10'	1,318,000	Available Space in Village	

Maintenance is also a serious issue in these structures. Though these are created under income generating activity component to enhance livelihood, ownership at cluster level is important.

### 3. Community Development

#### Entry Point Activities (EPA)

EPAs were part of the community mobilization process taken up in the respective villages at the initial stage of Project implementation. There will be a time lag between first contact with the community and actual works/investment following the sanction of the micro plan. In order to generate interest among community members and to provide them certain elementary benefits, and even to gain the confidence of the community, EPA were undertaken.

Proper selection and effective implementation of the EPA is important to lay a firm foundation for future activities by the community. The process of EPA selection was facilitated by the NGO. The FMU concerned was also be closely associated in the process and supervise the NGO organising community meetings for selection and planning of EPA.

The design and cost estimate of the selected EPA was made by the FMU concerned, with technical assistance from DMU.

EPA items were selected in a well-facilitated participatory manner. The major EPA activities are given below:

Renovation of school/temple	Cement platform under a tree for meeting
Cement platform/soak pit around a well x 4	Renovation of water bodies like pisciculture tank
Communal fish pond	Construction of Compound Walls
Tube well	Compost pit
A set of farming tools	Bathing ghat (staircase for a pond)

*Source: MIS EPA data, PMU website*



### **Attachment 3.5.1 Farm Forestry in Other JICA Forestry Sector Projects**

#### **1. Tamil Nadu Biodiversity Conservation and Greening Project - Tree Cultivation on Private Land (TCPL)**

JICA assisted Tamil Nadu Biodiversity Conservation and Greening Project (TBGP) has been promoting Tree Cultivation on Private Land based on the experience of tree planning on the private land under Tamil Nadu Afforestation Project, Phase 1 and 2. Around 2.5 million ha (i.e. 19% of total geographical area) is categorized as fallow and the land use pattern of the state has undergone structural changes over last 30 years with an increasing trend for the fallow land. TCPL targets about 140,000 – 150,000 ha of fallow land, which is 5-6% of the total fallow land available in the state. The small and marginal farmers constitute 89.7% of the total farmers in the state but own only about 54% of the total agricultural area. The average size of holding which was 1.25 ha in 1976-77 declined to 0.91 ha in 1995-96. TCPL intends to achieve the following objectives:

- To contribute to the national goal of bringing 33% of the geographical area under forest and tree cover by increasing the tree cover in the villages.
- To increase the supply of wood and non-wood products from private land for industrial as well as household consumption contributing to reduction of pressure on forest land.
- To establish tree-based farming system as a sustainable and viable economic enterprise for farmers.
- To strengthen technical capabilities of the farmer to create farm plantations.

The TCPL is proposed to be implemented in about 4,000 - 5,000 villages spread over 32 districts in the state. The villages would be selected based on multiple criteria such as availability of fallow land, interest of farmers etc. Private fallow land and farm bunds covering a notional area between 140,000 ha to 150,000 ha would be planted with a variety of tree species. About 3,000 ha of proposed area would be covered under short-rotation tree crop – mainly Casuarina. The rest would be covered with medium and long rotation crops. All categories of farmers are proposed to be covered under TCPL but small and marginal farmers would be given priority.

#### **i. Approach & Strategies**

The main strategies of different farm forestry programmes are to supply tree seedlings at free of cost or at subsidized cost; to provide survival incentives; and to create extension infrastructure. However, these are not adequate enough to have effective farm forestry programme. Some issues in farm forestry are mentioned below:

- Low survival of seedlings
- Low density of trees per unit of farm land
- Low productivity of farm forestry plantations
- Low adoption of farm forestry by small and marginal farmers
- Low success in semi-arid regions

The strategies adopted under TCPL are:

- Financial support and incentives for creation and maintenance of plantations
- Technical support in the form of quality planting stock and planting by forest department
- Beneficiary contribution and participation -- involvement of beneficiaries in planning, implementation and monitoring
- Cluster approach to village selection for coverage under TCPL

- Enlarged basket of species and planting models to suit the needs of different socio-economic, farming and agro-climatic conditions
- Informed choice of species and planting models by farmers
- Transfer of skills to (women) farmers for nursery and planting operations
- Capacity building of farmers for proper management of plantations
- Robust monitoring system.

ii. Process of implementation of TCPL

TCPL is based on principles of good governance – participation, transparency and accountability. The steps involved in implementation of TCPL are given below:

- Village Cluster Selection and Rapid Appraisal - screening of all villages based on secondary data to identify the potential villages; and then rapid appraisal of potential villages to select the target villages. A cluster approach for targeting is adopted with each cluster comprising of 4-6 villages.
- Engagement of NGOs/Resource organizations to carry out entry level activities and preparation of micro plan.
- Entry Level Activity - FIG formation; microplanning; participatory monitoring and evaluation; capacity building and training; and facilitating farmer institutions.
- Preparation of Micro Plan for TCPL - a clear understanding on criteria to be used for selection of farmers, land and/or species would facilitate quick decision and reduce the possibility of conflict over who is covered first under the programme. The plant is to have a proportionate mix of both short rotation crop (Casuarina) constituting a maximum of 30% of the seedlings (up to 50% in case of small and marginal farmers) and a minimum of 70% in case of medium and long rotation crops (a minimum of 50% in case of small and large farmers). The total target under TCPL is 10 crores seedlings i.e. 3 crores by casuarinas and 7 crores by other miscellaneous and timber species. Proportionately, an area of 3000 ha would be covered under casuarinas (@ 10,000/ ha) and 140,000 ha under timber and other miscellaneous species (@ 500/ ha).
- Implementation of Micro Plan
  - Three planting designs
    - Compact block planting (more than one year old fallow land)
    - Inter-crop planting (current fallows)
    - Farm boundary planting.
  - On-site training of farmers & SHG members on nursery, planting and maintenance techniques; agro-forestry models, crops for inter-cropping etc.
  - Procurement of tall & older seedlings (for MPTs, fruit trees, bamboo) and clonal seedlings from Permanent and/or Hi-tech nurseries
  - Plantation by Forest Department in farms.
  - Only quality seedlings raised from the seeds obtained from the ‘Seed stands’, ‘Seed Production Areas’, ‘Seed Orchards’ and ‘Plus trees’, ‘proven clones’ would be supplied to the farmers.
- Monitoring & Evaluation (M&E) – robust monitoring system for monitoring of activities, survival assessment, and incentive distribution based on survival assessment.
- As per the guidelines 160 plants per acre and maximum 2.5 acre per farmer would be considered. Incentive mechanism has been incorporated in this scheme based on the survival of the plants after first year and third year of plantation.

## **2. Farm and agro-forestry in Tripura**

Angan-Ban Prakaalpa is a scheme for productive use of private fallow land in private holdings implemented by the Tripura Forest Department since 1996-97. The Forest Department provides

technical inputs and guidance to the selected beneficiaries in raising plantation. 4,915 hectares of 28,043 beneficiaries have been targeted under the scheme. Under the scheme 150 teak (*Tectona grandis*) or gambhar (*Gmelina arborea*) stumps and 25 polybag seedlings (miscellaneous species) are given to each beneficiary along with a cash benefit of Rs. 125 for planting. After 2-3 months of planting Rs. 150 per beneficiary is given for maintenance after verification of plantation by the Gram Pradhan and Beat Officer.

**i. Tripura Forest Environmental Improvement and Poverty Alleviation Project/ Tripura JICA Project**

Under Tripura JICA assisted Forestry Project, efforts were made to rehabilitate shifting cultivators. 9 models of agro-forestry plantations were raised on 8522.83 ha of land given to ST and other traditional forest dwellers under the Forest Rights Act 2006. Cost of each agro-forestry plantation model varies between Rs. 49,000 to Rs. 53,000. These models were designed to address 5 Fs i.e. Food, Fodder, Fuel, Fibre and Fertilizer. In each model includes crops of short rotation (2-6 months), medium rotation (1-4 years) and long duration (more than 4 years). The combination of crops in different models is given below.

1. Bamboo+Jackfruit+Maize+Pineapple,
2. Ghamhar+Lemon+Ginger+Pegion pea,
3. Bamboo+Arecanut+Dalbergia+Maize+Black Pepper (high in demand)
4. Acacia+Litchi+Lemon+Maize+Turmeric (high in demand)
5. Teak+Jackfruit+Maize+Ginger,
6. Bamboo+Mango+Maize+Pineapple (high in demand)
7. Agar+Arecanut+Turmeric+Black Pepper
8. Banana+Acacia+Turmeric
9. Orange+Acacia+Papaya+Turmeric

Support from JICA Project – Rs. 22,000 in the year of creation of plantation and Rs. 8,000 in the second year for maintenance. The rest other costs come through fund convergence from MGNREGA sanctioned by the Blocks. For beneficiaries from Regrouped Villages, the entire cost was met from the Project.

Joint Liability Groups (JLGs) of beneficiaries were created and bank accounts of JLGs opened. Project money and material component under MGNREGA are transferred to JLG account, which is jointly operated by the JLG leader and Member Secretary of JFMC. Utilization of labour component under MGNREGA is approved by the Gram Panchayat/ Village Committee.

**3. Promotion of farm forestry by Karnataka Forest Department**

The Krishi Aranya Protsaha Yojane – Karnataka Government's scheme was launched in 2011 to promote tree planting outside the forest. Under the scheme farmers, public and NGOs may get the seedlings at subsidized rates at nearest nurseries of the Forest Department. There is an incentive system based on the survival of trees. A sum of Rs. 10 is provided as incentive for each seedling that survived after planting; Rs. 15 and Rs. 20 per seedling survived is paid as incentive to farmers in the second and third year respectively based on the assessment of the Forest Department.

**4. Farm Forestry in Rajasthan Forestry and Biodiversity Project, Phase 2**

JICA assisted RFBP 2 is being implemented by Rajasthan Forest Department since 2011. The Project has a provision for promotion of agro-forestry in 590 villages to utilize marginal farm land to produce fodder, fuel wood as well as organic fertilizer for agricultural production.

Nursery for agro-forestry will be raised by specially formed SHGs (preferably women SHGs) and one SHG will raise seedlings for about 5 VFPMCs/JFMCs (about 25,000 seedlings – if the demand is more the SHG can even raise more seedlings). It is expected that during micro plan preparation members interested to buy seedlings of forestry and horticulture species will be listed out along with their choice of species and accordingly SHGs will be constituted at a cluster level to raise nursery and supply seedlings to the willing farmers. The Project will provide training to SHGs for nursery management and raising of seedlings and also the funds for raising nursery as no interest loan. The SHG has to recover the cost by selling the seedlings and continue to raise nursery every year. The price of seedlings will be fixed by the SHG in consultation with the Forest Officials. The Project is expected to work with 130 SHGs for agro-forestry promotion. During the last 4 years the Project has been facing difficulties in formation of SHGs exclusively for agro-forestry. There have been demands from the VFPMCs for free distribution of seedlings of selected species and/ or some kind of incentives for the farmers to plant trees on their own land – farm, homestead, fallow land etc. Now the Project is revisiting its strategy for promotion of agro-forestry and is planning to initiate incentive based agro-forestry activities through selected VFPMCs.

**Attachment 3.7.1 List of Clusters Organised under OFSDP-I**

Sl. no	Name of the Forest Divisions	Forest Ranges	Name of Cluster	Product	Type of Infrastructure Support provided
1	Angul	Kaniha	Maa Hingula oilseed cluster	Groundnut & other oil seeds	Godown, Drying yard, tube well, electrification
2		Talcher	Jhulakhuntia Sal leaf plate	Sal leaf plate	Godown, leaf plate stitching making machine (6nos.)
3		Purunagarh	Amantapur Onion Cluster	Onion	No
4		Durgapur	Budhipahad Onion cluster	Onion	No
5	Balliguda	K. Nuagaon	Banashakti Bahumukhi Mahila Samabaya Ltd.	Siali leaf plate	Godown & leaf plate stitching machines ( 5 nos.), electric pressing machine 2 nos., Electrification
6		Tumudibandha	Banashree Producer Cooperative Ltd.	Siali leaf plate	Godown & leaf plate stitching machines ( 5 nos.), electric pressing machine 7 nos. turmeric powder making machine -1, electrification
7		Balliguda	Kurtumgarh Anchalika Mahila Samabaya Ltd.,	Siali leaf plate	Godown & leaf plate stitching machines ( 5 nos.), electric pressing machine 4nos. , electrification
8		Simanbadi	Bethel Producers Cooperative Ltd.	Siali leaf plate	Godown & leaf plate stitching machines ( 5 nos.), electric pressing machine 4nos. Electrification
9	Bonai	Tamara	Jamudar Jay Jagannath Mahua Cluster	Mahua	No
10		Kuliposh	Kuliposh Mahua Cluster	Mahua	No
11		Jarda	Arnapurna Siali Cluster	Siali	No
12		Bonai	Binapani Mahua Cluster, Sarsara	Mahua	No
13	Deogarh	Deogarh	Hadamunda Siali Leaf Plate making cluster	Siali Plate	Godown & drying yard
14		Deogarh	Durijungle Tamarind processing cluster	Tamarind	Godown & drying yard
15		Barkote	Singsal Agarbati Cluster	Agarbati	Godown & drying yard
16		Barkote	Dimiriposhi Agarbati Cluster	Agarbati	Godown & drying yard
17		Barkote	Nagadihi Siali Cluster	Siali leaf plate	Godown & drying yard
18		Pallahara	Jamara Siali Leaf Plate Cluster	Siali leaf plate	Godown & drying yard
19		Khamar	Sukhudevpur Sal Leaf Plate Cluster	Sal leaf plate	Godown & drying yard
20		Reamal	Nuadhi Agarabati Cluster	Agarbati	No
21		Reamal	Maa Bhairabi Onion Cluster Timur	Onion	No

Sl. no	Name of the Forest Divisions	Forest Ranges	Name of Cluster	Product	Type of Infrastructure Support provided
22	Jeypore	Borigumma	Maashakti Tamarind Self Help Cooperative	Tamarind	Godown, de-seeding & Cake making machine
23		Borigumma	Sibashakti Maze Self Help Cooperative	Maize	Godown, Dehuller machine
24		Kotpad	Dentaswari Tamarind Self Help Cooperative	Tamarind	Godown, de-seeding & Cake making machine
25		Boipariguda	Birakhamba Tamarind Cluster	Tamarind	Godown, de-seeding & Cake making machine
26		Jeypore	Jagatjanani Tamarind Self Help Society	Tamarind	Godown, de-seeding & Cake making machine
27		Kundra	Trishakti Tamarind Self Help Cooperative	Tamarind	No
28		Kundra	Tarini Tamarind Self Help Cooperative	Tamarind	No
29		Boipariguda	Gupteswar Agarbati Self Help Cooperative	Agarbati	No
30		Boipariguda	Gungamaa Tentuli Sambaya	Tamarind	No
31		Gupteswar	Baba Gupteswar Tentuli Samabaya	Tamarind	No
32		Keonjhar	Telkoi	Maa Mangala Sal Leaf cluster	Sal leaf plate
33	Patna		Baitarini Sal Leaf Cluster	Sal leaf plate	Godown, drying yard, stitching & pressing machine
34	Bansapal		Saibaba Sal Leaf Cluster	Sal leaf plate	Godown, drying yard, stitching & pressing machine
35	Ghatgaon		Laxmi Narayan Sal Leaf Cluster	Sal leaf plate	Godown, drying yard, stitching & pressing machine
36	Koraput	Koraput	Bhairabi Tentuli Samabaya	Tamarind	No
37		Semiliguda	Bada Debata Tentuli Samabaya	Tamarind	No
38		Semiliguda	Deomali Aada Samabaya	Ginger	No
39		Balda	Gumma Bhairabi Tentuli Samabaya	Tamarind	No
40		Lamtaput	Gumma Bhairabi Cashew Samabaya	Cashew	No
41		Laxmipur	Mahila mandal Phulajhadu Samabaya	Hillbroom	No
42		Laxmipur	Maa Tarini Cashew Samabaya	Cashew	No
43		Laxmipur	Mutyalumaa Haladi Sambaya	Turmeric	No
44		Laxmipur	Brinjodi phulajhadu Samabaya	Hillbroom	No

Sl. no	Name of the Forest Divisions	Forest Ranges	Name of Cluster	Product	Type of Infrastructure Support provided
45		Laxmipur	Maa khabeswar Khlipatra samabaya	Siali Leaf Plate	No
46		Narayanpatna	Majhigouri Tamarind cluster	Tamarind	No
47	Parlakhemundi	Mohana	Narishakti Anchalika Mahila Samiti	Tamarind	No
48		Ramagiri	Mahalaxmi Maize Cluster	Maize	Godown & drying yard, machinery equipment
49		Chandragiri	Manikpur Maize Cluster	Maize	No
50		R Udayagiri	Pragati Maize Cluster	Maize	No
51	Phulbani	Sudrukumpa	Banasakti Laxmi Narayana Mahila Samabaya Ltd. (Siali leaf)	Siali leaf plate	Godown building and drying yard, bore well, electrification, processing machine and equipment
52		Phulbani	Sailaxmi Producer Cooperative Ltd. (Sal leaf)	Sal leaf plate	Godown building and drying yard, bore well, electrification, processing machine and equipment
53		Raikia	Banabasi Producer Cooperative Ltd. (Turmeric)	Turmeric	Godown building and drying yard, electrification, processing machine and equipment
54		Phiringia	Laxmibai Producer Cooperative Ltd. (Turmeric)	Turmeric	Godown building and drying yard, electrification, Processing machine and equipment
55		G. Udayagiri	Jiban Jibika Mahila haladi mandal	Turmeric	Godown building and drying yard
56		Tikabali	Jeevan Sathi Producer Cooperative Ltd. (Sal leaf)	Turmeric	Godown building and drying yard, electrification, processing machine and equipment
57	Rourkela	Banki	Banakusum Cluster	Mahua	Storage godown, drying yard, office & toilet with electrification
58		Biramitrapur	Jagruti Cluster	Mahua	Storage godown, drying yard, office & toilet with electrification
59		Kuarmunda	Pragati Cluster	Mahua	Storage godown, drying yard, office & toilet with electrification
60		Kuarmunda	Ujala Mahua Cluster	Mahua	Construction of CFC-cum-NTFP storage godown
61		Banki	Banalaxmi Siali Cluster	Siali	Construction of CFC-cum-NTFP storage godown

Sl. no	Name of the Forest Divisions	Forest Ranges	Name of Cluster	Product	Type of Infrastructure Support provided
62		Rajgangpur	Gangpur Mahua Cluster	Mahua	Construction of CFC-cum-NTFP storage godown
63	Rayagada	Gudari	Maa Thakurani Samabaya Samiti	Tamarind	Godown , drying yard, power deseeded machine , cake making machine, electronic weighing machine, furniture & fixture, aluminium ladder 1 no., Small label printing machine, rack 4 lane, stitching machine for cake, polythine packing machine 8 inch
64		Gunupur	Maa Manikeswari Samabaya Samiti	Tamarind	Godown, drying yard, power deseeded machine cake making machine, electronic weighing machine, furniture & fixture, aluminium ladder 1 no., Small label printing machine, rack 4 lane, stitching machine for cake, polythine packing machine 8 inch
65		Tikiri	Dehursahi Samabaya Samiti	Siali	Godown , drying yard, Electronic weighing machine, furniture & fixture, , stitching machine electronic pressing machine
66		K. Singhpur	Devagiri Samabaya Samiti	Hill broom	Godown, drying yard, hill broom cutting machine, packing machine
67		Muniguda	Niyamagiri Samabaya Samiti	Tamarind	Godown , drying yard, power deseeded machine , cake making machine, Electronic weighing machine, furniture & fixture, aluminium ladder 1 no., small label printing machine, rack 4 lane, stitching machine for cake, polythine packing machine 8 inch
68		Kashipur	Haliasahi Samabaya Samiti	Hill broom	Godown, drying yard, hill broom cutting machine, packing machine
69		Rayagada	Maa Majhigouri Samabaya Samiti	Hill broom	Godown, drying yard, hill broom cutting machine, packing machine
70	Satkosia	Salor	Salor bee keeping cluster	Bee keeping	No



**Attachment 3.7.2 Field Observations on SHG and SHG Cluster in Keonjhar Division (OFSDP-I area)**

Date	20 <sup>th</sup> Sep 16
Venue	Cluster Office; Baitarani Salapatra Cluster; Rohinimunda Village, Patna Block; Keonjhar
Persons attended	Women SHG Members from different villages (Approx 20 persons) Forest Department Officials Mr. Amiya Parida, Deputy Project Director, Livelihoods, OFSDS Mr. Jitesh Panda, JICA Survey Team Member Ms. Kalpana Mishra, JICA Survey Team Member
Objective	To understand functioning of Baitarani Sal Patra Cluster
<p><b>Discussion Points</b></p> <ol style="list-style-type: none"> <li>1. Earlier SHG members were selling Sal leaf plates at low rate. The local traders do not go to some of the villages, as they are across the river. Now they are able to get good price by selling to wholesale trader. The cluster has developed linkage with 2 wholesale traders. Although prevailing sales price is Rs210/- per 1000 plates, at times it has gone up to Rs.360/-. Unfortunately, on 2 instances there was loss incurred by cluster.</li> <li>2. Although cluster building has come up, the electricity connection is yet to come. Some of the equipments have been procured. Women members expect training for stitching Sal leaf plates and for making press leaf plates. Meanwhile, as per market demand, they have tried to make 4 stitch Sal leaf plates, instead 3 stitches.</li> <li>3. During season, there is practice of collection of Sal leaf plates on every Thurs day. There after the aggregated leaf plates is brought to Cluster storage place. Normally, they check price of sal leaf plates at different places.</li> <li>4. Meanwhile with facilitation of ALC, supported by NABARD, the producer company has been registered. It seems the business plan has been developed. However, the participants present in the meeting are not aware of business plan, and/or process of its formulation.</li> <li>5. The members of producer company are eager to get hand-holding support by external agencies. They feel as if they have just taken first step, and project has left them by just starting the initiative.</li> <li>6. According to members, there may be possibility of taking up agriculture based business through producer company. However, they have not explored. Similarly, they can take up business of NTFPs like Mohula and Tola through producer company. At present, they are selling such commodities to local traders coming to village, or in weekly markets.</li> <li>7. OFSDP 1 project has provided equipment like 5 press leaf plate making machines, 5 leaf cup making machines, 3 weighing machines. Although, weighing machines are used, but product making machines are yet to be used.</li> </ol>	
Materials (Supplied by)	Two page document detailing profile of cluster along with past business transaction

Date	20 <sup>th</sup> Sep 16
Venue	Laxminarayan Cluster Office; Sanajiuli village, Keonjhar
Persons attended	Women SHG Members (Approx – 30 Persons) Forest department officials CEO of Producer Company JICA Survey Team Members – Ms Kalpana, Mr Jitesh
Objective	To understand functioning of SHG cluster promoted under OFSDP 1 project
<p><b>Discussion Points</b></p> <ol style="list-style-type: none"> <li>1. Women members shared that initially, they were not were not aware of savings and SHGs. They started with saving Rs.20/- to Rs.30/- per month. Meanwhile, groups accessed low cost funds ranging from Rs.10, 000 to Rs.50,000 from VSS, and getting engaged in different IGA activities like paddy processing, pickle making, sal leaf plates.</li> <li>2. Most of the SHGs have taken up different IGAs at different point of time. Overall, experience is encouraging. However, in every 4 transactions, there is incidence loss in 1 transaction.</li> <li>3. Meanwhile with initiative of ALC, producer company has been formed having share of 270 members. The producer company has just started marketing of vegetables, by linking with Keonjhar based trader. The producers aggregate vegetables and collectively sell to trader who buys at village level.</li> <li>4. Project has supported for creation of building for SHGs cluster. During Sal leaf plucking season, the building is utilized by SHG Cluster and buyer/trader for storing Sal leave plates.</li> <li>5. There is plan for collective production of machine pressed Sal leaf plates. As three phase electricity connection is not available, they are not able to start business. They also need further skill training. The dice available for making Sal leaf plates may need to be changed to be able to produce plates having demand in market.</li> <li>6. In between, some groups went for rearing of improved poultry birds. According to groups, there was good profit. However, they are not able take up systematically as they do not have space, sheds and adequate water facility.</li> <li>7. According to CEO of producer company, women have formed cluster and producer company, to be able to transact big business, get into branding, and also for visibility. At present, NABARD is supporting promotion of producer company.</li> <li>8. The producer company is associated with 253 members spread across 9 VSS/Villages, 3 GPs and one block. Out of 23 SHGs, 10 SHGs were involved in Sal leaf trading activities.</li> <li>9. By trading through SHGs members could get Rs. 220 instead of Rs.200 per 1000 Sal leaf plates. After formation of cluster SHGs, the price went up to Rs.250 per 1000 Sal leaf plates. The SHGs and cluster has experienced about 15 cycles of regular transactions spread across 3 years. At individual level, one person may be able to collect and stitch 200 Sal leaf plates, thereby earning about Rs.50 per day.</li> <li>10. The proposed business plan of producer company focuses on marketing of vegetables and sal leaf plates; and gets into production of press Sal leaf plates. It is estimated to reach about Rs.2.5 Crores of turnover in 3 years. The producer company has just started marketing of vegetables at village point to Keonjhar based trader, total sales being Rs.18, 000/-. There is 10% margin in collective marketing of vegetables. In future, there is plan to promote vegetable cultivation by providing extension services and inputs.</li> </ol>	

11. During discussion, some of the participant felt that at times promotion of clusters may lead demand for more produce, thereby may lead to unsustainable harvesting practices.

12. The villagers are able to sell fruits like Harida, Bahada to traders, who periodically visit the village.

Materials (Supplied by)	NA
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### Attachment 4.4.1 Initial Prioritisation of the Project Divisions

Phase	S.N	MapID	Forest Division	District	Proposed Components	Current Forest Degradation (function)	Changes in Density of Forest (function)	Soil Erosion(% of Medium Ravine) function	VSS/ EDC (function)	% of SC/ST population (function)	Similar Interventions	Priority
II	1	7	Baripada	Mayurbanj	All	3	2	1	5	4	1	1
II	2	42	Rairangpur	Mayurbanj	All	2	2	1	5	4	2	1
II	3	29	Karanja	Mayurbanj	All	2	2	1	4	4	2	1
II	4	46	Sambalpur	Sambalpur	All	2	2	2	4	3	1	1
II		52	Sambalpur	Sonepur	All	2	2	1	4	2	1	1
II	5	21	Dhenkanal	Dhenkanal	All	4	1	2	5	2	2	1
II	6	50	Sundargarh	Sundargarh	All	3	1	1	5	3	2	1
II	8	48	Subarnapur	Sonepur	All	4	1	1	4	2	2	1
II		53	Subarnapur	Bolangir		4	1	1	4	2	2	1
II	9	12	Boudh	Boudh	All	3	2	1	3	2	2	1
II	10	22	Ghumsur North	Ganjam	All	2	2	1	4	2	1	1
II	11	26	Jharsuguda	Jharsuguda	All	4	2	1	3	3	2	1
II	12	6	Bargarh	Bargarh	All	3	1	1	4	2	1	1
II	13	2	Athagarh	Cuttack	All	3	1	1	3	2	2	1
II	14	51	Athamalik	Angul	All	2	2	5	3	2	2	1
II	16	37	Nayagarh	Nayagarh	All	3	1	3	5	2	2	1
II	15	27	Kalahandi (North)	Kalahandi	All	3	1	2	5	3	1	1
II	17	10	Bolangir	Bolangir	All	4	1	1	5	2	1	1
II	18	41	Rairakhol	Sambalpur	All	2	2	2	3	3	1	1
II		54	Rairakhol	Sonepur	All	2	2	1	3		1	1
II	19	23	Ghumsur South	Ganjam	All	3	2	1	3	2	1	1
II	20	43	Rajnagar WL	Kendrapada	Biodiversity	3	2	1	2	2	2	1
II		55	Rajnagar WL	Jagatsinghpur	Biodiversity	3	2	1	2		2	1
II	21	5	Bamra WL	Sambalpur	Biodiversity	2	1	2	4	3	1	1
II	22	24	Hirakud WL	Bargarh	Biodiversity	2	1	1	2	2	2	1
II	7	28	Kalahandi (South)	Kalahandi	All	4	2	2	5	3	1	0
II	6	32	Khariar	Nuapada	All	4	1	1	5	3	1	0
II	20	31	Keonjhar WL	Keonjhar	Biodiversity	3	2	4	3	3	1	0
II	17	35	Mahanadi WL	Boudh	Biodiversity	1	2	1	2	2	2	0
II	16	36	Mahanadi WL	Nayagarh	Biodiversity	1	2	3	2	2	2	0
II	17	49	Sunabeda WL	Nuapada	Biodiversity	3	1	1	2	3	2	0
II	21	8	Berhampur	Ganjam	Farm Forestry	5	2	1	3	2	1	0
II	24	15	Cuttack	Cuttack	Farm Forestry	5	1	1	2	2	2	0
II	24	16	Cuttack	Jagatsinghpur	Farm Forestry	5	1	1	2	2	1	0
II	24	17	Cuttack	Jajpur	Farm Forestry	5	1	1	2	2	2	0
II	24	18	Cuttack	Kendrapada	Farm Forestry	5	1	1	2	2	1	0
II	26	13	City Forest	Khurda	Farm Forestry	5	1	1	2	1	0	0
II	23	33	Khurda	Khurda	Farm Forestry	3	2	1	3	1	1	0
II		56	Khurda	Puri	Farm Forestry	3	2	1	3	1	1	0
II	27	40	Puri WL	Puri	Farm Forestry	4	2	1	2	1	1	0
I	4	19	Deogarh	Deogarh	Livelihood	3	1	5	5	3	1	1
I	6	30	Keonjhar	Keonjhar	Livelihood	3	2	4	5	3	1	1
I	1	1	Angul	Angul	Livelihood	3	1	5	5	2	1	1
I	4	20	Deogarh	Angul	Livelihood	3	1	5	5	2	1	1
I	8	38	Parlakhemundi	Gajapati	Livelihood	3	1	3	5	4	1	1
I		59	Parlakhemundi	Ganjam	Livelihood	3	1	1	5		1	1
I	11	45	Rourkela	Sundargarh	Livelihood	3	1	1	5	3	1	1
I	13	3	Balasore WL	Balasore	Livelihood	4	2	1	3	2	1	1
I	14	9	Bhadrak WL	Bhadrak	Livelihood	5	2	1	2	2	1	1
I	10	44	Rayagada	Rayagada	Livelihood	4	2	6	5	4	1	1
I	5	25	Jeyapore	Koraput	Livelihood	3	2	4	5	4	1	1
I	9	39	Phulbani	Kandhamal	Livelihood	2	2	1	5	4	1	1
I	3	11	Bonai	Sundargarh	Livelihood	2	1	1	4	3	1	1
I	2	4	Baliguda	Kandhamal	Livelihood	3	2	1	5	4	1	0
I	7	34	Koraput	Koraput	Livelihood	4	2	4	5	4	1	0
I	12	47	Satkosia WL	Angul	Livelihood	1	1	5	2	2	1	0
I		60	Satkosia WL	Cuttack	Livelihood	1	1	1	2		1	0
II		14	City Forest	Cuttack	Farm Forestry	5	1	1	2	2	0	0
II		58	Khurda	Nayagarh	Farm Forestry	3	2	3	3	2	2	0
II		57	Khurda	Cuttack	Farm Forestry	3	2	1	3	2	2	0

Remarks: Some divisions appear more than once in the list as some part of the division may fall in other district(s). (Soil erosion and SC/ST population data are only available for district wise and thus, these divisions need to be categorized by the districts.)

Source: JICA Survey Team (2016)

### Attachment 4.8.1 Sub-Component Wise DPR Review on Biodiversity

Proposed Sub-component	Proposed Extent	Observation
Addressing Human Wildlife Conflict	20 DMUs (including 5 wildlife divisions)	<ul style="list-style-type: none"> <li>A holistic approach would necessarily encompass (i) early warning and emergency response, (ii) capacity enhancement of local communities with adaptive and migratory measures (cover villages in both wildlife and territorial DMUs) (iii) habitat improvement in source area mainly the protected areas (PAs), (iv) habitat improvement in corridor and dispersal areas (mainly the territorial DMUs), (v) Habitat improvement of refuge areas (mainly the territorial DMUs), (vi) educating people, especially the youth to take long term perspective on biodiversity /wildlife conservation and emerging conflicts. The Project had given focus on most of the above given aspects.</li> <li>It seems all the proposed 15 territorial and 5 wildlife divisions are considered for this component. However, the project needs to prioritize the DMUs for working on this component.</li> <li>Prioritisation can be based on either magnitude of problem. However, in terms of HW conflict, almost all the forest fringe villages are facing the problem with some degree of variation in its intensity. Thus, all divisions require assistance to mitigate the problem. In such situation, we must prioritize the areas which in addition to mitigate the problem, should also give better conservation gains.</li> </ul>
Habitat Improvement and Management	5 PAs (under 5 WL DMUs)	<ul style="list-style-type: none"> <li>While project proposed to mainstream the human-wildlife mitigation work in 20 DMUs, including 15 territorial DMUs, the habitat improvement works (like water and fodder augmentation), which is very critical for lasting solutions, is limited to five PAs and to corridor areas. Habitat improvement in refuge areas are not covered exclusively.</li> <li>Although project kept budgetary provisions for several activities (like SMC works, fire protection, plantation etc.) in assigned areas for the 15 Territorial DMUs which undertake forest management through VSS, as such these activities are not meant to improve habitats to address need of wildlife. Here focus will be on plantation activities in the assigned areas of VSS using one of the given plantation models. Thus, even though, project is providing support to territorial DMUs to reduce the conflict, they may not be holistic in nature. Some additional provisions need to be made to territorial DMUs, exclusively for these targeted habitat improvement program.</li> </ul>
Eco-development work	5 WL Divisions	<ul style="list-style-type: none"> <li>There is no separate budgetary provisions given for this sector for five WL DMUs, like entry point activities, IGA etc. For 15 Territorial DMUs, however, the same is supported under Community/Tribal Development Head. Project proposes engagement of 3,000 VSS which are coming from 15 Territorial Division. None is included from WL divisions</li> </ul>
Eco-tourism (Nature Camps, Interpretation centres, conservation education)	5 Sites	<ul style="list-style-type: none"> <li>It seems that project arbitrarily proposed development of one eco-tourism site in each proposed wildlife division without considering their actual potential.</li> <li>However, the project must invest on this component based on some prioritisation.</li> <li>Based on field visits to all the proposed divisions (except Sunabeda), only one division viz. Hiraakud WL Division was found having good potential to promote as a hub for conservation education based eco-tourism.</li> <li>While project proposed nature camps and conservation education as key aspects, budgetary allocation to undertake such activities is not given.</li> </ul>
Conservation of BD Hotspots outside PAs (Conservation/Community Reserves)	5 sites	<ul style="list-style-type: none"> <li>It seems that project arbitrarily proposed one site each in five proposed wildlife divisions without considering their actual potential.</li> <li>These sites at best can be identified in proposed territorial DMUs and can be supported as mainstreaming of biodiversity conservation through co-management. Micro-planning exercise needs to identify such sites which people value and thus keen to conserve and manage with some technical and institutional support.</li> </ul>

Source: JICA Survey Team (2016)

## **Attachment 5.1.1 Prioritisation Criteria and Scoring/ Ranking for Priority Territorial Divisions Selection**

### **1. Exclusion Criteria**

- 1) Divisions for OFSDP-I to be excluded
- 2) Divisions with "High" and "Medium" security levels\* to be excluded (only the Divisions with low and no security Range>50 will be included)
- 3) Concerns during implementation (physical contiguity and conflict) to be excluded\*\*

\*Definition of Categorization for Security in Division

High: High Geographical Area in the Division >50%

Medium: High and Medium Geographical Area in the Division >50%

Low: Medium or High=<50%, Low and No>50%

\*\*If Divisions with AJY are selected, OFSDP-II replaces AJY so that there is no overlap in division.

### **2. Prioritisation Criteria**

- 1) Current Status of Forest Degradation
- 2) Pace of Forest Degradation
- 3) Status of Soil Erosion
- 4) No of VSS
- 5) % of SC/ST Population

### 3. Scoring and Ranking of Territorial Division Based on Exclusion Criteria and Prioritisation Criteria

Item Division	Exclusion	Current Status of Forest Degradation		Pace of Forest Degradation		Status of Soil Erosion		No of VSS		% of SC/ST Popula		Weighted Total Score
		figure	score	figure	score	figure	score	figure	score	figure	score	
1	Baripada	41.06	3	0.097794473	2	0.0017	1	456	5	66.05	4	20.5
2	Rairangpur	23.81	2	0.014135544	2	0.0017	1	320	5	66.05	4	20.0
3	Sambalpur	37.42	2	0.114063201	2	0.2441	2	216	4	43.76	3	18.0
4	Dhenkanal	60.44	4	-4.710286296	1	0.3852	2	326	5	33.21	2	18.0
5	Karanja	24.93	2	0.006072695	2	0.0017	1	248	4	66.05	4	18.0
6	Sundargarh	42.93	3	-0.652872996	1	0.0800	1	331	5	59.9	3	17.5
7	Subarnapur	78.64	4	0.374943487	2	0.0873	1	227	4	36.95	2	17.0
8	Athamalik	34.61	2	-0.015101317	1	0.9795	5	169	3	32.91	2	16.0
9	Ghumsur South	55.5	3	0.026896283	2	0.1989	1	177	3	22.87	2	14.5
10	Boudh	40.35	3	0.028854612	2	-	1	130	3	36.34	2	14.5
11	Ghumsur North	35.54	2	-0.022746129	1	0.1989	1	223	4	22.87	2	14.0
12	Jharsuguda	60.9	4	-0.174887058	1	0.0213	1	137	3	52.55	3	14.0
13	Rairakhol	33.44	2	-0.033099028	1	0.2441	2	154	3	36.95	2	13.0
14	Berhampur	84.45	4	-0.046410254	1	0.1989	1	178	3	22.87	2	13.0
15	Khurda	55.21	3	0.102	2	0.1644	1	108	3	20.1625	1	13.5
16	Cuttack	84.36	5	-0.775655967	1	0.0107	1	73	2	24.8175	2	11.5
17	City Forest	89.16	5	-0.476372972	1	0.0176	1	9	2	20.445	1	10.5
18	Angul											
19	Balliguda											
20	Bonai											
21	Deogarh											
22	Jeypore											
23	Keonjhar											
24	Koraput											
25	Parlakhemundi											
26	Phulbani											
27	Rayagada											
28	Rourkela											
29	Bargarh											
30	Malkangiri											
31	Kalahandi (North)											
32	Kalahandi (South)											
33	Khariar											
34	Bolangir											
35	Nawarangapur											
36	Athagarh											
37	Nayagarh											

#### 4. Definitions and Scores for Territorial Division Selection Prioritisation Criteria

Item	Category	Definition	Score
Current Status of Forest Degradation	0-20	(Scrub+Open)/ Forest area in the division	1
	21-40		2
	41-60		3
	61-80		4
	81-100		5
Pace of Forest Degradation	Improved	(Scrub+Open in ISFR 2015)% - (Scrub+Open in ISFR 2013)%: if negative= improved/ if positive=degraded	1
	Degraded		2
Status of Soil Erosion	0-0.2	% of the medium ravine against the total geographical area of the district	1
	0.21-0.4		2
	0.41-0.6		3
	0.61-0.8		4
	0.81-1		5
	1.01-1.2		6
	1.21-1.4		7
No of VSS	0		1
	1-100		2
	101-200		3
	201-300		4
	301-400		5
Similar Interventions in the Division/ District	0		2
	1		1
	2		0
% of SC/ST Population	0-20		1
	21-40		2
	41-60		3
	61-80		4
	81-100		5

#### Weightage

Item	Weight
Current Forest Degradation	0.5
Changes in Density of Forest	2
Soil Erosion (% of Medium Ravine)	1
VSS/ EDC	2
% of SC/ST population	1



### Attachment 5.2.1 Division Wise Change Analysis

Phases	Forest Division/WLS	Satellite Data 2013 (ISFR 2015)				Satellite Data 2011 (ISFR 2013)				Changes in the Forest Areas and Quality				
		OF	MDF	VDF	Total	OF	MDF	VDF	Total	Change in Degraded Area*1	Change in Good Canopy Forest*2	Absolute Change in Forest Cover*3	Total Forest Area	Density
II	ATHAMALLIK	245.72	486.76	95.06	827.53	246.42	487.73	95.35	829.50	-0.70	-1.27	-1.97	Decreased	Degraded
II	ATHGARH	294.33	172.33	51.02	517.68	319.54	155.55	43.59	518.68	-25.21	24.21	-1.00	Decreased	Improved
II	BAMARA_WL	379.25	539.76	331.37	1250.39	381.95	544.91	326.17	1253.03	-2.70	0.06	-2.64	Decreased	Improved
II	BARAGARH	336.46	248.30	111.54	696.30	333.94	247.95	111.31	693.20	2.52	0.58	3.10	Increased	Improved
II	BARIPADA	579.01	613.20	235.14	1427.35	581.70	616.58	238.16	1436.44	-2.69	-6.41	-9.10	Decreased	Degraded
II	BOLANGIR	476.35	134.98	53.27	664.59	474.92	134.96	53.14	663.02	1.43	0.15	1.58	Increased	Improved
II	BOUDH	445.56	527.55	253.82	1226.94	445.56	528.34	253.94	1227.83	0.01	-0.89	-0.89	Decreased	Degraded
II	DHENKANAL	817.63	416.95	173.65	1408.24	888.96	347.74	173.32	1410.02	-71.33	69.55	-1.78	Decreased	Improved
II	GHUMUSAR_N	243.38	458.48	129.70	831.57	242.63	459.57	129.98	832.18	0.75	-1.37	-0.61	Decreased	Degraded
II	GHUMUSAR_S	358.10	488.12	23.02	869.25	358.62	494.48	18.09	871.19	-0.51	-1.43	-1.94	Decreased	Degraded
II	HIARAKUD_WL	66.33	134.25	66.63	267.20	66.06	133.65	66.68	266.39	0.27	0.55	0.82	Increased	Improved
II	JHARSUGUDA	172.52	138.82	3.06	314.40	173.19	138.84	3.09	315.11	-0.67	-0.05	-0.72	Decreased	Degraded
II	KALAHANDI_N	535.46	298.58	223.08	1057.12	533.43	298.60	223.69	1055.71	2.04	-0.63	1.41	Increased	Improved
II	KARANJIA	209.15	408.10	253.73	870.98	210.08	411.21	255.83	877.12	-0.92	-5.21	-6.13	Decreased	Degraded
II	NAYAGARH	400.62	658.47	99.22	1158.30	404.78	659.42	96.67	1160.87	-4.16	1.59	-2.57	Decreased	Improved
II	RAIRAKHOL	456.32	771.28	164.43	1392.04	457.43	771.84	164.76	1394.03	-1.11	-0.89	-2.00	Decreased	Degraded
II	RAIRANGPUR	195.67	374.30	287.02	857.00	196.66	376.18	289.63	862.46	-0.98	-4.48	-5.47	Decreased	Degraded
II	RAJNAGAR_WL	79.48	86.36	79.23	245.06	99.77	87.57	79.90	267.23	-20.29	-1.88	-22.17	Decreased	Degraded
II	SAMBALPUR	345.13	592.88	38.09	976.10	344.97	593.69	39.46	978.11	0.16	-2.17	-2.01	Decreased	Degraded
II	SUBARNAPUR	253.06	101.15	15.74	369.95	251.62	100.87	15.73	368.22	1.44	0.29	1.73	Increased	Improved
II	SUNDARGARH	535.16	534.99	271.95	1342.11	543.64	530.36	266.81	1340.80	-8.47	9.77	1.30	Increased	Improved
I	ANGUL	408.43	320.51	27.40	756.35	416.30	319.17	21.64	757.11	-7.87	7.10	-0.76	Decreased	Improved

Phases	Forest Division/WLS	Satellite Data 2013 (ISFR 2015)				Satellite Data 2011 (ISFRI 2013)				Changes in the Forest Areas and Quality				
		OF	MDF	VDF	Total	OF	MDF	VDF	Total	Change in Degraded Area*1	Change in Good Canopy Forest*2	Absolute Change in Forest Cover*3	Total Forest Area	Density
I	BALASORE_W	195.59	124.94	22.70	343.23	196.32	125.94	22.90	345.17	-0.73	-1.20	-1.93	Decreased	Degraded
I	BHADRAK_WL	40.94	5.73	0.52	47.19	54.51	5.96	0.56	61.03	-13.57	-0.27	-13.84	Decreased	Degraded
I	BONAI	440.96	853.23	637.83	1932.02	449.15	824.61	665.75	1939.51	-8.19	0.70	-7.49	Decreased	Improved
I	DEOGARH	833.75	875.55	283.27	1992.58	853.11	864.79	280.46	1998.36	-19.35	13.58	-5.77	Decreased	Improved
I	JEYPORE	358.73	339.44	2.41	700.58	359.02	339.67	2.40	701.09	-0.29	-0.21	-0.51	Decreased	Degraded
I	KEONJHAR	1167.66	1130.33	136.69	2434.67	1176.73	1126.08	147.32	2450.12	-9.07	-6.38	-15.45	Decreased	Degraded
I	PARALAKHEMUNDI	935.27	1518.71	87.94	2541.92	930.38	1463.53	89.11	2483.02	4.90	54.01	58.91	Increased	Improved
I	PHULBANI	636.41	1156.42	321.27	2114.11	629.76	1157.13	321.60	2108.48	6.66	-1.04	5.62	Increased	Degraded
I	RAYAGADA	1909.58	890.70	442.09	3242.37	1913.61	892.46	444.16	3250.22	-4.03	-3.82	-7.85	Decreased	Degraded
I	ROULKELA	332.64	429.72	108.61	870.97	342.62	417.59	111.49	871.70	-9.97	9.24	-0.73	Decreased	Improved
I	SATKOSIA_WL	73.96	346.30	126.10	546.36	86.35	335.59	126.17	548.11	-12.39	10.65	-1.74	Decreased	Improved

Note: OF=Open Forest (Canopy Density 10% and above and less than 40%), MDF= Moderately Dense Forest (Canopy Density 40% and above and less than 70%), VDF= Very Dense Forest (Canopy Density 70% and above)

\*1 Change in Degraded Area-Open Forest+Scrub (from 2011 to 2013)

\*2 Change in Good Canopy Forest-V.Dense+M.Dense (from 2011 to 2013)

\*3 Absolute Change in Forest Cover (from 2011 to 2013)

Source: JICA Survey Team (Based on ISFR 2013 and ISFR 2015)

## **Attachment 5.3.1 Field Observations: Interactions with VSS in OFSDP-II Area**

### **1. JFM in Athgarh Forest Division**

Athgarh Forest Division has 51,432.79 ha forest area distributed in 54 forest blocks and 149 village forests. There are 38 Reserve Forest Blocks and 16 Proposed Reserved Forest Blocks. There are 159 VSSs in 5 Forest Ranges functioning in the Division and the total area protected by them is 15,759 ha. The average area for each VSS is nearly 100 ha. Plantation was taken up in 83 VSS (52%) for once or twice under FDA. Micro plans were prepared for once for the VSSs targeted under FDA. No new micro plans were prepared nor was revision of existing micro plans done after five years. In other VSSs no support has been provided by Forest Department.

#### **➤ Oranda VSS, Khuntuni Range, Athgarh Forest Division**

Oranda village, motivated by the then local forester, started protection of Suniamuhan Reserve Forest in 1982. The Village Committee (traditional village committee) and Sambheswar Youth Club motivated all the villagers to participate in forest protection. With lots of difficulties they could convince people from their own village as well as the neighbouring villages to cooperate in forest protection. A team of 7 persons were sent to the forest every day for watch and ward. All the families were mandated to send one member for voluntary patrolling when their turn comes. The Youth Club members moved around Gobara, Paranda, Gurudijhatia, Radhakishorepur, Kumarpur, Chhagaon gram panchayats to inform the people about the initiatives taken by Oranda village, the rules and regulations for forest protection, penalty for offenders etc. So that all these villagers would cooperate Oranda in forest protection and they would also start protecting forests nearer to their village.

VSS was formed in 1994 with 117 members; 120 ha forest area was assigned to the VSS. Because of the protection there was a good regeneration of forest. Hunting of animals was stopped; illegal felling was checked. Now the village committee, VSS and Youth Club collectively look after the forest. The forest has become a safe habitat for elephants. 8-10 elephants are staying in the forest for 6-10 months a year. Because of the elephants now nobody goes to the forest for fuel wood or other forest produces. Oranda VSS was given the Prakruti Mitra Award in 1996 at the state level for their exemplary work for forest and environment protection.

During late 1990s the VSS requested the DFO for thinning and cleaning but no permission was granted. But the super cyclone in 1999 thinned the forest - about 50% of the trees were damaged. The VSS demanded for their share from the salvage operation and after lot of persuasions they got their share of about Rs. 9 lakh, which was invested in construction of school building and a small amount was also spent for the village temple. 80 ha was planted during 2002-3 under FDA and handed over to VSS. Now the VSS is protecting 200 ha of forest area. The membership of VSS is still limited to 117 though there are many new families evolved. Some of the VSS members have raised teak, eucalyptus, acacia, bamboo etc. on the farm dykes and fallow land.

The major challenge before the VSS is the increasing human-wildlife conflicts. The population of deer, wild boar, peacock etc. has substantially increased in the forest. A herd of elephants is staying in the forest for most part of the year. They are always getting into the farms and habitation causing severe damage to the agriculture as well as tree crops. Since there is no source of water inside the forest, so these animals come to the village in search of water. Since the national highway passes between the forest and village there are often cases of accidents with deer. The VSS requested the Forest Department to create water bodies inside the forest tapping the seasonal springs. The Department may put up solar fences and elephant trenches to

keep the elephant within the forest area. Since the urban areas (Choudwar and Cuttack) are not very far from the village, there is always a threat from timber smugglers. The VSS requires more support from the Forest Department to check illegal felling of trees. In case of theft/felling of tree, they expect the Department to send the response team immediately.

➤ **Gobara VSS, Khuntuni Range, Athgarh Forest Division**

The village initiated protection of Gobara Reserve Forest during 1983-84. The VSS was constituted in 1994 and 200 ha forest area was assigned to them. During 2002-03, 100 ha area was treated under FDA. The Executive Committee was reconstituted on 15th Nov 2015. The new committee has celebrated Van Mahotsava and planted 3 acre area with Amrapali Mango. It intends to create a playground for the school children; raise cashew plantations and initiate action for bee-keeping. The VSS intends to create water bodies for the wild animals inside the forest/ near the forest. There is no problem in forest protection. The dead wood is being collected by the VSS and distributed to the members. The VSS supplies free firewood to the members for cremation. The village has been protecting forest for last 30 years but there is no significant economic benefit to them. The villagers are paying for the watch and ward. The VSS demanded that the Forest Department should provide some financial assistance for payment of watchers as the Department has an equal share in final harvest.

The key issue is crop damage by elephants, deer and wild boars. A herd of elephants is staying in the area for 4-5 months. The tree crops are also damaged by the wild animals. Adequate water bodies need to be created within and near the forest for the wildlife. VSS members are interested for farm forestry. 5-6 persons have already raised plantations of eucalyptus, acacia, teak etc. Others don't have capacity to invest in fencing, tree planting, maintenance etc. The Forest Department may provide some financial assistance to the VSS for promotion of farm forestry.

➤ **Talasara VSS, Buguda Range, Ghumsur South Forest Division**

VSS was formed in this tribal village of 48 HHs in 2004 to protect an area of 100 ha. No plantations, other development works, and VSS strengthening activities have been undertaken in this village by the Forest Department. Rs. 14,000 was provided by the Forest Department for fire protection. During last 2-3 year efforts were made by the local forester to revive the VSS. Members of VSS were engaged in plantation works in neighbouring villages to earn some wage employment. The VSS is facing difficulties in protecting the forest as people from neighbouring villages, which are big and influential ones, forcefully fell trees. The VSS needs support of the Forest Department to check illicit felling of trees in the VSS area. The village is remotely located with very limited infrastructure. Roads and communication are poor and even to visit the Gram Panchayat people have to walk about 8-9 km. The VSS members collect siali leaf, sal leaf, tubers, mushrooms, bamboo shoots etc. from the forest for their own consumption as well as for sale. Though not a regular activity, majority of the families make siali leaf and sell them in nearby markets. The VSS members have their own cashew plantations, which has started fruiting and they believe that after 4-5 years it would be a major source of cash income for them. They do cultivate vegetables and other agriculture crops. Crop failure is common because of lack of adequate water and also crop damage by Elephants.

## **2. JFM in Ghumsur North Forest Division**

This Forest Division has 929.35 sq. km of forest area i.e. 39.37% of the geographical area of the Division. 99% of the forest area is Reserve Forests distributed in 22 blocks and 154 compartments. There are 223 VSSs in the Division protecting about 314.58 sq. km of Reserve Forest with an average area of 141 ha per VSS. The Division intends to form 330 additional VSS covering an additional area of 500 sq. km so that all 22 Reserve Forest Block will be protected in community participation. VSSs have been successfully protecting forests in the Division.

### **➤ Parsulunda VSS, Central Range, Ghumsur North Forest Division**

The dense teak forests of Parsulunda village disappeared in 1970s and 80s. With the help of Forest Department the villagers started protection of forest in 1994-95 and the VSS was formally constituted in December 1995. Initially an area of 150 ha was assigned and later on another 20 ha was given to the village for protection. Because of the efforts of the village good teak forest has regenerated from the existing root stock. 20 ha area has been planted with Acacia and other species. Once a village with no water, no electricity, influenced by superstitions, Parsulunda has now become a model village. Two brothers, who came back to village after their service in Indian Army led the villagers in forest protection and other village development works. Wildlife is back in the forest and there plenty of wild boars and spotted deer. A herd of 12 Elephants roam around in the area. Initial years the VSS struggled very hard to protect the forest from theft and fire. 10-15 persons used to patrol the forest during day time and also occasionally in the night. Now only 4-5 persons are patrolling daily. A micro plan was prepared after formation of VSS with the help of one NGO – Nigamananda Education Centre. The villagers organised awareness campaign – meetings and cycle rallies in the village as well as in the neighbouring villages to sensitize people on forest conservation. During 2015, 20 ha ANR was carried out under NAP. Some funds have been provided for entry point activities. During Phailin cyclone 1,665 trees were uprooted. The VSS did receive its share from the salvage operation.

The VSS has well established system for forest protection, use of fuel wood and other forest produces. No member is doing any harm to the forest. The VSS and the Village traditional governance committee work together for various village development activities. They have constructed temple, community halls, set up tent house business etc. With the help of Gram Vikas, an NGO, 137 toilets were constructed. Land disputes were settled in the village and the village committee also disposed of some community land and raised some funds, which were used for village infrastructure development. The village has a community cultural/ religious troupe, which performs in different villages and some funds are raised for the village. The VSS requested Forest Department to construct Elephant trenches and help the VSS in setting up of a good nursery.

### **➤ Meeting with VSS leaders at Saluapalli, Bhanjanagar**

The meeting was attended by Presidents of 8 no. of VSSs, Staff of Forest Department and women SHG members. Discussions were held with them on very specific issues i.e. micro planning at the VSS level, involvement of Panchayat in VSS activities as well as micro planning, possible livelihood interventions etc. The suggestions provided by these VSSs have been presented below.

- Micro planning should be done for a period of 10 years. There should not be any discontinuity in preparation of micro plan. Another plan should be prepared after completion of 10 years. Forest Department and VSS should take the lead in preparation of micro plan but involvement of other Line Departments is essential.

Some of the Departments named by the VSSs are Revenue, Livestock, Agriculture, Horticulture, Fishery, Water (PHED), Soil Conservation, Power/Electricity and Panchayati Raj. Gram Panchayat should be involved in during formation of VSS. Its participation in micro planning is very essential. Micro plan may be prepared with the help of local NGOs, who are basically involved in the field of forest and environment. The micro plan should include interventions on a) protection of forest, b) plantation and other improvement, c) livelihood of villagers, d) higher level technology in forest protection and management, forest produce management, livelihood skills etc. For the preparation of micro plan, an instruction should be issued from the District Collector to the Officers of different Line Departments so that they will participate in the process of micro planning and subsequently implement some of the activities mentioned in the micro plan.

- Mass awareness needs to be created among the PRIs on forest protection and management through JFM.
- The Forest Department has to adequately think of providing incentives to the VSSs. Because of the efforts of VSSs/ villages there is a significant decline in smuggling of timber and other forest produces. But the villagers are not adequately compensated. The major benefits from forest will come after a long period of time, when the mature trees are harvested. The VSS members need to get some incentives to continue their efforts for protection. More efforts should be given on skill development and capacity building of VSS members.
- Some of the business/ IGA opportunities identified by the VSS leaders include collection, procurement, processing and marketing of turmeric, arrowroot, Ragi, leaf plates, amla (amla candy), pickle, cane furniture. Banani - an initiative taken up by Ghumsar North to procure, process and market different produces of VSSs, is not actively functioning now. But there is a scope for revival of Banani to process and market agriculture and forest products from the hilly areas. Some other livestock related livelihood interventions suggested by the VSSs are dairy and goat rearing.

### **3. Dhenkanal Division**

The Dhenkanal division has 8 ranges and 64 forest blocks, and managing around 100,000 ha. of Reserved Forest area. Out of 64 forest blocks, around 3 blocks are overlapping and 61 blocks are in isolation or contiguous or in few places overlap between forest ranges. Digitization process till forest Compartment level has been accomplished in 5 ranges of the division.

Dhenkanal division is receiving around Rs.10 Cr. per year under CAMPA scheme. Out of 8 ranges, 5 range offices are newly constructed through CAMPA funds. DFO has shared that remaining three range offices are old structures, and need to be renovated / upgraded.

Other infrastructure that are being supported through CAMPA are new office buildings, watch towers, protection barracks, forest roads, residential quarters, training, HWL conflict mitigation aids like elephant torch, fire-crackers, and compensation amount for human deaths. However, SMC works are not being allowed under CAMPA. Around, 400 elephant torches have been distributed so far.

All Range Offices are equipped with desktop computers, printers, internet connectivity, and have email ID for efficient communication. Through CAMPA funds each Range Office is also supported with Data-entry Operators (DOs) that are hired on contract. The DOs are now hired through a Service Provider in compliance with the Government Orders.

Dhenkanal division has second largest population of elephants, and is widely affected due to human-wildlife (HWL) conflict incidences. As shared by DFO previous year around 14 elephants and 16 human deaths were reported, and around Rs.2.32 Cr. has been spent on 'compensation' for human deaths.

Traditional elephant corridors are now crossed mainly by NH-55 and NH-42, which is resulting in incidences of HWL conflicts every now and then. It was shared that provisions of under pass, pathways, etc. for elephants have been made along the NH while forest land diversions were considered for highway road construction.

As of now around 5000 acre (approx.200 ha.) forest area have been transferred to Palli Sabha (Gram Panchayats)/ individuals under FRA 2006, and this forest area do not overlap with forest area assigned to VSS.

As of now around 40,000 ha. forest area (this includes both Reserved Forest and Revenue Forest) is assigned to 346 VSS and EDC institutions. These assigned areas are demarcated and well recognized.

DFO is member to several committees constituted at district level e.g. District Development Committee, Infrastructure, Electricity, Irrigation, NREGA etc. These committees are headed by District Collector/ Magistrate, and also resolve issues wherever FCA 1980 is applied.

Free distribution of around 16.40 lac seedlings has taken place in financial year 2015-16, but during current financial years there is government order in place to recover Rs.2 per seedling whereas the cost of seedling is around Rs.9.45. After introducing the cost recovery mechanism, the pace of distribution of seedling has slowed down in comparison to previous year, and till now (August 2016) 40-45% have been distributed.

There is no mechanism in place to record either area planted or survival percentage/ status of the seedlings distributed. However, this year it was shared that photographs of plantation sites are taken and reported.

➤ **Village 1: Alusingh (Hindol Range)**

Hindol Range has around 40 VSS created during FDA implementation, and currently no financial assistance is being provided to these VSS.

There are 62 households in the village, and landholding size varies between 3-5 acres; out of this only around one is productive land. The main source of income is agriculture – paddy cultivation, seasonal migration, and remittance due to employment outside village/ state. Now, this village is notified as urban area.

Community has requirement for drinking water and irrigation water, and some water harvesting structure within VSS assigned forest area.

President of the VSS is Manoj Kumar Sahoo, who has been recently elected. Records have not been received by him from the earlier President, and thus new register was created on August 24, 2016. The earlier Executive Committee has completed its tenure of 3 years, and thus there has been change in the management. There are around 16 members in the committee.

For plantation works, VSS account receive allocations that includes seedling costs. The cost of seedling is later paid to the government as per norms, and from balance funds members are paid labour wages.

The VSS micro-plan period has completed in year 2010-2011, and since then has not been

formulated again, as no funds are now available.

There are 5 SHGs functioning in the village. These were formed some 10-15 years ago through some government scheme (SGSY) at Block level. Out of these, only one group till now has accessed credit/ loan for goat rearing, while remaining 4 are still functioning as thrift groups and have not been guided to initiate IGAs. The SHG who has taken-up goat-rearing as activity has miserably failed in the business, as the goats died due to spread of some disease.

Community has taken saplings as individuals and planted in fields, backyard, near house, VSS areas etc.

➤ **Village 2: Gundichapada (Dhenkanal Range)**

The VSS was formed way back in year 1993. The Executive Committee has been reconstituted in year 2015. All households in the village are member of VSS.

As shared, all the households have adopted smokeless chulha that has helped to reduce fuel cost by 50%, and is good for health as well.

The village has tribal population as well, who are NTFP collectors of mainly kendu leaves, sal leaves etc. For kendu leave they receive the wages, whereas sal leaves could be utilized by the collectors as a 'right'.

Micro-plan period got completed in year 2011-12, and has not been formulated again.

Three SHGs were interacted which are around 8 years old. Out of these, two SHGs are operating rice de-husking plants, while one SHG has opted for goat rearing. The SHGs who are running rice de-husking plants are making profits, whereas the SHG for goat rearing has suffered loss due to death of goats for some disease. It was shared that the disease in goats has been prevalent past two years.

➤ **Findings:**

- The linkages between the Revenue Forest (looked after Revenue Department) and Reserved Forest (looked after Forest Department), and their authorities needs to be factored while designing institutional arrangements
- Institutional arrangement at VSS level is weak, and VSS members are not well capacitated to independently undertake responsibilities for the assigned forest areas, and other related activities.
- SHGs are working mainly as thrift groups with no realization about their group strengths, and any vision or orientation for initiating IGAs
- Mechanism for equitable distribution of forest resources is not in place at VSS level, and VSS records are not kept/ shared at village level.
- Convergence with other line department is not happening (e.g. issue of death of goats due to some disease not addressed through concern Animal Husbandry Department; Insurance back-up for the goats was not facilitated/ made available)
- Digitization of forest compartments completed - could be used as prioritization criteria for forest ranges; this could work as a trigger for accelerating digitization till the lowest level;
- Other criteria that could be applied at VSS level is – dropping VSS where Palli Sabha has claimed/ applied for rights under FRA/ CFR statutory provisions.



## Attachment 5.5.1 Findings from the Socio Economic Survey

### (a) The Survey

#### 1. Survey Outline

Due to the limited availability of the socio economic data in the potential project divisions to be covered under OFSDP-II, the survey team has out sourced the socio-economic data collection to Samaj Kalyan Foundation, Bhubaneswar. The data collection was undertaken between the end of September to 1<sup>st</sup> half of October, 2016.

#### 2. Survey Areas and Sampling

The JICA survey team has identified 3 forest divisions and 1 wildlife division out of the priority divisions for OFSDP-II. 600 households have been selected from 4 districts identified in the project area keeping in mind the geographic characteristics. From each VSS, 10 HHs were selected based on systematic random sampling. The list of Forest Division/ Ranges/ No of VSSs/ EDCs to be surveyed is given in the table below. The village wise number of households selected for the survey is given in the **section (b) – Table 1**.

**Table 2.1 List of Ranges Selected**

District	Division	Approximate Forest Condition	Range	No of VSSs/ EDCs to be selected
Ganjam	Ghumsur South	Dense	Buguda	4
		Moderately Dense	Badagada	4
		Degraded	Aska	4
<b>Ghumsur South Total</b>				<b>12</b>
Bolangir	Bolangir	Degraded	Titlagarh	5
		Moderately Dense	Bolangir	8
		Dense	Patnagarh	8
<b>Bolangir Total</b>				<b>21</b>
Sambalpur	Bamra WL	Degraded	Kuchinda	3
		Moderately Dense	Bamra	4
		Dense	Badrama	5 (4 EDCs + 1 VSS)
<b>Bamra WL Total</b>				<b>12 (8 VSS and 4 EDCs)</b>
Dhenkanal	Dhenkanal	Degraded	Saranggi	5
		Moderately Dense	Hindol	5
		Dense	Kamakhyanagar East	5
<b>Dhenkanal Total</b>				<b>15</b>
<b>Total VSSs to be covered</b>				<b>60 (56 VSSs and 4 EDCs)</b>

Source: JICA Survey Team (2016)

#### 3. Profile of Sample Households

##### 3.1 Demography

Out of the total number of households surveyed 9.3% is the female headed households. The families interviewed in Bamra wildlife division has indicated 20% of the female headed households, which is the highest among the surveyed divisions. Many of these households are headed by widows but living with their adult children and their family.

**Table 3.1 Number of Female Headed and Male Headed Households**

Division	FHH		MHH		Total	
	No of HH	%	No of HH	%	No of HH	%
Dhenkanal	14	9.3	136	90.7	150	100.0
Ghumsur South	8	6.7	112	93.3	120	100.0
Bamra	24	20.0	96	80.0	120	100.0
Bolangir	10	4.8	200	95.2	210	100.0
<b>Total</b>	<b>56</b>	<b>9.3</b>	<b>544</b>	<b>90.7</b>	<b>600</b>	<b>100.0</b>

Source: Socio Economic Survey, JICA Survey Team (2016)

The total population of the survey households was 2,874, of which 49% were women. The average family size is 4.8 persons per family.

**Table 3.2 Population in the Sample Households**

Division	Male Headed			Female Headed			Grand Total
	Male	Female	Total	Male	Female	Total	
Bamra	219	212	431	39	59	98	529
Dhenkanal	367	331	698	19	27	46	744
Ghumsur South	280	256	536	15	18	33	569
Bolangir	505	482	987	23	22	45	1,032
Total	1,371	1,281	2,652	96	126	222	2,874

Source: Socio Economic Survey, JICA Survey Team (2016)

### 3.2 Social Backgrounds

Among the surveyed households, ST households (42.3%) accounted for the majority of the households followed by OBC (34.3%) and SC (18.3%). Across all the divisions general communities are minimal among the member households of VSSs/ EDCs. The distribution of the ST households was the highest in Bamra. Bolangir had the high concentration of OBC households. Dhenkanal indicated almost even distribution of the SC, ST and OBC households.

**Table 3.3 Social Groups of Sample Households**

Division	SC		ST		OBC		General		Total No of HH
	No of HH	%	No of HH	%	No of HH	%	No of HH	%	
Bolangir	37	17.6	67	31.9	99	47.1	7	3.3	210
Bamra	13	10.8	76	63.3	30	25.0	1	0.8	120
Dhenkanal	41	27.3	48	32.0	46	30.7	15	10.0	150
Ghumsur (South)	19	15.8	63	52.5	31	25.8	7	5.8	120
Total	110	18.3	254	42.3	206	34.3	30	5.0	600

Source: Socio Economic Survey, JICA Survey Team (2016)

### 3.3 Religion

Out of the 600 Households Interviewed, 99.5% of the households were Hindu. In Bamra wildlife, 3 households were reported to be Christians. All the female headed households belong to Hindu community.

**Table 3.4 Religion**

Division	Total				Total No of Households in the division
	Hindu		Christian		
	No of HH	%	No of HH	%	
Dhenkanal	150	100.0			150
Ghumsur South	120	100.0			120
Bamra	117	97.5	3	2.5	120
Bolangir	210	100.0			210
<b>Total</b>	597	99.5	3	0.5	600

Source: Socio Economic Survey, JICA Survey Team (2016)

### 3.4 Economic Status

The families having public distribution services under BPL categories are given in the table below. Out of the total number of sample households, 59.8% of the households hold the BPL status. There was not much difference between the % of FHHs holding BPL status and the same for MHHs in total. However, division wise, Ghumsur South and Bolangir indicated slightly higher proportion of FHH households belonging to BPL category. Ghumsur South indicated the highest proportion of the households holding BPL card. 80.7% of the households hold MGNREGA job card.

**Table 3.5 BPL Households**

Division	FHH			MHH			Total No of HH		
	Total No of HH	No of BPL	% in Division	Total No of HH	No of BPL	%	Total No of HH	No of BPL	%
Bamra	24	15	62.5	96	64	66.7	120	79	65.8
Dhenkanal	14	7	50.0	136	74	54.4	150	81	54.0
Ghumsur South	8	6	75.0	112	80	71.4	120	86	71.7
Bolangir	10	6	60.0	200	107	53.5	210	113	53.8
<b>Total</b>	56	34	60.7	544	325	59.7	600	359	59.8

Source: Socio Economic Survey, JICA Survey Team (2016)

### 3.5 Habitation pattern

Ghumsur south indicated the highest proportion of households living in the tribal hamlets accounting for 44.2% of the total number of households. The least number of families living in the tribal habitation was seen in Bolangir division accounting for 2.9% of 6 households out of 210 households. However, the majority of the households are living in the mixed habitation.

**Table 3.6 Habitation Pattern**

Division	FHH	MHH	Total No of HH living in the tribal habitation	Total No of the HH	% of HH living in the tribal habitation
	No of HH	No of HH			
Bamra	8	21	29	120	24.2
Dhenkanal	4	24	28	150	18.7
Ghumsur South	8	45	53	120	44.2
Bolangir		6	6	210	2.9
<b>Total</b>	20	96	116	600	19.3

Source: Socio Economic Survey, JICA Survey Team (2016)

In the survey areas, Gauda and Godna communities are mostly seen in Bolangir, Kandaha in Dhenkanal and Ghumsur South.

## 4. Education

### 4.1 Literacy

Out of the total population above 6 years old, 25 % of the population is non literacy. The female non literacy among the female population above 6 years old is 30.7% and out of overall population is above 16% of the same. Among the divisions, both male and female non literacy is high in Ghumsur South. In Bamra, Dhenkanal and Bolangir, female non literacy rate is much higher than males.

**Table 4.1 Non Literate Persons in the Sample Households (Age above 6 years old)**

Division	Non Literate			Non Literate (%)		
	Male	Female	Total	Male	Female	Total
Bamra	33	76	109	7.3	16.9	24.3
Dhenkanal	53	83	136	9.0	14.1	23.1
Ghumsur South	54	83	137	11.3	17.3	28.6
Bolangir	78	138	216	9.1	16.0	25.1
Total	218	380	598	9.2	16.0	25.1

Source: Socio Economic Survey, JICA Survey Team (2016)

### 4.2 Education

There is not much difference in pursuing the education up to Intermediate level. When it comes to higher education, the % of women pursued or pursuing the studies lags behind from their male counterparts. 36.1% of the population are either completed the primary or upper primary or pursuing the studies. 21.4% are studying or completed the higher secondary education in the project areas. The data on education level is given in **section (b) Table 2**.

## 5. Economic Activities

About 10% of the total work force is comprised of women. Of this, 32.5% of women are engaged in daily wage work as agriculture labourer and 28.8% are home-based worker. As for men, 34% of those who are engaged in economic activities are engaged in daily wage work as agriculture labourer. Both men and women 16.6% and 17.8% are engaged in subsistence farming respectively. The gender wise primary occupation data is given in **section (b) Table 3**.

## 6. Agriculture Land Holding

68.9% of the sample households own land. Of which, 91% of the lands are held under the name of either the male spouse or the name of the male family member. 91.4% of the land is rain fed. On an average 1.9 acres or 0.8 ha. The land holding is slightly smaller among the female headed households, which is 1.8 acre or 0.7 ha. The ownership of irrigated land is rarely seen with 8% of the households of the total households holding land.

**Table 6.1 Number of Households Owning Agriculture Land (Unit: No of HH)**

Ownership	Male Headed HH			Female Headed HH			Overall
	Irrigated	Unirrigated	Total	Irrigated	Unirrigated	Total	
Husband	20	213	233	0	16	16	249
Wife	2	2	4	0	3	3	7
Other Male Member of the Family	8	111	119	2	8	10	129
Other Female Member	2	17	19	0	8	8	27
Total :	32	343	375	2	35	37	412

Source: Socio Economic Survey, JICA Survey Team (2016)

The division wise details of the land holding and ownership is given in the **section (b) Table 4**.

Out of the sample households, two families in Bolangir received the patta under Forest Rights Act.

### 7. Livestock

Commonly owned livestock includes cow, bullock, goat and poultry. The average number of livestock owned by the female headed households and male headed households have not indicated much difference for cow and bullock. However, slightly higher number of poultry and goats are owned among the male headed households. The figures of the female and male headed households are given in the **section (b) Table 5**.

**Table 7.1 Number of Households owning Livestock and the Average Number of Livestock**

Division	Total No of HH	Cow		Bullock		Poultry		Goat	
		No of HH	Average	No of HH	Average	No of HH	Average	No of HH	Average
Bamra	120	42	2.0	42	2.2	19	3.6	36	6.4
Bolangir	210	38	1.4	58	2.0	12	2.7	45	4.2
Dhenkanal	150	69	1.6	30	2.0	10	4.4	25	4.0
Ghumsur South	120	36	2.5	50	1.9	5	5.8	7	4.3
Total	600	185	1.8	180	2.0	46	3.8	113	4.9

Source: Socio Economic Survey, JICA Survey Team (2016)

Free grazing is not common for buffaloes but cow, bullock and goats are mostly grazed freely.

**Table 7.2 Number of Households Graze Livestock Freely**

Division	Cow		Bullock		Buffalo		Goats	
	No of HH	%	No of HH	%	No of HH	%	No of HH	%
Bamra	42	100.0	41	97.6	1	100	35	97.2
Bolangir	38	100.0	57	98.3	5	83.3	45	100.0
Dhenkanal	65	94.2	29	96.7			22	88.0
Ghumsur South	36	100.0	48	96	3	75	6	85.7
Total	182	98.4	175	97.2	9	81.8	108	95.6

Source: Socio Economic Survey, JICA Survey Team (2016)

## 8. Household Energy

Main household energy is the fuelwood across 4 divisions. 98.5% of the households depend on it. Kerosene is still widely used for the lighting. LPG is yet to become common among the surveyed households and mostly seen among the male headed households.

**Table 8.1 Household Energy (Unit: Counts of Responses)**

Divisions	FHH			MHH			Total		
	Fuelwood	LPG	Kerosene	Fuelwood	LPG	Kerosene	Fuelwood	LPG	Kerosene
Bamra	23	1	10	95	9	50	118	10	60
Dhenkanal	13		10	134	14	51	147	14	61
Ghumsur South	8		3	111	3	61	119	3	64
Bolangir	10		9	197	3	120	207	3	129
Total	54	1	32	537	29	282	591	30	314

Source: Socio Economic Survey, JICA Survey Team (2016)

The average volume of fuelwoods used among the survey households is given in the table below. The consumption of the fuelwood is slightly higher among the male headed households.

**Table 8.2 Consumption of Fuelwood per week (kg)**

Divisions	FHH	MHH	Total
Bamra	32.8	33.6	33.5
Dhenkanal	25.0	29.3	28.9
Ghumsur South	25.3	31.9	31.4
Bolangir	31.5	29.8	29.9
Total	29.6	30.8	30.7

Source: Socio Economic Survey, JICA Survey Team (2016)

## 9. Access to Financial Services

### 9.1 Bank Accounts

Both male and female adults have bank accounts. Among the male headed households, slightly less number of adult women have bank accounts.

**Table 9.1 Gender wise Bank Account Holding Status by Household Category (Unit: No of HH)**

Bank Accounts	Male			Female		
	FHH	MHH	Total	FHH	MHH	Total
Bamra	12	86	98	20	83	103
Dhenkanal	9	130	139	11	104	115
Ghumsur South	5	108	113	8	72	80
Bolangir	6	184	190	9	155	164
Total	32	508	540	48	414	462

Source: Socio Economic Survey, JICA Survey Team (2016)

### 9.2 Distance to the Bank

The average distance to the bank is 8.7 km. Villages in Bamra located the farthest from the banking facilities among the surveyed villages.

**Table 9.2 Average Distance to Bank (Unit: km)**

Division	Average
Bamra	11
Dhenkanal	7.3
Ghumsur South	9.5
Bolangir	7.5
Total	8.7

*Source: Socio Economic Survey, JICA Survey Team (2016)*

**Table 9.3 Number of Household Members having Savings and Amount of Savings**

Division	Male		Female	
	No of Responses	Average (Rs.)	No of Responses	Average (Rs.)
Bamra	96	3,511.7	103	4,539.5
Dhenkanal	136	2,300.1	115	1,333.4
Ghumsur South	112	2,074.5	80	938.9
Bolangir	200	2,226.8	164	1,627.3
Total	544	2,465.9	462	2,184.4

*Source: Socio Economic Survey, JICA Survey Team (2016)*

The survey findings also revealed that the women in the female headed households save Rs. 6,067.9 on an average whereas those in the male headed households save Rs. 1,710.2. The highest amount save among women are found in Bamra for both female and male headed households.

### 9.3 Loan

Taking loan from financial institutions has not become a common practice among the villagers SHGs, government banks, and cooperatives are the main providers of loan. The purpose of taking loan from these financial institutions are mostly for agriculture. A small number of households in Dhenkanal and Bolangir took loan from money lenders. Loan from SHGs are taken by women as the groups are comprised of women only in most cases and the main purpose of taking loan is for agriculture.

**Table 9.4 Number of Households Taking Loan from Different Financial Institutions**

(Unit: No of HH)

Division	Bank (Government)	Bank (Private)	Cooperatives	SHG	MFI	Money Lender
Bamra	6		7	13		
Dhenkanal	10	1	3	21	4	3
Ghumsur South	13	1	14	9		
Bolangir	8		1	14	1	1
Total	37	2	25	57	5	4

*Source: Socio Economic Survey, JICA Survey Team (2016)*

The average amount of loan taken by the households are given below. The common interest rate from the financial institutions vary between 6-9% per month and most frequently mentioned repayment period is 12 months.

**Table 9.5 Average Amount of Loan taken from Different Financial Institutions (Unit: Rs.)**

Division	Bank (Government)	Bank (Private)	Cooperatives	SHG	MFI	Money Lender
Bamra	37,333		34,714	10,077		
Dhenkanal	31,300	3,000	21,667	13,524	16,250	14,000
Ghumsur South	38,231	20,000	22,786	17,889		
Bolangir	54,625		10,000	9,643	10,000	7,000
Total	39,757	11,500	25,480	12,474	15,000	12,250

Source: Socio Economic Survey, JICA Survey Team (2016)

## 10. Household Expenditure

The average annual expenditure of the survey households was Rs. 42,811 while that of the female headed households was 70% of that of the male headed households. In both female headed and male headed households, food is accounts for a little above 50% of the annual expenditure followed by farming and other activities. The division wise expenditures are given in the **section (b) Table 6**, which has not shown much differences in the spending pattern and the annual expenditure. Female headed households in Dhenkanal and Ghumsur South appear to be earning less than those households of the same category on Bolangir and Bamra.

**Table 10.1 Itemised Household Expenditure (Unit: Rs.)**

Expenditure Item	FHH	MHH	Total
Food	17,296	24,337	23,691
Medicine	1,919	3,294	3,167
Clothes	2,852	3,754	3,672
Farming and other related activities	9,671	9,024	9,079
Education	3,361	3,871	3,841
Cultural activities/ festivals	1,754	2,120	2,088
Maintenance of house	1,775	1,864	1,856
Other expenses	1,167	2,505	2,393
Total	32,053	43,918	42,811

Source: Socio Economic Survey, JICA Survey Team (2016)

## 11. Food Shortage

Most households derive their food from more than one sources. 50% of the households derive the required food from their own cultivated land and 50% of households depend on ration. 40% of the households also purchase food. 333 households out of 600 survey households experienced food shortage during the past 12 months. The duration of food shortage vary between 2-6 months. 71.5% of the 333 households indicates they have experienced 3-4 months of the food shortage in the past 12 months. The shortages of pulses, vegetables, oil and cereals are commonly encountered among nearly 70% of those households experienced food shortage. When they fall short of food, they purchase to supplement.

## 12. Health and Sanitation

### 12.1 Average Distance to the Health Facilities.

The average distance to the health care facilities is 9.4 km. Bamra sample villages had the longest distance among the divisions. In Bamra, EDCs are located within the sanctuary areas and the access to basic amenities may be limited in comparison to other divisions.



**Table 12.1 Distance to the Healthcare Facilities (Unit: km)**

Division	Distance
Bamra	11.2
Dhenkanal	8.4
Ghumsur South	9.0
Bolangir	9.2
Total	9.4

Source: Socio Economic Survey, JICA Survey Team (2016)

### 12.2 Use of Bathing facilities at home

94.7% of the total number of households surveyed indicated that not all the family members use the bathing facilities at home stead.

**Table 12.2 Number of Households Not using Bathing Facilities at Home**

Divisions	Total No of Households	No of HH	%
Bamra	120	106	88.3
Dhenkanal	150	140	93.3
Ghumsur South	120	118	98.3
Bolangir	210	204	97.1
Total	600	568	94.7

Source: Socio Economic Survey, JICA Survey Team (2016)

Among the households not using the bating space at homestead, 19.5% of the households bathe at river and 13.4% of the respondents use common well for bathing. The rest of the households did not specify where they bathe.

**Table 12.3 Places used for Bathing (Unit: Number of HH)**

Divisions	River		Common Well		Spring	
	No of HH	%	No of HH	%	No of HH	%
Bamra	29	27.4	12	11.3	2	1.9
Dhenkanal	31	22.1	41	29.3	8	5.7
Ghumsur South	24	20.3	4	3.4		0.0
Bolangir	27	13.2	19	9.3	2	1.0
Total	111	19.5	76	13.4	12	2.1

Source: Socio Economic Survey, JICA Survey Team (2016)

### 12.3 Use of Toilet facilities at home

79.5% of the total number of households do not use toilets. 97.7% of these households do not have toilet facilities at home stead.

**Table 12.4 Number of Households do not use Toilets at Homestead (Unit: Number of HH)**

Divisions	Total Sample HH	No of HH	% to the Total Sample HH
Bamra	120	64	53.3
Dhenkanal	150	123	82.0
Ghumsur South	120	94	78.3
Bolangir	210	196	93.3
Total	600	477	79.5

Source: Socio Economic Survey, JICA Survey Team (2016)

**Table 12.5 Reasons for Not using Toilet (Unit: Number of HH)**

Divisions	Do not know the use of the toilet		No toilet in the home premises		Used to going outside		Forest	
	No of HH	%	No of HH	%	No of HH	%	No of HH	%
Bamra	1	1.6	62	96.9	0	0.0	51	79.7
Dhenkanal	3	2.4	114	92.7	8	6.5	66	53.7
Ghumsur South	0	0.0	94	100.0	0	0.0	58	61.7
Bolangir	0	0.0	196	100.0	0	0.0	155	79.1
Total	4	0.8	466	97.7	8	1.7	330	69.2

Source: Socio Economic Survey, JICA Survey Team (2016)

For those households not using toilet facilities, 69.2% of the households go to the forests and 19.1% of the households go to the agriculture field.

**Table 12.6 Places used for Toilet (Unit: Number of HH)**

Divisions	Forest		Riverside		Agriculture field		Community toilet	
	No of HH	%	No of HH	%	No of HH	%	No of HH	%
Bamra	51	79.7	1	0.0	11	17.2	0	0.0
Dhenkanal	66	53.7	13	0.1	32	26.0	7	5.7
Ghumsur South	58	61.7	2	0.0	23	24.5	2	2.1
Bolangir	155	79.1	0	0.0	25	12.8	1	0.5
Total	330	69.2	16	0.0	91	19.1	10	2.1

Source: Socio Economic Survey, JICA Survey Team (2016)

### 13. Schemes

The survey households access government schemes and programmes. 80.7% of the households hold job card of MGNREGA and 31.7% of the total surveyed households are holding the status of Priority Households of the Public Distribution System. The division wise number of households having MGNREGA and AAY status are given in the table below.

**Table 13.1 Major Schemes Accessed by the Survey Households**

Divisions	AAY		PHH		MGNREGA		Total No of HH
	No of HH	%	No of HH	%	No of HH	%	
Bolangir	7	3.3	72	34.3	164	78.1	210
Bamra	6	5.0	38	31.7	99	82.5	120
Dhenkanal	9	6.0	40	26.7	119	79.3	150
Ghumsur South	1	0.8	40	33.3	102	85.0	120
Total	23	3.8	190	31.7	484	80.7	600

Source: Socio Economic Survey, JICA Survey Team (2016)

Other schemes indicated by the surveyed households are given below.

**Table 13.2 Outline of the Schemes Accessed by the Survey Households other than Major Schemes**

Name of Schemes	Outline of the Schemes
Biju Jyoti Yojna	This scheme provide electricity to every villages those are not covered under RGGVY. ( Rajiv Gandhi Gramin Vidyutikaran Yojana)
IHHL	Individual House Hold Latrine
Mamata Yojna	This scheme provides monetary support to the pregnant women. Government provides Rs.5000/- to each rural women to enable the pregnant and lactating women of 19 years of age and for the first 2 life birth.
Mo Kudia	Provide shelter to all Rural People. It also benefits who are affected by disaster.

Source: Socio Economic Survey, JICA Survey Team (2016)

## 14. Gender

### 14.1 Participation in the community matters

The level of attendance of women to the community level organisations has been asked. Palli Sabha and VSS/ EDC/ Forest Protection Committees were found out to be very high. Almost 83% and 82% of women are participating in respective committees, which majority always attends the meetings. The participation to the SHG meetings were 47% since not all the women are members of the SHGs and thus, the level of participation was low. However, among those women who are members of SHGs, 84.8% of women are always participating in the meetings and other related activities. On the other hand, women seem to have been less involved in the conflict resolution in the community. The details of the responses of Palli Sabha, VSS/ EDC/ Forest Protection Committee and SHGs are given in the table below.

**Table 14.1 Women's Participation to the Community Organisations**

#### Palli Sabha

Division	Always	Very Often	Sometimes	Never	Total
Bamra	69	18	26	2	115
Bolangir	137	12	17	8	174
Dhenkanal	65	15	20	14	114
Ghumsur South	63	12	11	9	95
Total	334	57	74	33	498

#### VSS/ EDC/ Forest Protection Committee

Divisions	Always	Very Often	Sometimes	Never	Total
Bamra	50	39	19	1	109
Bolangir	138	8	18	7	171
Dhenkanal	66	18	20	15	119
Ghumsur South	70	6	11	7	94
Total	324	71	68	30	493

#### SHGs

Divisions	Always	Very Often	Sometimes	Never	Total
Bamra	38	5	5	2	50
Bolangir	67	5	2	5	79
Dhenkanal	60	7	4	3	74
Ghumsur South	74	2		3	79
Total	239	19	11	13	282

Source: Socio Economic Survey, JICA Survey Team (2016)

The level of participation among the three different types of community organisations is given in the table below. The data shows women are actively participating in the discussion in the case of SHGs while they are more of the level of attending the meeting when it comes to the meetings of Palli Sabha/ Gram Sabha or VSS/ EDC/ Forest Protection Committees where men are also present.

**Table 14.2 Level of Participation of Women at Different Community Organisations**

Divisions	Palli Sabha/	Gram	VSS/	EDC/	Forest	SHG	
	Sabha		Protection	Committee	Committee	Attending	Actively Participate in Discussion
	Attending	Actively Participate in Discussion	Attending	Actively Participate in Discussion	Attending	Attending	Actively Participate in Discussion
Bamra	29	3	19	17	6	32	
Bolangir	10	2	2	2	17	50	
Dhenkanal	10	5	9	2	6	52	
Ghumsur South	1	2	45		4	70	
Total	50	12	75	21	33	204	

Source: Socio Economic Survey, JICA Survey Team (2016)

#### 14.2 Division of labour in the family

Domestic chores are largely the domain of women. Livestock is mostly looked after by women and male child. Men takes lead in the on-farm activities. As for NTFP and fuelwood collection and fetching water are equally done by men and women. The average time spent in a day for different types work by men and women are given in the table below. Time spent on other works are given in the **section (b) Table 7**.

**Table 14.3 (1) Time Spent by Male and Female for Various Daily Activities**

##### Household Work

Division	Male	Female	Male child	Female child
Bamra	69	214		
Bolangir	63	195		240
Dhenkanal	102	247		60
Ghumsur South	86	203		142
Total	76	215		137

##### Livestock

Division	Male	Female	Male child	Female child
Bamra	78	127		
Bolangir	83	91		
Dhenkanal	99	127	135	60
Ghumsur South	79	90		
Total	84	112	135	60

Source: Socio Economic Survey, JICA Survey Team (2016)

**Table 14.3 (2) Time Spent by Male and Female for Various Daily Activities**

On Farm Activities

Division	Male	Female	Male child	Female child
Bamra	352	176	94	
Bolangir	374	204		
Dhenkanal	355	232	315	
Ghumsur South	357	171		
Total	361	207	238	

Source: Socio Economic Survey, JICA Survey Team (2016)

### 15. Forest Protection Activities

The average forest area that are assigned to the VSSs in the area are ranging between 96 ha to 101 ha.

**Table 15.1 Forest areas protected by the Community (unit: ha)**

Division	Area
Bolangir	95.99
Bamra	103.1
Dhenkanal	100.9
Ghumsur South	106.7
Total	101.1

Source: Socio Economic Survey, JICA Survey Team (2016)

Majority of the interviewed households were aware of the roles of VSS/ EDC/ Forest Protection Committee and 84.5% out of 600 households saw the benefit of having such committees. Those benefits included 1) being able to collect fuelwoods, NTFPs (mahua, siali leaf, kendu leaf) and other vegetables and tubers.

**Table 15.2 Efforts made by VSS/ EDC/ FPC by the Respondents (Unit: Counts of Responses)**

Efforts made by the VSS/ EDC/ FPC	Bolangir	Bamra	Dhenkanal	Ghumsur South	Total
Protect forest and Plantation	125	65	73	56	319
Protect forest from fire	42	3	4	54	103
Watch & warn	2	32	28	9	71
Awareness creation on forest protection and afforestation	2		3	1	6
Protection and proper distribution of forest products (access to all)	12				12
Total	183	100	108	120	511

Source: Socio Economic Survey, JICA Survey Team (2016)

### 16. Man Animal Conflicts

57.3% of the total households have indicated that they have experienced damages caused by wild animals. The crop damage was the most commonly damage caused by the wild animals. Elephant and wild boar are the two main causes of conflicts. On an average, Rs. 7,088 is received from the Forest Department. The most commonly referred to counter measures for the wildlife damages included the solar fencing and trenches.

**Table 16.1 Number of Households Experienced the Damage caused by Wildlife**  
(Unit: Number of HH)

Divisions	Experienced	No Experience	Grand Total
Bamra	72	47	119
Bolangir	101	109	210
Dhenkanal	74	61	135
Ghumsur South	97	23	120
Grand Total	344	240	584

Source: Socio Economic Survey, JICA Survey Team (2016)

**Table 16.2 Types of Damages caused by Wildlife**  
(Unit: No of Responses)

Divisions	Crop Damage	Damage to House and Other Property	Injury to Human Being	Loss of Domestic Animals	Any Others	Grand Total
Bamra	75	9				84
Bolangir	101	6	1		1	109
Dhenkanal	75	14	8	2		99
Ghumsur South	95	5				100
Grand Total	346	34	9	2	1	392

Source: Socio Economic Survey, JICA Survey Team (2016)

**Table 16.3 Types of Wildlife causing Damages (Unit: Number of Responses)**

Divisions	Elephant	Wild Boar	Tiger	Leopard	Monkey	Others	Grand Total
Bamra	81	38	1		23		143
Bolangir	74	113		31	31	1	138
Dhenkanal	110	43		3	12		121
Ghumsur South	82	72	7	9	30	11	116
Grand Total	347	266	8	43	96	12	772

Source: Socio Economic Survey, JICA Survey Team (2016)

(b) Tables

**Table 1 Village wise Number of Households Selected for the Survey**

Forest Division	Forest Range	Village	No of HH
Dhenkanal	Hindol	Alusing	11
		Ambithi	10
		Karabira	10
		Karnapur	9
		Sinkol	10
	Kamakshya Nagar ( E )	Birasala	10
		Mandiapada	10
		Sario	10
		Sashapasi	10
		Sendhesara	10
	Sadangi	Baniapada	10
		Dalara	10
		Hatibari	10
		Nabakasipur	10
		Palagandua	10
		Total	150
Bamara(Wildlife)	Badrama	Badrama	10
		Gantab	10
		Kutab	10
		Odising	10
		Pathuria	10
	Bamra	Haripada	10
		P.Niktimal	10
		Rangeitikra	10
		Saloi	10
	Kuchinda	Dansinadihi	10
		Kulanjore	10
		Laidaguna	10
		Total	120
Balangir	Balangir	Anlapali	10
		Barapudugia	10
		Bijilimunda	10
		Chhatrapali	10
		Dudukasira	10
		Kalijharan	10
		Madhupur	10
		Telapali	10
	Patnagarh	Dahimal	10
		Dunguriguda	10
		Gambharimal	11
		Guniabahal	9
		Jalia	10

Forest Division	Forest Range	Village	No of HH	
		Jurabandh	10	
		Karlamal	10	
		Luhuret	10	
	Titlagarh		Bhoiripada	10
			Kanjire	10
			Kumudipadar	10
			Pendrapadar	10
			Suhagpur	10
			Total	210
	Ghumusar( South)	Aska	Dantaribagada	10
Kalasuta			10	
Osthapali			10	
Padampali			10	
Badagada			Kandhagochha	10
			Lengama	10
			Sarabadi	10
			Srirampalli	10
Buguda			Jhatikapali	10
			Kiriamba	10
			Kundrei	10
			Talasara	10
			Total	120
		TOTAL	600	

Source: Socio Economic Survey, JICA Survey Team (2016)



**Table 2 Educational Background of the Household Members (above 6 years old)**

Male		Primary		Upper primary (7th)		Higher Secondary (8-10th)		Intermediate (11th - 12th)		Graduate		Post Graduate		Qualification/ Professional Degree	
Division	Total Population	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Bamra	253	50	19.8	38	15.0	56	22.1	23	9.1	7	2.8		0.0	2	0.8
Dhenkanal	371	86	34.0	36	14.2	90	24.3	24	9.5	7	2.8		0.0	1	0.4
Ghum sur South	292	95	37.5	30	11.9	46	15.8	4	1.6	4	1.6	1	0.4		0.0
Bolangir	523	114	45.1	48	19.0	123	23.5	27	10.7	6	2.4	4	1.6	2	0.8
<b>Total</b>	<b>1439</b>	<b>345</b>	<b>24.0</b>	<b>152</b>	<b>10.6</b>	<b>315</b>	<b>21.9</b>	<b>78</b>	<b>5.4</b>	<b>24</b>	<b>1.7</b>	<b>5</b>	<b>0.3</b>	<b>5</b>	<b>0.3</b>

Female		Primary		Upper primary (7th)		Higher Secondary (8-10th)		Intermediate (10th - 11th)		Graduate		Post Graduate		Technical Qualification	
Division	Total Population	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Bamra	258	56	21.7	28	10.9	51.0	19.8	22	8.5	4	1.6	2	0.8	1	0.4
Dhenkanal	328	71	27.5	54	20.9	74.0	22.6	9	3.5	2	0.8		0.0		0.0
Ghum sur South	261	86	33.3	29	11.2	40.0	15.3	5	1.9	2	0.8		0.0		0.0
Bolangir	496	122	47.3	61	23.6	114.0	23.0	20	7.8	4	1.6		0.0		0.0
<b>Total</b>	<b>1343</b>	<b>335</b>	<b>24.9</b>	<b>172</b>	<b>12.8</b>	<b>279.0</b>	<b>20.8</b>	<b>56</b>	<b>4.2</b>	<b>12</b>	<b>0.9</b>	<b>2</b>	<b>0.1</b>	<b>1</b>	<b>0.1</b>

Overall		Primary		Upper primary (7th)		Higher Secondary (8-10th)		Intermediate (10th - 11th)		Graduate		Post Graduate		Technical Qualification	
Division	Total Population	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Bamra	511	106	20.7	66	12.9	107.0	20.9	45	8.8	11	2.2	2	0.4	3	0.6
Dhenkanal	699	157	22.5	90	12.9	164.0	23.5	33	4.7	9	1.3	0	0.0	1	0.1
Ghum sur South	553	181	32.7	59	10.7	86.0	15.6	9	1.6	6	1.1	1	0.2	0	0.0
Bolangir	1019	236	23.2	109	10.7	237.0	23.3	47	4.6	10	1.0	4	0.4	2	0.2
<b>Total</b>	<b>2782</b>	<b>680</b>	<b>24.4</b>	<b>324</b>	<b>11.6</b>	<b>594.0</b>	<b>21.4</b>	<b>134</b>	<b>4.8</b>	<b>36</b>	<b>1.3</b>	<b>7</b>	<b>0.3</b>	<b>6</b>	<b>0.2</b>

Source: Socio Economic Survey, JICA Survey Team (2016)

**Table 3 Primary Occupation of the Household Members**

Male	Subsistence farmer		Commercial farmer		Fishery		Animal husbandry		Daily wage/ agriculture labourer		Skilled wage labourer		Semi/ unskilled wage labourer	
	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%
Bamra	68	24.6	2	0.7	1	0.4	1	0.4	97	35.1	5	1.8	18	6.5
Dhenkanal	81	22.2	2	0.5	1	0.3	2	0.5	84	23.0	22	6.0	64	17.5
Ghumsur South	41	12.9		0.0		0.0	1	0.3	110	34.6	9	2.8	55	17.3
Bolangir	65	11.3		0.0		0.0		0.0	233	40.6	7	1.2	77	13.4
Grand Total	255	16.6	4	0.3	2	0.1	4	0.3	524	34.2	43	2.8	214	14.0

Female	Subsistence farmer		Commercial farmer		Fishery		Animal husbandry		Daily wage/ agriculture labourer		Skilled wage labourer		Semi/ unskilled wage labourer		
	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	
Bamra	8	13.6		0.0		0		0	17	28.8	1	1.7	10	16.9	
Dhenkanal	11	26.2	1	2.4		0		1	2.4	14	33.3	2	4.8	6	14.3
Ghumsur South	3	9.7		0.0		0		0	0.0	12	38.7		0.0	1	3.2
Bolangir	7	22.6		0.0		0		0	0.0	10	32.3		0.0	1	3.2
Grand Total	29	17.8	1	0.6		0		1	0.6	53	32.5	3	1.8	18	11.0

Overall	Subsistence farmer		Commercial farmer		Fishery		Animal husbandry		Daily wage/ agriculture labourer		Skilled wage labourer		Semi/ unskilled wage labourer	
	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%
Bamra	76	22.7	2	0.6	1	0.3	1	0.3	114	34.0	6	1.8	28	8.4
Dhenkanal	92	22.6	3	0.7	1	0.2	3	0.7	98	24.1	24	5.9	70	17.2
Ghumsur South	44	12.6	0	0.0	0	0.0	1	0.3	122	35.0	9	2.6	56	16.0
Bolangir	72	11.9	0	0.0	0	0.0	0	0.0	243	40.2	7	1.2	78	12.9
Grand Total	284	16.7	5	0.3	2	0.1	5	0.3	577	34.0	46	2.7	232	13.7

Male	Service- private sector		Service- Government		Trade/ Business		Owner of cottage industry		Other self-employed		Home based worker		Total
	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	
Bamra	5	1.8	6	2.2		0.0		0.0	1	0.4	72	26.1	276
Dhenkanal	7	1.9	5	1.4	3	0.8	2	0.5	2	0.5	90	24.7	365
Ghumsur South	5	1.6	3	0.9	1	0.3	1	0.3	4	1.3	88	27.7	318
Bolangir	11	1.9	4	0.7	7	1.2	1	0.2	3	0.5	166	28.9	574
Grand Total	28	1.8	18	1.2	11	0.7	4	0.3	10	0.7	416	27.1	1533

Female	Service- private sector		Service- Government		Trade/ Business		Owner of cottage industry		Other self-employed		Home based worker		Total
	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	
Bamra	2	28.7	2	3.4	2	3.4		0		0	17	28.8	59
Dhenkanal	1	34.0		0.0		0.0		0		0	6	14.3	42
Ghumsur South	1	10.4	1	3.2		0.0		0		0	13	41.9	31
Bolangir	1	10.4		0.0	1	3.2		0		0	11	35.5	31
Grand Total	5	6.8	3	1.8	3	1.8	0	0	0	0	47	28.8	163

Overall	Service- private sector		Service- Government		Trade/ Business		Owner of cottage industry		Other self-employed		Home based worker		Total
	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	
Bamra	7	2.1	8	2.4	2	0.6	0	0.0	1	0.3	89	26.6	335
Dhenkanal	8	2.0	5	1.2	3	0.7	2	0.5	2	0.5	96	23.6	407
Ghumsur South	6	1.7	4	1.1	1	0.3	1	0.3	4	1.1	101	28.9	349
Bolangir	12	2.0	4	0.7	8	1.3	1	0.2	3	0.5	177	29.3	605
Grand Total	33	1.9	21	1.2	14	0.8	4	0.2	10	0.6	463	27.3	1,696

Source: Socio Economic Survey, JICA Survey Team (2016)

**Table 4 Division Wise Land Holding/ Ownership Status**

**a) No of HH having own Cultivable Land**

Division	FHH	MHH	Total
Bamra	3	14	17
Dhenkanal	4	29	33
Ghumsur South		3	3
Bolangir	3	47	50
Total	10	93	103

Source: Socio Economic Survey, JICA Survey Team (2016)

**b) No of HH Having Irrigated/ Unirrigated Land and Average Area in Acres**

Own Cultivable Land	Irrigated Land				Unirrigated			
	FHH	MHH	Total	Average Area (Acre)	FHH	MHH	Total	Average Area (Acre)
Bamra	1	1	2	8.0	19	83	102	2.5
Dhenkanal	1	16	17	1.7	6	69	75	1.4
Ghumsur South		13	13	2.1	6	64	70	1.4
Bolangir		6	6	0.9	4	137	141	2.0
Total	2	36	38	2.1	35	353	388	1.9

Source: Socio Economic Survey, JICA Survey Team (2016)

**c) Owners of Unirrigated Land (FHH)**

Divisions	Husband	Wife	Other Male member of the Family	Other Female Member	Others	Total
Bamra	5	2	6	6		19
Dhenkanal	3	1	1		1	6
Ghumsur South	4			2		6
Bolangir	4					4
Total	16	3	7	8	1	35

Source: Socio Economic Survey, JICA Survey Team (2016)

**d) Owners of Unirrigated Land (MHH)**

Divisions	Husband	Wife	Other Male member of the family	Other Female member of the family	Joint membership	Others	Total
Bamra	45	1	30	4	1		82
Dhenkanal	43	1	19		1	1	65
Ghumsur South	37		19	6			62
Bolangir	86		41	7		1	135
Total	211	2	109	17	2	2	344

Source: Socio Economic Survey, JICA Survey Team (2016)

**e) Owners of Irrigated Land**

Divisions	FHH			MHH					Total
	Other male member of the family	Others	Total	Husband	Wife	Other Male member of the family	Other Female member of the family	Total	
Bamra	1		1	1				1	2
Dhenkanal		2	2	9		2	1	12	14
Ghumsur South			0	6	2	4	1	13	13
Bolangir			0	4		2		6	6
Total	1	2	3	20	2	8	2	32	35

Source: Socio Economic Survey, JICA Survey Team (2016)

**Table 5 Livestock Holdings (1)**

**Cow**

Division	FHH		MHH		Total	
	No of HH	Average	No of HH	Average	No of HH	Average
Bamra	8	2	34	2.1	42	2.0
Bolangir	4	1.5	34	1.4	38	1.4
Dhenkanal	3	1.3	66	1.6	69	1.6
Ghumsur South	2	1.5	34	2.6	36	2.5
Total	17	1.7	168	1.9	185	1.8

**Bullock**

Division	FHH		MHH		Total	
	No of HH	Average	No of HH	Average	No of HH	Average
Bamra	6	2	36	2	42	2
Bolangir	2	2	56	2	58	2
Dhenkanal	4	2	26	2	30	2
Ghumsur South	3	2	47	1.9	50	1.9
Total	15	2	165	2	180	2

**Buffalo**

Division	FHH		MHH		Total	
	No of HH	Average	No of HH	Average	No of HH	Average
Bamra			1	8	1	8
Bolangir			6	2	6	2
Dhenkanal						
Ghumsur South			4	2	4	2
Total			11	2.5	11	2.5

**Poultry**

Division	FHH	MHH	Total
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**Goats**

Division	FHH		MHH		Total	
	No of HH	Average	No of HH	Average	No of HH	Average
Bamra	6	4.5	30	6.8	36	6
Bolangir	1	3	44	4.2	45	4.2
Dhenkanal	1	2	24	4.1	25	4.0
Ghumsur South			7	4.3	7	4.3
<b>Total</b>	<b>8</b>	<b>4</b>	<b>105</b>	<b>5</b>	<b>113</b>	<b>4.9</b>

**Sheep**

Division	FHH		MHH		Total	
	No of HH	Average	No of HH	Average	No of HH	Average
Bamra			1	4	1	4
Bolangir	2	2	10	3.1	12	3
Dhenkanal			2	6	2	6
Ghumsur South			2	2	2	2
<b>Total</b>	<b>2</b>	<b>2</b>	<b>15</b>	<b>3.4</b>	<b>17</b>	<b>3</b>

	No of HH	Average	No of HH	Average	No of HH	Average
Bamra	2	3	17	3.7	19	3.6
Bolangir	1	2	11	2.7	12	2.7
Dhenkanal			10	4.4	10	4.4
Ghumsur South			5	5.8	5	5.8
<b>Total</b>	<b>3</b>	<b>2.7</b>	<b>43</b>	<b>3.9</b>	<b>46</b>	<b>3.8</b>

Source: Socio Economic Survey, JICA Survey Team (2016)

**Table 6. Division Wise Household Expenditure**

Expenditure Item	Bolangir			Bamra		
	FHH	MHH	Total	FHH	MHH	Total
Food	19,860	23,422	23,252	19,471	23,473	22,666
Medicine	1,820	2,978	2,923	1,870	2,636	2,480
Clothes	3,444	3,867	3,848	2,813	3,732	3,545
Farming and other related activities	6,800	8,994	8,920	10,632	12,247	11,943
Education	2,400	3,177	3,144	3,088	3,972	3,833
Cultural activities/ festivals	1,545	2,130	2,101	2,086	1,949	1,975
Maintenance of house	1,356	1,778	1,759	2,067	1,924	1,952
Other expenses	2,000	1,736	1,742	1,067	1,650	1,456
<b>Total</b>	<b>32,345</b>	<b>42,567</b>	<b>42,080</b>	<b>37,633</b>	<b>46,044</b>	<b>44,348</b>

Expenditure Item	Dhenkanal			Ghumsur South		
	FHH	MHH	Total	FHH	MHH	Total
Food	12,077	25,343	24,185	16,050	25,487	24,858
Medicine	2,072	4,326	4,129	1,938	3,141	3,061
Clothes	2,977	3,564	3,513	2,100	3,781	3,669
Farming and other related activities	11,471	7,436	7,749	5,550	7,170	7,079
Education	5,050	3,647	3,725	3,600	5,398	5,366
Cultural activities/ festivals	1,300	2,437	2,340	1,850	1,841	1,841
Maintenance of house	1,545	2,117	2,071	1,800	1,624	1,636
Other expenses		4,102	4,102	1,200	1,929	1,885
<b>Total</b>	<b>25,410</b>	<b>45,061</b>	<b>43,227</b>	<b>26,575</b>	<b>43,015</b>	<b>41,919</b>

Source: Socio Economic Survey, JICA Survey Team (2016)

**Table 7 Gender wise Time spent on different types of Daily Activities (Unit: Time)**

Collection of Fuelwood

Division	Male	Female	Male child	Female child
Bamra	96	92	83	
Bolangir	109	95	104	
Dhenkanal	109	109	110	90
Ghumsur South	84	101	87	
<b>Total</b>	<b>103</b>	<b>98</b>	<b>100</b>	<b>90</b>

Collection of NTFP

Division	Male	Female	Male child	Female child
Bamra	72	79	82	
Bolangir	76	90	111	60
Dhenkanal	87	75	76	
Ghumsur South	156	106	140	
<b>Total</b>	<b>80</b>	<b>88</b>	<b>108</b>	<b>60</b>

Fetching water

Division	Male	Female	Male child	Female child
Bamra	60	54	60	
Bolangir	60	59	71	53
Dhenkanal	53	73		60
Ghumsur South	56	57	60	60
<b>Total</b>	<b>56</b>	<b>61</b>	<b>69</b>	<b>57</b>

Source: Socio Economic Survey, JICA Survey Team (2016)

## **Attachment 5.5.2 Field Observations: Women in VSS and SHG in OFSDP-II Area**

### **1. Ma Dalakhai Producer Company, Ganjam**

The study team has been interacted with an Agricultural producer company members at Khalikot, Ganjam, Odisha. The discussion was held on the challenges and issues of the Agriculture producer group. The name of the APC is Ma Dalakhai Producer Company. Along with the team local resource persons (2), producer group members (2), a member of Panchayat and the Sarpanch of the Gram Panchayat were present and took part in the discussion.

Ganjam district is known for cultivation of small millets (Ragi/ Mandia), different types of pulses like (Black gram, Green gram) as the farmers of the area face problem in marketing their products, one of the board members said. To address the issue initially, Farmer's interest groups are formed. Each group has 20 members. Similarly, 50 groups, consisting of 1000 farmers, the producer group have been formed. These 1000 members also represented 9 villages from one block.

The Executive Body comprises 10 members out of which 2 are women and the rest are men (8). Open election pattern was followed through village committee.

Average land size of a farmer is 2.5 acre (at the maximum). A few women have patta document of land in their name, some with their husbands and others have ownership with their fathers. The institution was built in 1st year. It followed the activities like official process, capacity building, training and exposure visits of the farmers. The agriculture producer company was registered in the year of 14.04.2016. Since the inception one transaction has been conducted.

Before the formation of the Agriculture producer company (APC), the framers of this region are selling pulses to the middleman. After the APC was formed the produces are sold to the wholesale trader directly and the profit has been shared by the members of the APC equally.

Ground nut, cashew nut production and sale is in their future planning, as the president of the company said.

#### **➤ Women in the producer Company:**

- Out of 1000 farmers 40% are women and the rest 60% are men.
- 2 women members are in the Governing Body Committee. They are only members (not Board of Director).
- Non availability of educated women in rural area of their region is the cause of less No. of members in the governing body of the company, as they said.

## **2. Talsara VSS of Buguda Forest range of Ghumusar South Division, Bhanjanagar**

Talsara VSS has been formed in the year 2004. It consists of 10 members. Out of which 7 are men and 3 are women. There are 40 HHs in the village. They all are from ST community. Total population of the village is 210. 110 are men and 100 are women. The villagers depend on agriculture based wage work (4 to 5 months in a year). They collect cherenga (edible tuber), Karba, Pithal, mahua, Bamboo shoots, Honey, Jhuna, Sal leave (MFP). Both men and women collect the forest produces sale through local trading. The income/profit out of NTFP sale was consumed towards household expenses. Women collect, sale and keep the money with them. Besides, the villagers collect cashew nuts and sale to local traders.

Women in the village activity participate in forest patrolling and management duties.( The women usually share forest patrolling duties by the day while men share the duties at night (Protection)). In forest fire management both are involved in assisting the forest department staff.

During FDA project period the villagers both men and women engaged in activities such as Nursery raising, plantation. They are not recall accurately, as the women members said during our discussion with the group. Other points are:

- Ward Members attend Panchayat level meetings.
- The Pallisabha (village committee) has not been conducted since last year.(all the members are the members of the Pallisabha).
- They do not know about micro plan.

During discussion the women group expressed that there is a need to improve Irrigation, Road, Land Patta distribution (they stayed in this forest village more than 50 years).

Women take decision along with men in their routine matters to education and other cultural activities.

In the process of fighting against liquor in the village the SHG has decided to fine the SHG member in whose house the male member will drink. That strategy works. Since 2/3 years drinking alcohol has been stopped from the village.

By using “Time use survey” it is found that women work more hours than their counterparts. Men collect fodder for their cow and bullocks from ‘huda bandh’ of their land. Women engaged in collecting firewood, drinking water, cleaning, cooking, taking care of children and elder persons. During woman’s illness man helps in domestic work. Men have recreation during evening by playing cards. But the recreation aspect is e limited in case of women.

Wage gap is there. A woman gets Rs. 150/- per day while a man gets Rs.200/- for the same work.

Age at marriage for a girl is from 15-16 onwards.

There is longing for son among women who already have daughters.

During illness women prefer to go to traditional medicine man (jani), later visit the health centre. But it happens in case of few.

They give votes, attend Pallisabha, VSS meeting but the participation is limited into putting signature or thumb impression. But in SHGs women are active. They manage the group. From formation to carrying out activities like maintaining register, account keeping made by women themselves.



### **3. Athagar Division**

#### ➤ Oranda VSS

Oranda Village is consisting of 275 households. VSS was formed in the year of 1983. Forest Department initially allotted 300 Ha. of Sunamuhi RF, later increased to 200 ha. for the protection by the VSS. In the year 1999 by the super cyclone-around 70% of the forest was destroyed. By selling the fallen timber to the forest corporation the VSS got some fund. With that money they constructed a School Building and a Temple (Balunkeswar) in the village. Elephant and wild boar menace is the persisting problem. The major issue in the field is man-animal conflict. Women participation is almost zero in VSS activities.

There are 4 SHGs (Women Groups) in the village. The SHGs are formed but yet not started any activities due to lack of seed money. They do not have any idea of VSS existing in their village. No knowledge of micro plan. They do not depend on forest. No involvement in protection of forest management. No role in forest fire management. Not dependant on NTFP for their livelihood.

#### ➤ Gobara VSS, Gobara Reserve Forest

Total households are 450, General-327, SC-40, ST-83. The VSS has been formed in the year of 1994. Presently the VSS is involved in activities like provision of wood for cremation in village, distribution of firewood among VSS members of the village community. A play ground was constructed by the community. Mango plantation of 1.25 ha. was done by the VSS members in encroached forest land. 18 SHGs are there in the village. Each group consists of 10-20 members. Elephant menace is there. SHG members are engaged in tailoring, processing paddy. They expressed their interest to make plates from Sal leaves, Agarbati, phenyl for enhancing their income. They identified there issues like Demarcation of forest land, need of a Check dam for irrigation and absence of a community centre, market for their product.

#### ➤ Balunkeswar VSS, Malbiharpur

In formal discussion with Balunkeswar VSS, Malbiharpur it was found that the VSS was formed in the year of 2006. 100Ha. forest area was assigned to the VSS for protection. there are. 220 members in the VSS out of which 70 are male and 150 are female, most of the households are from ST community. Pramila Pradhan is the VSS president. The VSS executive committee consists of 18 members out of which 11 are women and 7 are men. 70% people of the village depend upon agriculture on the small land holding they have. The villagers collect firewood, brush wood, fencing materials, bamboo from the forest. The women watch forest during day and in night the men do this.

10 SHGs are active in the village. They are involved in management of eco tourism and recreation in shape of boating, pindi distribution for picnic and providing other logistics to the visitors. Besides them the households staying on hill top are involved in maintenance of cashew plantation (taken on lease )

Financial management of SHGs. Out of the total earning they keep 10% as SHG corpus fund, 10% given to the VSS as repayment of loan from VSS, the balance amount is distributed among the group members. Bookkeeping of accounts is not there.

Their issues are beautification of Ansupa Lake, tools and improvement of fire fighting skill, Sanitation, toilet, drinking water facilities.

**Attachment 5.6.1 Number of Intensive Blocks under National Rural Livelihood Mission (NRLM) in Odisha**

Sr.	District	Block	Coverage year
1	Angul	Athamalik	Covered till 2015-16
2	Angul	Chhendipada	Covered till 2015-16
3	Angul	Pallahara	Covered till 2015-16
4	Angul	Angul	Covered till 2015-16
5	Bolangir	Bangomunda	Covered till 2015-16
6	Bolangir	Muribahal	Covered till 2015-16
7	Balasore	BalasoreSadar	Covered till 2015-16
8	Balasore	Bhograi	Covered till 2015-16
9	Balasore	Jaleswar	Covered till 2015-16
10	Balasore	Khaira	Covered till 2015-16
11	Bargarh	Paikamala	New Intensive during 2016-17
12	Bhadrak	Basudevpur	Covered till 2015-16
13	Bhadrak	Bhadrak	Covered till 2015-16
14	Bhadrak	Chandabali	Covered till 2015-16
15	Bhadrak	Tihidi	Covered till 2015-16
16	Bhadrak	Saintala	New Intensive during 2016-17
17	Boudh	Harbhanga	New Intensive during 2016-17
18	Cuttack	Baramba	Covered till 2015-16
19	Cuttack	Narasinghpur	Covered till 2015-16
20	Deogarh	Barkote	Covered till 2015-16
21	Deogarh	Reamal	Covered till 2015-16
22	Deogarh	Tileibani	Covered till 2015-16
23	Dhenkanal	Kankadahada	New Intensive during 2016-17
24	Gajapati	Gumma	Covered till 2015-16
25	Gajapati	Nuagada	Covered till 2015-16
26	Gajapati	R.Udayagiri	Covered till 2015-16
27	Gajapati	Rayagada	Covered till 2015-16
28	Gajapati	Mohana	New Intensive during 2016-17
29	Ganjam	Chhatrapur	Covered till 2015-16
30	Ganjam	Chikiti	Covered till 2015-16
31	Ganjam	Ganjam	Covered till 2015-16
32	Ganjam	Khalikote	Covered till 2015-16
33	Ganjam	Patrapur	Covered till 2015-16
34	Ganjam	Rangeilunda	Covered till 2015-16
35	Ganjam	Shergada	Covered till 2015-16
36	Ganjam	Soroda	Covered till 2015-16
37	Ganjam	Beguniapada	Covered till 2015-16
38	Jagatsinghpur	Balikuda	Covered till 2015-16
39	Jagatsinghpur	Erasama	Covered till 2015-16
40	Jagatsinghpur	Kujang	Covered till 2015-16
41	Jagatsinghpur	Tirtol	Covered till 2015-16
42	Jajpur	Danagadi	Covered till 2015-16

<b>Sr.</b>	<b>District</b>	<b>Block</b>	<b>Coverage year</b>
43	Jajpur	Dasarathpur	Covered till 2015-16
44	Jajpur	Dharmasala	Covered till 2015-16
45	Jajpur	Sukinda	Covered till 2015-16
46	Jharsuguda	Kirmira	New Intensive during 2016-17
47	Kalahndi	T.Rampur	Covered till 2015-16
48	Kalahndi	Langigarh	New Intensive during 2016-17
49	Kalahndi	Madanpur-Rampur	New Intensive during 2016-17
50	Kandhamal	Baliguda	Covered till 2015-16
51	Kandhamal	Chakapad	Covered till 2015-16
52	Kandhamal	Daringibadi	Covered till 2015-16
53	Kandhamal	Phulbani	Covered till 2015-16
54	Kandhamal	Kotagarh	New Intensive during 2016-17
55	Kendrapada	Kendrapara	Covered till 2015-16
56	Kendrapada	Mahakalpara	Covered till 2015-16
57	Kendrapada	Pattamundai	Covered till 2015-16
58	Kendrapada	Rajanagar	Covered till 2015-16
59	Keonjhar	Banspal	New Intensive during 2016-17
60	Keonjhar	Telkoi	New Intensive during 2016-17
61	Khurda	Balipatna	Covered till 2015-16
62	Khurda	Begunia	Covered till 2015-16
63	Khurda	Chilika	Covered till 2015-16
64	Khurda	Tangi	Covered till 2015-16
65	Koraput	Borigumma	Covered till 2015-16
66	Koraput	Koraput	Covered till 2015-16
67	Koraput	Kotpad	Covered till 2015-16
68	Koraput	Laxmipur	Covered till 2015-16
69	Koraput	Baipariguda	New Intensive during 2016-17
70	Malkangiri	Kudumulugumma	Covered till 2015-16
71	Malkangiri	Malkangiri	Covered till 2015-16
72	Malkangiri	Mathili	Covered till 2015-16
73	Malkangiri	Khairiput	Covered till 2015-16
74	Mayurbanj	Bangiriposi	Covered till 2015-16
75	Mayurbanj	Jashipur	Covered till 2015-16
76	Mayurbanj	Karanja	Covered till 2015-16
77	Mayurbanj	Kusumi	Covered till 2015-16
78	Mayurbanj	Moroda	Covered till 2015-16
79	Mayurbhanj	Tiring	New Intensive during 2016-17
80	Nabarangpur	Umerkote	New Intensive during 2016-17
81	Nayagarh	Dasapalla	Covered till 2015-16
82	Nayagarh	Nuagaon	Covered till 2015-16
83	Nayagarh	Odagaon	Covered till 2015-16
84	Nayagarh	Ranapur	Covered till 2015-16
85	Nuapada	Sinapalli	Covered till 2015-16
86	Nuapada	Nuapada	New Intensive during 2016-17
87	Puri	Krushnaprasad	New Intensive during 2016-17

<b>Sr.</b>	<b>District</b>	<b>Block</b>	<b>Coverage year</b>
88	Puri	Astharanga	Covered till 2015-16
89	Puri	Gop	Covered till 2015-16
90	Puri	Nimapada	Covered till 2015-16
91	Puri	PuriSadar	Covered till 2015-16
92	Rayagada	Kalyansingpur	New Intensive during 2016-17
93	Rayagada	B.Cuttack	Covered till 2015-16
94	Rayagada	Chandrapur	Covered till 2015-16
95	Rayagada	Kashipur	Covered till 2015-16
96	Rayagada	Muniguda	Covered till 2015-16
97	Sambalpur	Bamara	Covered till 2015-16
98	Sambalpur	Jamankira	Covered till 2015-16
99	Sambalpur	Jujumara	Covered till 2015-16
100	Sambalpur	Kuchinda	Covered till 2015-16
101	Sonepur	Tarva	Covered till 2015-16
102	Sonepur	Birmaharajpur	New Intensive during 2016-17
103	Sundargarh	Balisankara	Covered till 2015-16
104	Sundargarh	Banaigarh	Covered till 2015-16
105	Sundargarh	Kuarmunda	Covered till 2015-16
106	Sundargarh	Tangarpali	Covered till 2015-16
107	Sundargarh	Gurundia	New Intensive during 2016-17

*Source: Odisha Livelihood Mission*

## Attachment 5.8.1 Status of IT Infrastructure in Divisions

S. No.	Division Name	Computer		Printer			GPS			Internet		Software	
		Total No.	Working Condition (No.)	Type (Multi Function (MF)/ Laser/ Deskjet/ Dot Matrix)	Total No.	Working Condition (No.)	Model Name	Total No.	Working Condition (No.)	Broadband Connection (Y/N)	3/4 G - Mobile/ Data card - (Y/N)	Type (GIS/ MS-Office/ Accounting)	Total No.
1	Balliguda	2	1	Laser, Dot Matrix, HP Color Laser	3	0	Garmin 72H, 78, Vista	21	16	Y	N	GIS, MIS, MS-Office, Accounting	1
2	Bamra WL	10	6	Laser	5	4	Garmin etrex	25	25	3	N	N	N
3	Bargarh	12	12	MF	4	4	-	0	0	Y	N	MS Office	12
				Laser	6	6							
4	Bolangir	12	12	Laser	8	8	Garmin72	56	51	Y	N	-	
5	Boudh	14	10	11	11	10		2	2	Y	Y	MS Office	
6	Deogarh	12	12	MF	3	3	Garmin72	3	3	Y	Y	1	1
				Laser	8	7	Garmin78	2	2				
				Dotmatrix	1	0	Garmin Vista	1	1				
7	Jeypore	2	1	Laser	4	2				Y		MS Office	
8	Keonjhar	7	5	Y	3	3	Garmin72	1	1	Y	Y	Y	
9	Mahana di WL	13	13	Laser	11	11	Garmin etrex10	1	1	Y	3G-Y	MS Office	
				DeskJet	1	1							
				Dot Matrix	1	1							
10	Phulbani	2	Damage Condition	Laser 1018	2	Good	Garmin Vista	1	1	Y	Y	Tally ERP9	1
				Laser 1106	1	Good	Garmin72H	1	0				
				EPSON	1	Damage	Garmin78	1	1				
				HP Psc-750	1	Damage							
				Colour Laser 2600	1	Good							

S. No.	Division Name	Computer		Printer			GPS			Internet		Software	
		Total No.	Working Condition (No.)	Type (Multi Function (MF)/ Laser/ Deskjet/ Dot Matrix)	Total No.	Working Condition (No.)	Model Name	Total No.	Working Condition (No.)	Broadband Connection (Y/N)	3/4 G - Mobile/ Data card - (Y/N)	Type (GIS/ MS-Office/ Accounting)	Total No.
11	Paralakh emundi	16	7	Multi function	5	3	Garmin	4	1	Y	N	MS Office	2
				Laser	5	2							
12	Jharsuguda	13	Y	2	8	8	Garmin72	15	15	Y(2)	N	N	N
13	Sunabeda WL	12	8	MF	3	8	Garmin72H, 76CSX, 76	5	4	Y	Y	MS Office	1
				Laser	6								
				Deskjet	2								

Note: Based on data received from Divisions till 5-Oct-2016

## Attachment 5.8.2 Status of IT Infrastructure in Ranges

Division	Range Name	Computer		Printer			GPS			Internet		Software	
		Total No.	Working Condition (No.)	Printer Type (Multi Function/ Laser/ Deskjet/ Dot Matrix)	Total No.	Working Condition (No.)	Model Name	Total No.	Working Condition (No.)	Broad Band Connection (Y/N)	3/4 G - Mobile/ Data card - (Y/N)	Type (GIS/ MS-OFFICE/ Accounting)	Total No.
Balliguda	<b>Balliguda</b>	1	0	Dot Matrix	1	0	Garmin	1	1	Y	N	GIS & MS-Office	1
	K.Nuagaon	1	0	Dot Matrix	1	0	Garmin-72 &78, Vista	3	3	Y	N	GIS & MS-Office	1
	Simonbadi	1	0	Dot Matrix	1	0	Garmin-72 &78, Vista	4	4	Y	N	GIS & MS-Office	1
	Brahmunigaon	1	0	Dot Matrix	1	0	Garmin	1	1	Y	N	GIS & MS-Office	1
	Tumudibandha	1	0	Dot Matrix	1	0	Garmin	2	2	Y	N	GIS & MS-Office	1
	Belghar	1	0	Dot Matrix	0	0	Garmin	1	1	Y	N	GIS & MS-Office	1
	Kotagarh	1	0	Dot Matrix	1	0	Garmin	2	2	Y	N	GIS & MS-Office	1
Bamra WL	<b>Bamra WL</b>	1	1	Laser	1	1	Garmin Etrex	8	8	Y	N	MS-Office	1
	Kuchinda WL	1	1	Laser	1	1	Garmin Etrex	5	5	Y	N	MS-Office	1
	Jamankira WL	1	1	Laser	1	1	Garmin Etrex	5	5	Y	N	MS-Office	1
	Badrama WL	1	1	Laser	1	1	Garmin Etrex	5	5	N	N	MS-Office	1
	khalasuni WL	1	1	Laser	1	1	Garmin Etrex	2	2	N	N	MS-Office	1
Bargarh	<b>Bargarh</b>	1	1	Laser	1	1	Garmin	2	2	N	Y	M S Office	1
	Bhatli	1	1	Laser	1	1	Garmin	4	4	Y	N	M S Office	1
	Ghess	1	1	Laser	1	1	Garmin	6	5	N	Y	M S Office	1
	Padampur	1	1	Laser	1	1	Garmin	8	5	Y	N	M S Office	1
	Paikmal	1	1	Laser	1	1	Garmin	9	8	N	Y	M S Office	1
	N.Nath	1	1	Laser	1	1	Garmin	5	5	N	Y	M S Office	1
Bolangir	<b>Bolangir</b>	1	1	Laser	1	1	Garmin-72	5	5	Y	N	N	
	Bangomunda	1	1	Laser	1	1	Garmin-73	6	5	Y	N	N	
	Deogaon	1	1	Laser	1	1	Garmin-74	4	4	Y	N	N	

Division	Range Name	Computer		Printer			GPS			Internet		Software	
		Total No.	Working Condition (No.)	Printer Type (Multi Function/ Laser/ Deskjet/ Dot Matrix)	Total No.	Working Condition (No.)	Model Name	Total No.	Working Condition (No.)	Broad Band Connection (Y/N)	3/4 G - Mobile/ Data card - (Y/N)	Type (GIS/ MS-OFFICE/ Accounting)	Total No.
	Harishankar	1	1	Laser	1	1	Garmin-75	5	4	Y	N	N	
	Kantabanji	1	1	Laser	1	1	Garmin-76	6	5	Y	N	N	
	Lathore	1	1	Laser	1	1	Garmin-77	5	4	Y	N	N	
	Loisingha	1	1	Laser	1	1	Garmin-78	4	4	Y	N	N	
	Muribahal	1	1	Laser	1	1	Garmin-79	6	5	Y	N	N	
	Patnagarh	1	1	Laser	1	1	Garmin-80	6	6	Y	N	N	
	Saintala	1	1	Laser	1	1	Garmin-81	4	4	Y	N	N	
	Titilagarh	1	1	Laser	1	1	Garmin-82	5	5	Y	N	N	
Boudh	<b>Boudh</b>	2	2	1	1	1	eTrex-20/30, Garmin-72	8	8	Y	N	N	
	Manamunda	2	2	1	1	1	eTrex-20/30, Garmin-72	8	8	Y	N	N	
	Kantamal	3	3	1	1	1	eTrex-20/30, Garmin-72	8	8	Y	N	N	
	Purunakatak	3	3	2	2	2	eTrex-20/30, Garmin-72	13	13	Y	N	N	
	Madhapur	2	2	2	2	2	eTrex-20/30, Garmin-72	8	8	Y	N	N	
Deogarh	<b>Deogarh</b>	2	1	Laser	2	1	GPS 72	10	4	Y	Y	GIS/MS OFFICE	1
				Dot Matrix		0	GPS 78		1				
	Barkote	2	1	Laser	1	1	GPS 72	5	3	Y	Y	GIS/MS OFFICE	1
				Dot Matrix		0	GPS 78		2				
	Reamal	2	1	Dot Matrix	1	0	GPS 72	11	6	Y	Y	GIS/MS OFFICE	1
				Laser		1	1		GPS 78				
Pallahara	1	1	Laser	1	1	GPS 72	6	2	Y	Y	GIS/MS OFFICE	1	
			Dot Matrix		0	GPS 78		1					



Division	Range Name	Computer		Printer			GPS			Internet		Software	
		Total No.	Working Condition (No.)	Printer Type (Multi Function/ Laser/ Deskjet/ Dot Matrix)	Total No.	Working Condition (No.)	Model Name	Total No.	Working Condition (No.)	Broad Band Connection (Y/N)	3/4 G - Mobile/ Data card - (Y/N)	Type (GIS/ MS-OFFICE/ Accounting)	Total No.
	Khamar	2	2	Laser	2	2	GPS 72	7	6	Y	Y	GIS/MS OFFICE	1
				Dot Matrix	1	0	GPS 78	1	1				
Jaypore	<b>Boipariguda</b>	1	1	Dot Matrix, Laster & Multi Function Printer	3	2	Garmin 72 & Garmin GPSMAP 78	5	4	Y	N	MS OFFICE	1
	Borigumma	1	1	Dot Matrix	1	0	Garmin-12, 72,78 & Vista	8		N	N	MS OFFICE	1
	Gupteswar	1	0	Dot Matrix	1	0		6	4	N	N	0	0
	Jeypore												
	Kotpad	3	2	Multi Function	2	2	72 Garmin	2	1	Y	Y	Y	2
	Kundra	1	0	Dot Matrix	1	0	Garmin-72	3	1	N	N	N	0
Mahanadi WL	<b>Banigochha (E)</b>	1	1	Laser	1	1	Garmin e-trex-10	7	7	N	N	MS-Office	
	Banigochha (W)	1	1	Laser	1	1	Garmin e-trex-10	7	7	N	N	MS-Office	
	Chhamundia	1	1	Laser	1	1	Garmin e-trex-10	11	11	N	N	MS-Office	
	Kusanga	1	1	Laser	1	1	Garmin e-trex-10	11	11	N	N	MS-Office	
Phulbani	<b>Phulbani</b>	1	0	Dot Matrix	1	0	GPS 72	2	0	Y	N	N	
	Phulbani	1	0	Dot Matrix	1	0	Garmin eTrex Vista	1	1	Y	N	N	
		1	0	Dot Matrix	1	0	GPS 78	2	2	Y	N	N	
	Phiringia	1	0	Dot Matrix	1	0	GPS 72	3	0	Y	N	N	
		1	0	Dot Matrix	1	0	GPS 78	1	1	Y	N	N	
	Sudrukumpa	1	0	Dot Matrix	1	0	GPS 72	1	0	Y	N	N	
		1	0	Dot Matrix	1	0	GPS 78	1	1	Y	N	N	
	Tikabali	1	0	Dot Matrix	1	0	GPS 72	1	0	Y	N	N	
1		0	Dot Matrix	1	0	Garmin eTrex Vista	1	1	Y	N	N		

Division	Range Name	Computer		Printer			GPS			Internet		Software		
		Total No.	Working Condition (No.)	Printer Type (Multi Function/ Laser/ Deskjet/ Dot Matrix)	Total No.	Working Condition (No.)	Model Name	Total No.	Working Condition (No.)	Broad Band Connection (Y/N)	3/4 G - Mobile/ Data card - (Y/N)	Type (GIS/ MS-OFFICE/ Accounting)	Total No.	
Paralakhemundi	G.Udayagiri	1	0	Dot Matrix	1	0	GPS 78	1	1	Y	N	N		
		1	0	Dot Matrix	1	0	GPS 72	3	0	Y	N	N		
	Raikia	1	0	Dot Matrix	1	0	GPS 78	1	1	Y	N	N		
		1	0	Dot Matrix	1	0	GPS 72	2	0	Y	N	N		
	Karada	1	0	Dot Matrix	1	0	GPS 78	1	1	Y	N	N		
		1	0	Dot Matrix	1	0	GPS 72	2	0	N	Y	N		
	Paralakhemundi	Devagiri	2	1	Multi Function	1	1	Garmin	8	4	Y	N	MS-OFFICE	
			Deskjet	1	1									
		Kasinagar	2	1	Multi Function	1	1	Garmin	3	2	Y	N	MS-OFFICE	
			Deskjet	1	1									
		Mohendra	2	1	Multi Function	1	1	Garmin	6	3	Y	N	MS-OFFICE	
			Deskjet	1	1									
R.Udayagiri		2	1	Multi Function	1	1	Garmin	5	4	Y	N	MS-OFFICE		
		Deskjet	1	1										
Ramagiri		2	1	Multi Function	1	1	Garmin	4	3	Y	N	MS-OFFICE		
		Deskjet	1	1										
Mohana		3	1	Multi Function	1	1	Garmin	6	4	Y	N	MS-OFFICE		
		Deskjet	1	1										
Chandragiri	3	1	Multi Function	1	1	Garmin	8	5	Y	N	MS-OFFICE			
	Deskjet	1	1											
Jharsuguda	Jharsuguda	1	1	Y	1	Y	Garmin-72	3	Y	1	N	N		
	Brajrajnagar	1	1	Y	1	Y		3	Y	1	N	N		
	Belpahar	1	1	Y	1	Y		3	Y	1	N	N		
	Kolabira	1	1	Y	1	Y		3	Y	1	N	N		
	Bagdihi	1	1	Y	1	Y		3	Y	N	Y	N		
Khariar	Nuapada WL	1	1	1/1	2	2	Garmin - eTrex20, GPS-12/76 CSX,	8		N	Y	N	N	
	Komna WL	1	1	1	1	1	Garmin-eTrex20, GPS-72	6		N	Y	N	N	

Division	Range Name	Computer		Printer		GPS			Internet		Software		
		Total No.	Working Condition (No.)	Printer Type (Multi Function/ Laser/ Deskjet/ Dot Matrix)	Total No.	Working Condition (No.)	Model Name	Total No.	Working Condition (No.)	Broad Band Connection (Y/N)	3/4 G - Mobile/ Data card - (Y/N)	Type (GIS/ MS-OFFICE/ Accounting)	Total No.
	Sunabeda WL	1	1	1	1	1	Garmin-eTrex20, GPS-Map76	4		N	Y	N	N
Keonjhar	<b>BJP</b>	2	1	Laser-2, Deskjet-1	3	2	Garmin72-(2), eTrex (1), GPS MAP78-(2)	5	3	N	Y	Y	1
	Telkoi	1	0	Laser-1	1	1	0	0	0	N	Y	Y	1
	Ghatgaon	2	2	Laser-1	1	1	Garmin72-(1), 78-(1), eTrex10-(1), eTrex30-(1), GPSPDA (2)	6	3	Y	N	Y	1
	Patna	1	0	Laser-1	1	0	Garmin78-(2), 72H-(4), GarminTM-(1), Garmin12F C-(1)	8	3	No	No	Ms office	
	Barbil	1	1	HP Deskjet	1	1	Garmin72H -(1) & 12(1), eTrex-(1)	6	2	Yes	3G	M.S Office	1
	Keonjhar	2	1	Laser-1	1	1	Garmin72-(2), 78-(1)	3	1	Yes	N	M.S Office	1
	Chamua	1	1	Laser-1	1	1	Garmin72-(3), eTrex30-(2), Garmin GPS MAP64-(5)	10	10	Yes	N	M.S Office	1

Note: Based on data received from Divisions till 5-Oct-2016

## **Attachment 6.3.1 Gender Mainstreaming and Action Plan**

### **1. Women and Joint Forest Management in Odisha**

In 1988, India has issued the National Forest Policy in which mandated the community participation in the forest management and recognized the significance of role of women in the sustainable forest management. Subsequently, the government of Odisha issued the JFM Resolution in 1993, 2008 and in 2011(amended in June, 2015). Reflecting on the principles of the Joint Forest Management stipulated in the National Forest Policy (1988), the Odisha JFM Resolution stipulates the following.

- At least 50% of the executive committee members of a VSS/ EDC shall be women.
- All adult villagers where a VSS/ EDC are constituted shall be the members of the General Body of the VSS/ EDC.

All the VSSs constituted under OFSDP-I are constituted according to the JFM Resolutions and the project ensured the full representation of women in the VSS executive committees in compliance to the Odisha JFM Resolution.

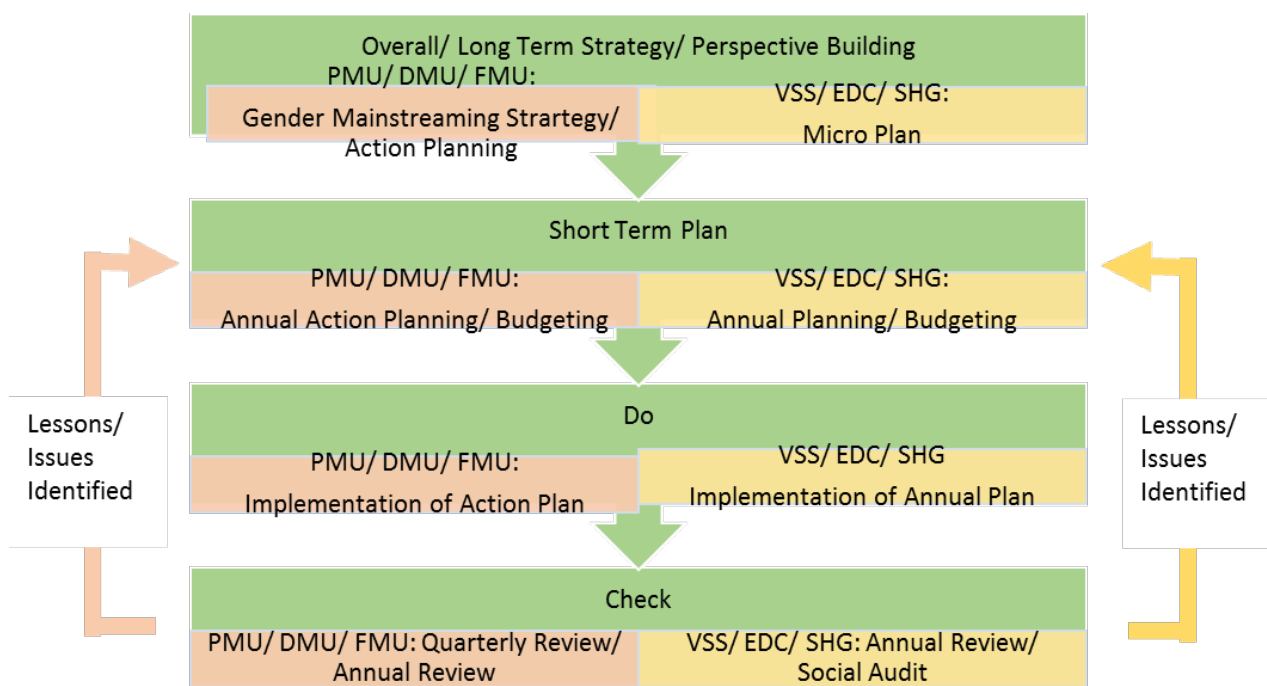
### **2. Gender Mainstreaming Strategy and Gender Action Plan**

JICA assisted forestry sector projects in India have always considered women as an important stakeholders in the joint forest management. While ensuring the women's representation in the VSS executive committees, income generation activities as part of the project interventions have been implemented for women VSS members, which aimed at providing alternative means of livelihoods to reduce dependency on the forest resources. This has also led to the economic empowerment and subsequent uplift of women's status in family and community. The OFSDP-II shall adopt a systematic approach and monitor the progress and achievements of the gender related interventions so that OFSDP-II would systematically adopt the gender responsive actions in implementation of the Project.

### **3. Action process for Implementation of the Gender Mainstreaming for OFSDP-II**

#### **3.1 Project Cycle**

The planning and implementation of the Gender Action Plan will follow the project cycle of OFSDP-II. The long term plan will be prepared at the initial stage of the project. As for PMU/ DMU/ FMU, it is the gender mainstreaming strategy and Action Planning. As for the VSS/ EDC/SHGs, it is the micro planning for 10 years. Based on the long term plan, at each level, annual planning will be undertaken. The activities planned in the annual plans will be implemented by the project implementation units. As part of the regular project monitoring cycle, the annual reviews will be undertaken at each level, where the progress and achievements of the annual plan, of which gender responsive components will be a part.



Source: OFSDS (2016)

**Figure: Project Cycle at PMU and Community Institutions**

### 3.2 Capacity Development

In order to mainstream the gender in effective ways, gender specific capacity development activities will be necessary. This would be included in the “Training Needs Assessment, Planning and Design of the Training, and Evaluation of the Learning Outputs and Outcome in the regular training cycle. The training outputs will be immediately assessed at the end of each training session and the outcome shall be assessed through the indirect indicators which will be set while the training programmes/ contents are designed. However, as for gender specific capacity development, to begin with, awareness generation and conceptualisation needs to be done at the initial stage. Some of the training needs to address the gender needs/issues to be identified at this stage, which should be addressed in the subsequent project activities or training activities of the project.

### 3.3 Monitoring and Evaluation

As part of the Project Cycle, monitoring and evaluation will be carried out by the PMU. However, to give a focus to the gender monitoring indicators, the specific responsibility of the Gender nodal officer at PMU will be monitoring of the gender related indicators as per the Gender Action Plan. The data required for gender monitoring shall be generated through the project MIS and thematic studies which are planned under the project.

## 4 Gender Action Plan and Monitoring Indicators for OFSDP-II

### 4.1 Objectives of Gender Mainstreaming in OFSDP-II

The objective of gender mainstreaming strategy and action plan for OFSDP-II is to ensure gender equity in access and control over the forest resources and promote women’s economic

and social empowerment through project interventions for the well-being of the forest dependent communities. Upon commencement of the project activities, PMU will appoint a nodal officer for gender mainstreaming who will lead the process of preparation of the gender mainstreaming strategy, guidelines for gender mainstreaming which would be used at DMU, FMU and partner NGOs (PNGOs). The State Programme Manager for Livelihood will be suggested for the position. PMC shall also provide the guidance on the gender mainstreaming.

#### 4.2 Indicative Gender Action Plan

Based on the gender mainstreaming strategy, gender action plan and budget shall be prepared by PMU. The Nodal Officer of State Programme Manager – Livelihood at PMU shall take the lead in the process. Indicative Gender Action Plan and Monitoring Indicators which are relevant to the project components and activities are given in the table below. The indicative Gender Action Plan shall be reviewed by PMU after the regular training on Gender and modified as required.

**Table: Indicative Gender Action Plan for OFSDP-II**

Component/ Main Activities	Gender Responsive Actions	Monitoring Indicators
<b>Objectives of Gender Action Plan:</b>	To ensure gender equity in access benefit and control over the forest resources and promote women's economic and social empowerment through project interventions for the well-being of the forest dependent communities	1 The number of Women VSS chairperson accounts for 30% of the total number of VSSs. 2 The income of women SHG members is increased by 50%. 3 The number of non literate women in VSS villages are reduced by 50%.
<b>Component 1: Preparatory Phase</b>		
Constitution of PMU, DMU, FMU and deployment of Staff	1-1. Engage woman forester at FMU level 1-2. Assign a nodal officer on gender mainstreaming at each level of project implementation unit	1-1. 30% of the FMU staffs to be woman 1-2. All nodal officers are appointed.
Deployment of PNGOs	1-3. Engage one woman staff at each FMU level team members	1-3. At least 30% of the PNGO staff engaged for the project implementation are women.
VSS Identification	1-4. The composition of the VSS executive members to comply with JFM Resolution of Odisha 1-5. General Body of VSS to comprised of all adult members of the village 1-6. Encourage women to become a chairperson, vice chairperson, or treasurer.	1-4. Woman executive members comprise at least 50% of the executive committee members of VSS/ EDCs. 1-5. 50% of the General Body members of VSS/ EDCs are women. 1-6. One of the woman executive member would assume one of the positions either the chairperson, vice chairperson, or treasurer.
Engagement of Animators	1-7. Engage one male and one female animators during the 3 year intensive support period.	1-7. 50% of the total number of animators are women.

Component/ Main Activities	Gender Responsive Actions	Monitoring Indicators
Micro Planning/ Annual Planning	<p>1-8. Incorporate gender perspectives in the micro planning/ annual planning manuals</p> <p>1-9. Organize a woman working group for micro planning at each VSS/ EDC</p> <p>1-10. Each micro plan/ annual plan to contain gender action plan/ budget</p>	<p>1-8. Micro plan/ annual plan formats have dedicated sections for gender responsive plan/ budget.</p> <p>1-9. Woman working groups for micro planning are organised at all the VSSs.</p> <p>1-10. 5 % of the micro plan/ annual plan budget are to be allocated for the implementation of gender action plan.</p>
<b>Component 2: Sustainable Forest Management</b>		
<p>JFM Mode:</p> <ul style="list-style-type: none"> <li>◆ Drainage Line Treatment</li> <li>◆ ANR</li> <li>◆ Block Plantation</li> <li>◆ Fire Protection</li> </ul>	2-1. Ensure equal wage payment for men and women.	2-1. No of women/ men engaged and total wages paid for women/ men
<p>Non JFM Mode:</p> <ul style="list-style-type: none"> <li>◆ Consolidation and Demarcation of Forest Boundaries</li> <li>◆ Construction/ Improvement of Permanent Nurseries</li> <li>◆ Drainage Line Treatment</li> </ul>	2-2. Ensure equal wage payment for men and women	2-2. No of women/ men engaged and total wages paid for women/ men
<b>Component 3: Sustainable Biodiversity Management</b>		
Sustainable Biodiversity Management incorporating concept of SATOYAMA model	<p>3-1. The composition of the EDC executive members to comply with JFM Resolution of Odisha</p> <p>3-2. General Body of EDC to comprised of all adult members of the village</p> <p>3-3. Encourage women to become a chairperson, vice chairperson, or treasurer.</p> <p>3-4. Engage one male and one female animators during the 3 year intensive support period.</p> <p>3-5. Organize a woman working group for micro planning at each EDC</p> <p>3-6. Each micro plan/ annual plan to contain gender action plan/ budget</p>	<p>3-1. Woman executive members comprise at least 50% of the executive committee members of VSS/ EDCs.</p> <p>3-2. 50% of the General Body members of VSS/ EDCs are women.</p> <p>3-3. One of the woman executive members assume one of the positions of chairperson, vice chairperson, or treasurer.</p> <p>3-4. 50% of the total number of animators are women</p> <p>3-5. Micro plan/ annual plan formats have dedicated sections for gender responsive plan/ budget.</p> <p>3-6. Woman working groups for micro planning are organized at all the VSSs.</p> <p>3-7. 5 % of the micro plan/ annual plan budget are to be allocated for the implementation of gender action plan.</p>

Component/ Main Activities	Gender Responsive Actions	Monitoring Indicators
<b>Component 4: Livelihood Improvement</b>		
Community Development Fund	4-1. To be used to implement Micro Plan/ Annual Plan including women responsive activities	4-1. 10 % of the fund was used for the implementation of gender action plan.
Promotion of IGAs	4-2. To be implemented according to the project plan (All these activities are targeting women SHGs only.)	4-2 (a). All project monitoring indicators 4-2 (b). Qualitative changes in women's status in the households and community (Qualitative assessment)
Revolving Fund for SHGs		
NTFP Based Livelihood Interventions		
Livelihood Resource Centre		
Livelihood Development Fund		
Annual Partner NGOs Review Meeting		
<b>Component 5: Capacity Development</b>		
Executing Agency	5-1. To create gender awareness among the project staffs at all levels	5-1. Assessment of learning achievement (before and after the training)
Community Institutions	5-2. To create gender awareness among VSS/ EDC/ SHGs.	5-2. Assessment of learning achievement (before and after the training)
	5-3. To capacitate women SHG members to plan and implement the gender responsive activities	5-3. Qualitative changes in the women's capacity to plan/ implement activities (Qualitative assessment)
	5-4. To ensure equal training opportunities for women VSS members	5-4. No of women participants in each training programmes
Training of Partner NGOs	5-5. To capacitate PNGOs in gender responsive facilitation skills and gender analysis tools	5-5. / 5-6. Assessment of learning achievement
	5-6. To provide knowledge on the resource/schemes/programmes that can cater for women's practical and strategic needs	
Training of Animators	5-7. To create gender awareness among animators 5-8. To capacitate them in gender responsive facilitation skills	5-7/ 5-8. Assessment of learning achievement
<b>Component 6: Supporting Activities</b>		
Monitoring & Evaluation	7-1. Socio Economic/ Gender baseline studies shall be undertaken.	7-1. Reports of Socio Economic/ Gender baseline studies.
	7-2. Gender Disaggregated Monitoring Indicators are to be adopted. 7-3. Through the project Grievance Redressal, RTI and Public Disclosure mechanism, the gender related issues are to be dealt with.	7-2. Reports of the thematic studies 7-3. 7-4. Records of the Grievance Redressal/ RTI/ Public Disclosure
Communication/ Publicity	7-5. Success stories on women empowerment will be documented and published.	7-5. No of cases/ stories published



Component/ Main Activities	Gender Responsive Actions	Monitoring Indicators
<b>Component 7: Phase-Out/ Phase-In</b>	NA	NA
<b>Component 8: Consulting Services</b>	1. PMC shall include at least one specialist to look after gender responsive interventions.	PMC TOR

Source: OFSDS (2016)

## 5 Gender Perspectives in Institutional Framework

### 5.1 Executing Agency

At PMU level, one nodal officer will be appointed as a nodal officer for gender mainstreaming. The State Programme Manager for livelihood is proposed for the same, who will be responsible for annual review/ assessment of the gender related interventions as per the monitoring indicators as given in the above section. Assistant DMU Chief and Assistant FMU Chief are also proposed to be the nodal officer of gender mainstreaming at each level. The project will encourage woman forester to join the position of Assistant FMU chief. At least 30% of the Assistant FMU Chief shall be women forester where possible. They will have a review meeting on a quarterly basis at the PMU level to assess the progress and issues to be addressed. The grievance redressal on gender related issues shall be dealt with at the Circle Officer.

PMU/ DMU/ FMU would be the implementing the Project. They need to be enabled to ensure the gender responsive Project implementation. As reflected in the Detailed Scope of Work, as part of the “Regular Trainings” for the PMU/ DMU/ FMU, a module on gender has been integrated. The details contents of the training would be worked out based on the Training Needs Assessment. Indicative topics on gender includes, gender analysis, approaches and strategies to gender mainstreaming and integration; human rights and gender based violence; gender awareness, equality and advocacy; gender responsive planning, budgeting and monitoring, mainstreaming gender into leadership and governance.

### 5.2 PNGOs and Specialized Agencies

OFSDP-II will engage 12 PNGOs. One PNGO will be placed to provide support in each DMU. There will be a team of three PNGO staffs to work in each FMU. Out of three member team, at least one woman member should be included. As for the specialized agencies engaged for Biodiversity Management Component in Bamra WL shall also place 30% of the women members in the team which is responsible for micro planning, creation of people biodiversity register, and to provide assistance in IGAs where possible.

### 5.3 PMC

PMC also shall engage a Team Leader with sufficient experiences in gender mainstreaming. The gender training for PMU/ DMU/ FMU will be carried out as part of the regular training programme as proposed under the Capacity Development Component of OFSDP-II. At the community level, training programmes would be undertaken by the PNGOs who will be trained prior to imparting the field level training programmes. Training objectives and outlines are given in the subsequent sections. The training achievements along with learning achievements will be assessed on an annual basis while preparing the annual training calendar.

### 5.4 VSSs/ EDCs/ SHGs

As part of the training needs assessment for the community level institutions, would also be undertaken. Based on the outcome, the training master plan for the entire duration of the project life and also the annual training plan will be prepared. The main learning outputs envisaged for the community level institutions include 1) understanding the different perspectives, 2) identify the gender related issues to be addressed within the community, and 3) acquire skills and

attitudes to prepare gender responsive micro plan/ annual plan and budget. As learning outcomes, VSS/ EDCs acquire knowledge and attitude to undertake the planned action, which would lead to the changes in the gender relations in the community and improved level of women's participation in the Joint Forest Management activities.

## **6. Gender Training Module (Indicative)**

The training will be imparted by a Team Leader with sufficient experiences in gender mainstreaming and will engage at least 20% of the women field managers.

### **6.1 VSS/ EDCs (1 Day)**

The programme shall be conducted by PNGO staffs. It may also be scheduled at the village level as the PNGO staffs visit the villages.

Learning Objectives:

- i) To understand the differences in perspectives between men and women
- ii) To understand the ways to respect the needs of men and women in the locality through gender responsive planning/ budgeting methods

**Table: Indicative Training Outline for VSS/ EDC**

Time	Programme	Group Exercises
AM	1) Understanding Different Perspectives – Men and Women 2) Importance of Gender Mainstreaming 3) Gender Roles in Joint Forest Management	i. Gender Roles in Community, Household, Forest Management (i.e. daily work schedule/ time table, gender division of labour matrix, gender roles in household/ community matrix etc.) ii. Gender Analysis on Access and Control of Forest Resources
PM	4) Gender Planning and Budgeting	iii. Mock Micro Planning/ Annual Planning

*Source: OFSDS (2016)*

### **6.2 SHGs**

Activities for the SHGs can be organised by PNGOs. Depending on the availability of time among the SHG members, the activities can be scheduled. In the thematic discussions, local resource persons including ASHA, Anganwadi workers, and other relevant government staffs may be invited. During the training programme, further action points/ training needs shall emerge. The PNGOs will take note of such requirements and discuss with FMU/ DMU so that the necessary activities will be incorporated in the project activities.

Learning objectives:

- 1) To understand the value/ importance of women's contribution to the community and family
- 2) To get exposed to the analytical thinking to resolve the problems faced by women in the community
- 3) To acquire skills to plan for action

**Table: Indicative Training Outline for SHGs**

Time	Programme	Group Exercises
General	1) Understanding Different Perspectives 2) Issues that faced by men and women in the community and how to resolve 3) Catering for Women's Needs	i. Gender Roles in Community, Household, Forest Management (i.e. daily work schedule/ time table, gender division of labour matrix, gender roles in household/ community matrix etc.) ii. Gender Analysis on Access and Control of Forest and non-Forest Resources iii. Problem Tree Analysis iv. Venn Diagrammes v. Action Planning
Thematic Discussions	Depending on the issues to be resolved in the community thematic training programmes can be organized by the PNGO staffs. Some of the suggested topics are given below: <ul style="list-style-type: none"> <li>✓ Water</li> <li>✓ Sanitation</li> <li>✓ Nutrition</li> <li>✓ Food Security</li> <li>✓ Drudgery Reduction</li> <li>✓ Literacy</li> <li>✓ Legal Literacy</li> <li>✓ Health/ Reproductive Health</li> <li>✓ Managing Household Economy and Income Generation Activities</li> <li>✓ Social issues – domestic violence/ alcohol/ rehabilitation</li> </ul>	

Source: OFSDS (2016)

### 6.3 PNGO Staff

OFSDP-II will engage PNGOs to provide field level guidance to VSS. They will also deliver the gender trainings for VSS and SHGs. The level of exposure in facilitation skills in gender related issues may vary from staff to staff and also have limited understanding on the gender responsive interventions specific to OFSDP-II. Thus, TOT will be carried out for the PNGO staffs.

Learning objectives:

- 1) To understand the concept of Gender
- 2) To understand the different perspectives in community, household and joint forest management
- 3) To understand how to devise gender analysis tools and facilitate the group discussions
- 4) To gain skills to carry out the gender responsive micro planning/ annual planning budgeting process with VSS/ EDCs

**Table Indicative Training Outline for PNGO Staff**

Time	Programme	Group Exercises
AM	1) Understanding Different Perspectives – Men and Women 2) Importance of Gender Mainstreaming 3) Gender Roles in Joint Forest Management 4) Gender Planning and Budgeting	i. Gender Roles in Community, Household, Forest Management (i.e. daily work schedule/ time table, gender division of labour matrix, gender roles in household/ community matrix etc.) ii. Gender Analysis on Access and Control of Forest Resources iii. Mock Micro Planning/ Annual Planning

Time	Programme	Group Exercises
PM	4) Gender Responsive Facilitation Skills 5) Issues that faced by men and women in the community and how to resolve 6) Catering for Women's Needs	iv. Principles in Facilitation v. Role Play vi. Problem Tree Analysis vii. Venn Diagrammes viii. Action Planning ix. Existing resources that can help women - Information on the government schemes/ programmes and how to access ✓ Water ✓ Sanitation ✓ Nutrition ✓ Food Security ✓ Drudgery Reduction ✓ Literacy ✓ Legal Literacy ✓ Health/ Reproductive Health ✓ Managing Household Economy and Income Generation Activities ✓ Social issues – domestic violence/ alcohol/ rehabilitation

Source: OFSDS (2016)

### 7. Monitoring and Evaluation of the Gender Action Plan

The gender nodal officer at PMU will monitor the gender monitoring indicators as per the action plan on a quarterly basis through project MIS. At the field level changes anticipated shall be assessed at the annual review/ planning stage on an annual basis. The following activities shall be incorporated as part of the annual review/ planning process of the OFSDP-II.

**Table: Indicative Actions for M&E for Gender Action Plan**

Implementation Units	Activities	Timing
PMU/ DMU/ FMU	➤ Review of the Gender Action Plan (status of the indicators)	➤ Quarterly by PMU gender nodal officer ➤ Annually by the PMU/ DMU/ FMU
Community Level Institutions	➤ Timeline/ Gender Roles and Reflection ➤ Review of the Micro Plan/ Annual Plan – Gender related section ➤ Issues/ Actions identified during the year and addressed ➤ Group Discussion: Changes in the gender relations in the community	➤ Annually by VSS/ EDC/ SHG during the review/ planning of the micro plan/ annual plan

Source: OFSDS (2016)

## Attachment 6.4.1 Scores for Range Selection Criteria

### 1. Scores for Range Selection Criteria

Item	Category	Definition	Score
% of Degraded Forest	0-20	(Scrub + Open) / Forest area in the division	1
	21-40		2
	41-60		3
	61-80		4
	81-100		5
No of VSS (%)	0-5		1
	6-10		2
	11-15		3
	16-20		4
	21 and Above		5
% of SC/ST Population	0-30		1
	31-45		2
	46-60		3
	61-80		4
	81-100		5
% of Literate Pop(Female) - Higher the literacy among women less is the weightage	81-100		1
	61-80		2
	41-60		3
	21-40		4
	0-20		5

### Weightage

Item	Weight
SC-ST% to Total Pop	3
Literacy level of female population	4
Current Forest Area degraded (%)	2.5
No of VSSs/ EDCs	0.5

### Attachment 6.5.1 Indicative Detail Project Work Quantity

Sub-Component	Main Activity	Unit	Quantity
<b>Component 1: Preparatory Works</b>			
1.1	Constitution of PMU, DMU, FMU and deployment of Staff		
1.2	Deployment of NGOs for Community Development and SFM (7 years)	FMU	50
1.3	Procurement of PMC (Component 9)		
1.4	Identification of VSSs (By PMU/ DMU/ FMU)	VSS	1,200
	a) Batch-1	VSS	300
	b) Batch-2	VSS	400
	c) Batch-3	VSS	350
	d) Batch-4	VSS	150
1.5	Survey and Demarcation	VSS	1,200
1.6	Review and Revision of Project Manuals/ Training materials	LS	10
1.7	Engagement of VSS/ EDC Animators: Core Period (3 years) , Follow-up/ Phase-out Period (1 year)	VSS	1,200
1.8	Micro Planning	VSS	1,200
1.9	Revisiting Micro Planning (after 4th year)	VSS	1,200
1.10	Annual Planning	VSS	1,200
1.11	Social and Environmental Consideration (Expert)	man-days	180
<b>Component 2: Sustainable Forest Management</b>			
2.1	JFM-Mode		
2.1.1	Site Specific Plan (SSP) & Monitoring	VSS or 100ha	1,200
2.1.2	JFM Mode Drainage Line Treatment (Ex-situ SMC Work)	ha	1,500
2.1.3	ANR	ha	51,000
	1) ANR with no gap planting	Ha	15,300
	2) ANR with 400 seedlings/ha gap planting	ha	25,500
	3) ANR with 800 seedlings/ha gap planting	ha	10,200
2.1.4	Block Plantation	ha	9,000
	1) Fuel and Fodder Plantation	ha	6,300
	2) NTFP Plantation	ha	2,250
	3) Other Block Plantation	ha	450
2.1.5	Fire Protection		
	1) Fire Line (FL) Construction and Maintenance	km	1,710
	2) Provision of Incentive Measures (25% VSS each year; for 3 years)	VSS	900
2.2	Non JFM Mode		
2.2.1	Consolidation and Demarcation of Forest Boundaries	km	1,898
2.2.2	Construction /Improvement of Permanent Nurseries	nursery	6
2.2.3	Non-JFM Drainage Line Treatment (DLT) (Ex-situ SMC Work)	ha	750
2.3	Farm Forestry		
2.3.1	Promotion of Mixed Model	ha	10,000
	a) Batch-1	ha	2,500

Sub-Component	Main Activity	Unit	Quantity
	b) Batch-2	ha	3,250
	c) Batch-3	ha	3,000
	d) Batch-4	ha	1,250
<b>Component 3: Sustainable Biodiversity Management</b>			
3.1	Sustainable Biodiversity Management incorporating concept of SATOYAMA model	Site	1
3.2	Establishment of Scientific Monitoring System at Bhitarkanika	year	5
<b>Component 4: Livelihood Improvement</b>			
4.1	Community Development Fund	VSS	1,200
4.2	Promotion of IGAs	VSS	1,200
4.3	Livelihood Resource Centre (LRC)	No	1
4.3.1	Staff of LRC	years	5
4.3.2	Business Plan Development for LRC	LS	1
4.3.3	R&D and Product Development	products	5
4.3.4	Livelihood Development Fund (with PMU)	LS	1
	1) Cluster Revolving Fund	LS	1
	2) Cluster Development Fund	LS	1
	3) Cluster Corpus Fund	LS	1
	4) IGA infrastructure for SHGs with VSS	VSS/ EDC	1,200
4.3.5	Facilitation of CSR/ Private Sector Partnership	LS	1
4.3.6	LRC Business Plan Review and Advisory Committee Meetings	meetings	8
4.4	NTPF Based Livelihood Interventions		
4.4.1	Inventoring of NTPF	DMU	6
4.4.2	Developing NTPF Collection and Marketing Strategy	PMU	1
4.4.3	Business Development Services including R&D	PMU	1
4.5	Annual Partner NGOs Review Meeting	years	8
<b>Component 5: Capacity Development</b>			
5.1	Executing Agency		
5.1.1	Training Plan Development	LS	1
5.1.2	Regular Trainings		
	1) PMU/ DMU		
	a) Managerial/ Skill Improvement	batches	6
	b) Technical/ Engineering	batches	5
	c) M&E/ MIS, GIS	batches	7
	d) Gender Training	batches	6
	2) FMU		
	a) Managerial/ Skill Improvement	batches	10
	b) Technical/ Engineering	batches	10
	c) M&E/ MIS, GIS	batches	12
	d) Gender Training	batches	10

Sub-Component	Main Activity	Unit	Quantity
	3) Environmental and Social Consideration: PMU/DMU		
	a) Environmental and Social Consideration Training (PMU)	training	10
	b) Environmental and Social Consideration Training (DMU)	training	120
5.1.3	Refresher Trainings		
	1) PMU/ DMU		
	a) Managerial/ Skill Improvement	batches	4
	b) Technical/ Engineering	batches	4
	c) M&E/ MIS, GIS	batches	5
	d) Gender Training	batches	4
	2) FMU	batches	
	a) Managerial/ Skill Improvement	batches	6
	b) Technical/ Engineering	batches	6
	c) M&E/ MIS, GIS	batches	8
	d) Gender Training	batches	6
	3) Environmental and Social Consideration: PMU/DMU		
	a) Environmental and Social Consideration Training (PMU)	training	10
	b) Environmental and Social Consideration Training (DMU)	training	120
5.1.4	Exposures		
	1) National/ Outside State (PMU/DMU/FMU)		
	a) JICA assisted states	batches	10
	b) States having Inter-sectoral/ Livelihoods models	batches	6
	2) Overseas	batches	3
	3) Hi-Tech Nursery exposure	batches	24
	4) Drainage Line Treatment/ SMC work exposure: Non-JFM	batches	24
	5) Drainage Line Treatment/ SMC work exposure: JFM	batches	80
5.1.5	National Workshop	stage	1
5.1.6	Institutional Capacity Impact Assessment	stage	3
5.2	Community Institutions		
5.2.1	Training of SHGs	VSS	1,200
	1) Objectives and Function of SHG	VSS	1,200
	2) Managing a Group Record Keeping and Meetings	VSS	1,200
	3) IGA activities (1)	VSS	1,200
	4) IGA activities (2)	VSS	1,200
	5) SHG Revolving Fund/ Financial linkages	VSS	1,200
	6) Support Available for SHGs	VSS	1,200
5.2.2	Skill Training to promote IGAs		
	1) Exposure Visit to successful IGAs	FMU	50
	2) Training on Business Plan Development and Management	FMU-Times	1,000
	3) Skill Training	VSS/ EDC	1,200
	4) Value Addition	VSS/ EDC	1,200



<b>Sub-Component</b>	<b>Main Activity</b>	<b>Unit</b>	<b>Quantity</b>
	5) Sustainable Harvesting Techniques/ Protocols of NTFPs and MAP and Value Addition	VSS/ EDC	1,200
	6) Cluster based enterprises - Introduction	VSS/ EDC	1,200
5.2.3	Training of VSS/ EDC	VSS	1,200
	1) Training need analysis and module development	PMU	1
	2) Re-organisation of VSS - 2 nos. per DMU	batches	24
	3) Orientation of VSS/ EDC on Microplanning	VSS/ EDC	1,200
	4) Documentation & Maintenance of VSS records - 7 per FMU	batches	350
	5) Forest protection and management (Basic) - 7 per FMU	batches	350
	6) Sustainable Biodiversity Management - 2 nos. per FMU	batches	100
	7) Orientation of VSS/ EDC members	VSS/ EDC	1,200
	8) Social Audit	VSS/ EDC	1,200
	9) Training on Revolving Fund Management to VSS/ EDC	FMU	50
	10) Community Disaster Management - 2 nos. per FMU	batches	100
	11) Wildlife - Human Conflict	VSS/ EDC	1,200
	12) Workshop of VSS/EDC Leaders - 2 nos. per DMU	times	60
	13) Workshop of VSS/EDC Leaders - 6 nos. per FMU	times	300
5.2.4	Exposure visits (within the DMU) - by DMU	batches	240
5.2.5	Exposure visits (within the State) - by PMU	batches	120
5.2.6	Exposure visits (Outside of the State)	DMU	12
5.2.7	Gender Training		
	1) VSS/ EDC	VSS/ EDC	1,200
	2) SHGs (3 per VSS/ EDC)	SHGs	3,600
5.3	Training of Partner NGOs		
	1) Microplanning/ Annual Planning	batches	12
	2) VSS management (at Circle level)	batches	12
	3) Orientation on Facilitating Convergence	times	2
	4) Training for implementation of Small IGAs through SHGs	times	2
	5) Training on Cluster Development	times	2
	6) Exposure Visit on Cluster Development	times	1
5.4	Training of Animators	FMU	50
5.5	Promotion of Product Cluster at DMU Level		
5.5.1	Institution Development	DMU	12
	1) Exposure Visit to Clusters / Producer Organizations	DMU	12
	2) Formation and strengthening of Producer Organizations	DMU	12
5.5.2	Skill Training	DMU	12
	1) Skill Training of Master Trainers	DMU	12
	2) Skill Training of Members	DMU	12
5.6	Training & Extension of Farm Forestry		
	1) Mixed Model	ha	10,000

Sub-Component	Main Activity	Unit	Quantity
5.7	Capacity Development - REDD+ Readiness		
	1) National Level Training	batches	2
	2) Division Level Training	batches	48
	a) Biomass	batches	48
	b) GPS	batches	48
	c) MIS	batches	48
	d) Awareness Generation Workshops	times	240
<b>Component 6: Research</b>			
6.1	REDD+ Readiness		
	1) Purchasing of Satellite Imageries	l.s.	1
	2) Biomass Survey	Plots	225
	3) Biodiversity Inventory	l.s.	1
<b>Component 7: Supporting Activities</b>			
7.1	Institutional and Project Management Support		
7.1.1	Strengthening of PMU Office		
	1) Equipment/ Office automation/ Gadgets	l.s.	1
	2) Refurbishing of PMU office - furniture/ fixtures	nos.	1
	3) PMU Building		
	a) Extension of PMU building	PMU	1
	b) Maintenance of Extended PMU building	time	1
	c) Renovation of Existing PMU building.	ls	1
	d) Existing PMU building renovation	time	1
	4) Vehicles for Project at PMU level (12 nos.)	l.s.	1
	5) Human Resource Support - PMU		
	a) Contractual/ Direct Hiring	months	120
	b) Outsourcing	months	120
7.1.2	Strengthening of DMU Office	DMU	12
	1) Equipment/ Office automation/ Gadgets	DMU	12
	2) Refurbishing of DMU office - furniture/ fixtures	DMU	12
	3) DMU Building		
	a) DMU Building Extension	DMU	12
	b) DMU Building Extension Maintenance (after 3rd yr.)	time	12
	4) Vehicles for project at DMU level (one per DMU)	DMU	12
	5) Human Resource Support - DMU		
	a) Contractual/ Direct Hiring	months	1,440
	b) Outsourcing	months	1,440
7.1.3	Strengthening of FMU Office	FMU	50
	1) Equipment/ Office automation/ Gadgets	FMU	50
	2) Refurbishing of FMU office - furniture/ fixtures	FMU	50
	3) FMU Building		
	a) FMU Building Extension	FMU	50

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Sub-Component	Main Activity	Unit	Quantity
	b) FMU Building Extension Maintenance (after 3rd yr.)	time	50
	4) Vehicles for project at FMU level (Motor Cycles - 2 per FMU)	nos.	-
	5) Human Resource Support - FMU		
	a) Contractual/ Direct Hiring	months	6,000
	b) Outsourcing	months	6,000
7.1.4	Strengthening of Circle Office		
	1) Equipment/ Office automation/ Gadgets	Circles	6
	2) Refurbishing of Circle office - furniture/ fixtures	Circles	6
	3) Human Resource support - Contractual Staff	Circle-months	720
7.2	Monitoring & Evaluation (M&E)		
7.2.1	Monitoring		
	1) Concurrent Monitoring and Periodic Reviews		
	a) PMU	meetings	114
	b) DMU	meetings	1,296
	c) FMU	meetings	10,800
	d) VSS (one per week by each)		
	i) Batch -1 (300 nos.)	meetings	124,800
	ii) Batch -2 (400 nos.)	meetings	145,600
	iii) Batch -3 (350 nos.)	meetings	109,200
	iv) Batch -4 (150 nos.)	meetings	39,000
	e) Circles (6 nos. - one per Quarter by each)	meetings	216
	f) HPC/ JICA (2 nos. - one per year by each))	meetings	36
	g) APCCF (M&E & IV), OFD (one per year)	meetings	9
	2) Inter-sectoral Coordination Meetings		
	a) Principal Secretary (Planning & Coordination)	meetings	36
	b) District Magistrate/ ADM (10 nos.)	meetings	360
	c) Block Development Officer (40 blocks)	meetings	4,320
	3) Community Self-monitoring		-
	4) Computerized MIS & GIS staff (in-house development)	LS	1
	5) Computerized Accounting System		
	a) PMU	PMU	1
	b) DMU	DMU	12
	c) FMU	FMU	50
	6) GIS - Satellite images for Monitoring	l.s.	1
	7) Annual Strategy Planning & Review Workshops		
	a) PMU	PMU	9
	b) DMU	DMU	108
7.2.2	Impact Assessment		
	1) Annual Outcome Assessments	year	8
	2) Baseline and Impact Surveys		

Sub-Component	Main Activity	Unit	Quantity
	a) Socio-economic/ Gender Surveys		
	i) Baseline	stage	1
	ii) Impact (mid and end-term)	stage	2
	b) Physical Surveys		
	i) Baseline	stage	1
	ii) Impact (mid and end-term)	stage	2
	3) Thematic and Short Studies	stage	5
7.2.3	Audits		
	1) Social Audits	VSS	1,200
	2) Statutory Financial Audits		
	a) PMU/ DMU/ FMU	audits	10
	b) VSS	VSS	1,200
	3) Concurrent Audits		
	a) PMU	audits	20
	b) DMU	audits	240
	4) Grievance Redressal, RTI and Public Disclosure		
7.3	Communication/ Publicity		
7.3.1	Knowledge Management Support	year	8
7.3.2	Internal Communication Support		
	1) Equipment and aids	sets	1
	2) Bulk SMS/ email services	year	9
7.3.3	External Communication Support		
	1) Folk Media	VSS	1,200
	2) Print Media	year	8
	3) Electronic media (Radio/ TV)	year	8
	4) Newsletter/ Magazine	year	9
	5) Short films	films	5
	6) Exhibitions/ Melas - participation support	events	24
	a) Product Conclaves	nos	6
	7) Workshop/ Seminars	events	8
	8) Publications	year	9
<b>Component 8: Phase-Out/ Phase-In</b>			
8.1	Preparation of Phase-Out/ Phase-In	LS	1
<b>Component 9: Consulting Services</b>		year	4

Source: JICA Survey Team

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## **Attachment 6.6.1 Terms of Reference for Partner NGOs**

### **Draft Terms of Reference for Partner NGOs to be deployed by OFSDP Phase -II**

#### **1. Rationale:**

Odisha Forestry Sector Development Project, Phase - II, with the financial assistance from Japan International Cooperation Agency (JICA) will be implemented in 12 Forest Divisions (notified as Divisional Management Units – DMUs) targeting 1,200 Van Samrakshan Samitis (VSSs) and Eco Development Committees (EDCs) spread over in 50 Forest Ranges (notified as Field Management Units – FMUs). The Project Interventions will include forestry development and participatory forest management, farm forestry, biodiversity conservation, livelihood enhancement, human-wildlife conflict management, disaster risk management, institutional capacity building etc. The Project envisages working with 3,600 Self Help Groups of women for livelihood enhancement activities at the VSS/EDC level and also with the producer groups formed by these SHGs at the Cluster level for higher level livelihood enterprises. The VSS/ EDC, as the building block of the Project, will be the primary unit of project implementation. The Project intends to strengthen the VSS as an empowered democratic village institution for forestry governance. It desires to build the capacity of the VSS so that they would continue to carry out different activities for forest management within the given legal and institutional framework.

The Project emphasizes rigorous engagements with the target communities, PRIs, other Line Departments and private players for implementation of different activities through convergence. With the limited human resources and skill set for livelihood enhancement, it would be difficult for the Odisha Forest Department (OFD) to implement all the interventions planned by the Project. Hence the need for engagement with the local NGOs as partners in project implementation. The Partner NGO will complement the activities of the OFD in decentralised participatory forest management, and focus intensively on the community institution building, addressing the issues in institutional sustainability at the community level, diversification of livelihood activities and ensuring higher incomes to the forest dependent communities.

#### **2. Scope of Work**

Partner NGOs will be engaged at the DMU level (One NGO for one DMU) to deploy quality human resources for implementation of different Project activities. A team of staff from the Partner NGO will be deployed at the FMU level, which is the operating unit for the Partner NGO. The Team will work under the directions of DMU Chief and under guidance of FMU Chief. The Team will report to FMU Chief.

The key objectives of engagement of Partner NGOs are a) to ensure institutional strengthening and sustainability of VSSs, EDCs and SHGs, so that they would be managing the assets created or developed by the Project in an equitable and sustainable manner, b) to enhance the participation of VSSs, EDCs and SHGs in project planning and implementation of project activities, and c) to ensure rigorous engagement of SHGs in different livelihood activities round the year to enhance their income and to reduce the risks of livelihood insecurities.

The scope of work of the Partner NGOs will include the following:

1. Community mobilization
2. Re-organisation/ formation of VSSs, EDCs and SHGs
3. Perspective planning/ microplanning, annual planning, convergence planning
4. Capacity building of VSSs, EDCs and SHGs
5. Assistance in implementation of different project activities – afforestation, farm forestry, biodiversity conservation, livelihood enhancement, community development, building interfaces with different stakeholders etc.

6. Business/ enterprise planning for the SHGs and implementation of business/ enterprise plan
7. Plan and efforts for institutional sustainability
8. Monitoring, performance reviews/ assessment and evaluation
9. Documentations
10. Knowledge management

### **3. Eligibility Criteria for NGOs**

#### **3.1 Registration and other legal requirements**

- The NGO should be registered under the Indian Societies Registration Act / Indian Trust Act / Company Act for a minimum of five years and shall be able to present annual reports and audit reports, when required.
- The NGO should be working in the same district in which the concerned DMU is located for at least 3 years and successfully implemented 2 projects funded by International Donors or Government Agencies (Union or State Governments).
- The turnover of the NGO for the last 3 years should be Rs. 2.5 million per year.
- An NGO blacklisted or placed under funding restriction by any Ministry or Government Department, Government Undertaking, shall not be eligible.
- NGO should not have defaulted either in works or in financial progress in any of their works with the Government Department or Government Agencies in last three years.

#### **3.2 Minimum experience required**

- Proven experience of working for 5 years in Forestry Sector, or in Wildlife Management and Biodiversity Conservation Sectors, or in other Sectors such as Environment, Natural Resources Management, Rural Livelihoods, Women's Empowerment, Community and Rural Development.
- Minimum 5 years of experience in preparation of village level development plans /Micro Plan, livelihood improvement/income generation plans for SHGs etc. The NGO should be well conversant in PRA and other participatory planning tools.
- Minimum 5 years of experience in community institution development, capacity building and building linkages between the community institutions and different opportunities in the government and market.
- Organisations having experience of working with OFSDP Phase 1 will be given preference.

### **4. Expected Roles/ Functions of NGO**

The Partner NGO shall have the following key roles/ functions for implementation of the Project:

1. Assist the FMU in assessment of project area and selection of VSSs and EDCs for implementation of the Project.
2. Carry out multi-pronged activities for community mobilization in VSS/ EDC to efficiently and effectively
  - a. Participate in forest protection, management and biodiversity conservation
  - b. Participate in implementation of the project activities

- c. Collaborate with PRIs and other Line Departments for carrying out different village development and livelihood improvement activities.
3. Assist the FMU in formation of VSSs, EDCs and SHGs, wherever required.
4. Assist the FMU and the target communities to reform their VSSs, EDCs and SHGs wherever required.
5. Work with the VSSs and EDCs to prepare Micro Plan following the Guidelines and Manual of the Project.
6. Assist the VSS/EDC and FMU in periodical review of the implementation of micro plan and in revisiting the micro plan.
7. Work with the VSSs and EDCs to prepare Annual Plans following the guidelines of the Project.
8. Assist VSSs, EDCs and FMU to prepare plan for convergence and facilitating linkages with PRIs, Line Departments and private sector agencies.
9. Work with DMU and FMU for planning and implementation of different capacity building activities for VSSs, EDCs and SHGs – the activities may include orientation, training, coaching, handholding, demonstrating etc. The focus shall be on institution development as well as programmes so that the VSSs, EDCs and SHGs can plan and implement different activities and can sustain the efforts even after the project period.
10. Assist the VSSs and EDCs to identify beneficiaries for different project components especially farm forestry, critical livelihood support, access to entitlements under different schemes of the Government.
11. Work with VSSs and EDCs to identify the poor and forest dependent communities in their respective villages and organize them to form Self Help Groups.
12. Assist the SHGs in building linkages with appropriate institutions for skill development, setting up of enterprises and marketing.
13. Work with other FMU Team to form clusters for promotion of livelihood activities and facilitate SHGs to become members in the cluster organisation.
14. Assist FMU and DMU in collection and compilation of data on the progress of project implementation and assist them in regular project monitoring and reviews, and preparation of periodic progress reports of the Project.
15. Assist VSSs, EDCs and SHGs to adopt standard institutional governance procedures and build their capacity to manage funds, maintain books of accounts and other records, undertake financial and social audits, and respect transparency and accountability.
16. Assist DMU and FMU in carrying out various publicity and promotional activities at VSS/EDC, Gram Panchayat, FMU and DMU level for creating public awareness on the Project and popularization of project strategies, results and best practices. The Partner NGO is expected to play role of a knowledge partner of the Project at the DMU and FMU level.

## **5. Composition of Team**

The Team at the FMU level will constitute one Team Leader (Institution Development, Networking and Convergence), one Development Officer (Community Development and Livelihoods) and one Development Officer (NRM, Farm Forestry and Institutional Linkages). The Partner NGO will be mandated to deploy women team members - at least one Woman member will be deployed per FMU.

One of the Team Leaders will be designated by the NGO as the coordinator for interaction with the DMU. The Chief Functionary of the NGO will be responsible for delivery of outputs agreed in the ToR.

**Table: Project area and indicative no. of Team Members to be deployed (to be filled in later)**

Sl.	Name of the DMU	No. of FMUs	Approximate number of VSSs and EDCs	No. of Team Leaders	No. of Development Officers (CD and Livelihoods)	No. of Development Officers (NRM and Linkages)
1	Athamalik					
2	Baripada					
3	Boudh					
4	Dhenkanal					
5	Ghumsur North					
6	Ghumsur South					
7	Jharsuguda					
8	Karanjia					
9	Rairangpur					
10	Sambalpur					
11	Subarnapur					
12	Sundargarh					
	Total	50	1,200	50	50	50

## 6. Terms of Reference and Required Qualifications of the Team Members

The essential and desired qualifications of team members to be deployed by the Partner NGO have been given below:

**Table: Key Responsibilities and Qualifications of the Team Members**

Sl.	Position	Key responsibilities	Qualification – essential	Qualification desirable
1	Team Leader	<ul style="list-style-type: none"> <li>• Team management, coordination with DMU and FMU and VSSs/EDCs/SHGs.</li> <li>• Coordination with different stakeholders, networking, building linkages with different Line Departments, Financial and Market Agencies.</li> <li>• Planning, implementation, monitoring and reporting of project activities in the target villages.</li> <li>• Microplanning, Annual Planning, Convergence Planning at the VSS and EDC level with the help of team members.</li> <li>• Planning and execution of Institutional Capacity Building – VSSs, EDCs and SHGs.</li> <li>• Planning and execution of livelihood enhancement activities.</li> <li>• Assistance to FMU and VSSs and EDCs in implementation of afforestation and farm forestry activities.</li> <li>• Build capacity of the Animators and guide them to work efficiently and effectively.</li> </ul>	<p>Post-Graduate degree in Rural Development, Forestry, Rural Management, Agriculture, Social Works, Sociology, Plant Sciences, Environmental Sciences or allied areas.</p> <p>10 years of relevant work experiences with at least 5 years of work experience in rural areas for rural development and livelihood projects.</p> <p>Minimum 3 years of experience as Team Leader / Project Coordinator of a project overseeing programmes and programme support/ operations.</p> <p>Proficiency in reading, writing and speaking of Odia and English languages.</p>	<p>Work experience in participatory forestry and biodiversity conservation projects.</p> <p>Experience of working with the Projects implemented by the Government.</p> <p>Demonstrated managerial/ leadership abilities.</p> <p>Work experience in the same geography/ district.</p>



Sl.	Position	Key responsibilities	Qualification – essential	Qualification desirable
		<ul style="list-style-type: none"> <li>• Assistance to DMU and FMU in organisation of workshops of leaders of VSSs and EDCs.</li> <li>• Assistance to FMU in organisation of social audits.</li> </ul>	<p>Proficiency in MS Office.</p> <p>Strong networking, communication and facilitation skills.</p>	
2	Development Officer – Community Development and Livelihoods	<ul style="list-style-type: none"> <li>• Community mobilisation, re-organisation of VSSs, EDCs and SHGs, formation of new SHGs etc.</li> <li>• Key role in preparation of micro plan and annual plan by the VSSs and EDCs.</li> <li>• Orientation and training of VSSs, EDCs, Animators, SHGs on institution development.</li> <li>• Assistance in mass awareness generation among the members of VSSs, EDCs and SHGs to enhance their participation in the project activities.</li> <li>• Assistance to FMU, VSSs, EDCs and SHGs in implementation of different project activities.</li> <li>• Business/IGA planning with SHGs and assistance to the SHGs in implementation of IGAs.</li> <li>• Assistance to VSSs and EDCs in revolving fund management.</li> <li>• Building linkages between SHGs and financial institutions, market, schemes of the Government.</li> <li>• Assistance to VSSs and EDCs and Animators in organisations of routine meetings, record maintenance, fund management, fund raising etc.</li> <li>• Facilitation of social audits at the VSS and EDC level.</li> <li>• Preparation of reports on project activities.</li> <li>• Participation in review meetings at the FMU as well as DMU level.</li> </ul>	<p>Graduate/Bachelor degree in Rural Development, Rural Management, Agriculture, Social Works, Social Sciences or allied areas.</p> <p>5 years of relevant work experiences in rural areas for rural development and livelihood projects.</p> <p>Strong training, facilitation and communication skills.</p> <p>Proficiency in reading, writing and speaking of Odia and English languages.</p> <p>Proficiency in MS Office.</p>	<p>Experience of working with the Livelihood Projects implemented by the Government.</p> <p>Demonstrated experience of working with SHGs and Producer Groups for livelihood improvement, enterprise development activities.</p> <p>Work experience in the same geography/ district.</p>
3	Development Officer – NRM, Farm Forestry and Institutional Linkages	<ul style="list-style-type: none"> <li>• Community mobilisation, re-organisation of VSSs, EDCs.</li> <li>• Assistance in preparation of micro plan and annual plan by the VSSs and EDCs.</li> <li>• Orientation and training of VSSs, EDCs, Animators, and SHGs on participatory forest management, sustainable harvesting of NTFPs, farm forestry etc.</li> <li>• Assistance to FMU, VSSs, EDCs and SHGs in implementation of afforestation, farm forestry, agro-forestry, NTFP plantations, soil and water conservation etc.</li> </ul>	<p>Graduate/Bachelor degree in Forestry, Agriculture, Environmental Sciences, Plant Sciences, Rural Management and allied areas.</p> <p>5 years of relevant work experiences in JFM/ NRM projects.</p> <p>Strong facilitation skills in community based forest management/ natural resource management.</p>	<p>Experience of working with the JFM/ Eco Development/Water shed Projects implemented by the Government.</p> <p>Demonstrated experience of working with JFMCs/EDCs for participatory forest management, convergence, farm</p>

Sl.	Position	Key responsibilities	Qualification – essential	Qualification desirable
		<ul style="list-style-type: none"> <li>• Assistance to FMU and EDCs for implementation of eco development activities including biodiversity conservation.</li> <li>• Convergence planning and building interface with PRIs, Line Department, and Private Sector Agencies for implementation of different activities in the VSSs and EDCs.</li> <li>• Assistance to other team members in business/IGA planning and implementation of IGAs.</li> <li>• Assistance to VSSs and EDCs, and Animators in organisations of routine meetings, record maintenance, fund management, fund raising etc.</li> <li>• Facilitate the process of information and experience sharing among VSSs, EDCs and SHGs at the FMU level.</li> <li>• Facilitation of exposure visits for the VSSs, EDCs and SHGs.</li> <li>• Facilitation of federation building process among the VSSs and EDCs</li> <li>• Preparation of reports on project activities.</li> <li>• Participation in review meetings at the FMU as well as DMU level.</li> </ul>	<p>Proficiency in reading, writing and speaking of Odia and English languages.</p> <p>Proficiency in MS Office.</p>	<p>forestry, forest based livelihood projects.</p> <p>Work experience in the same geography/ district.</p>

## 7. Deployment period

The deployment of NGO will be for a period of 6 years. The initial period of contract will be for 4 years with an extension of further two years based on the need. The performance appraisal will be conducted on an annual basis and accordingly the terms and conditions of the contract will be modified annually.

**Table: Deployment period of Partner NGOs**

Team to be deployed	Yr. 1 (2nd Quarter)	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6	Yr. 7	Yr. 8
Team Leader (Nos.)	Selection process	50	50	50	50	50	50	50
Development Officer (Community Development and Livelihoods) (Nos.)	Selection process	50	50	50	50	50	50	50
Development Officer (NRM, Farm Forestry and Institutional Linkages) (Nos.)	Selection process	50	50	50	50	59	50	50

## 8. Payments and other supports to the Partner NGOs

The Team will operate from the FMU Office and necessary office space will be provided by the FMU. One motor cycle will be provided to the Team in FMU for mobility. The Partner NGO will be provided with salary for each members, travel and coordination expenses and overheads. The payment will be made on quarterly basis.

## **9. Role of PMU in deployment of NGO**

The Partner NGOs will be procured through local competitive bidding following quality and cost based selection method. The PMU will finalise the guidelines for procurement of Partner NGOs, which will include RFP, TOR, selection procedures (constitution of selection committee, evaluation of proposal, interviews, contract negotiations etc.), contract document, special conditions of the contract, performance appraisal etc.

The PMU will notify constitution of selection/ procurement committee to initiate the process of selection during the first year of project implementation. The committee will have members from PMU, Regional CCF, concerned DMU Chief and other Experts.

## **10. Role of DMU in deployment of NGO**

The DMU Chief will be one of the members of the selection committee. The DMU Chief will sign the contract with the Partner NGO represented by the Chief Functionary. The Chief Functionary of NGO will be responsible for timely delivery of the outputs mentioned the contract. S/he will participate in the review meetings organised at the DMU as well as PMU level.

At DMU level, an NGO Coordination Cell will be constituted under the Chairmanship of DMU Chief with members consisting of Assistant DMU Chief, Subject Matter Specialists, one Representative of PMC and FMU Chiefs. One of the Subject Matter Specialist nominated by DMU chief will act as the Nodal Officer for coordination with NGO at the DMU level. Nodal Officer will coordinate all activities related to Partner NGO including convening the monthly review meetings, review of progress reports, maintenance all necessary records and communications etc. The Representative of PMC will assist the NGO Coordination Cell in technical coordination, monitoring and evaluation of activities of Partner NGO.

The NGO Coordination Cell will have monthly review of the progress of work by the NGO (Teams deployed by the NGO). One of the Team Leaders deployed at the FMU level will be designated by the NGO as the coordinator of the NGO to periodically interact with the DMU.

The DMU will conduct an annual performance appraisal / evaluation of the work of the NGO and the report will be shared with the PMU. Necessary feedback will be provided to the NGO by the DMU.

## **11. Selection Process**

The Partner NGOs will be procured through local competitive bidding following quality and cost based selection method involving a three-stage selection process i.e. preliminary screening, evaluation of technical proposal and presentation/ interaction with the short-listed NGOs. The selection process will have conformity to the State Government's relevant laws and rules. Selection committee will be formed at the PMU level with members of PMU, Regional CCFs, DMU Chief, Experts etc. Announcement for RFP will be widely publicised in the local newspapers (Both local vernacular and English) and on the website of the Project / Forest Department. The suggested selection criteria with weightage of scores have been presented below:

**Suggested Selection Criteria (Technical Proposal and Presentation)**

Selection Criteria	Indicators	Distribution of Scores
Organisational capacity and experience	Reputation of the organisation, presence in the district, quality of human resources with the organisation, publications etc.	10
	Understanding of the task, proposed methodology and work plan	10
Relevant Technical Experience	Experience of working with projects on forestry, wildlife and biodiversity conservation in last 5 years	10
	Experience of working with rural livelihoods projects in last 5 years	10
	Experience of working with OFSDP Phase 1	10
<b>Human Resources to be deployed</b>		
Team Leader	Qualification	5
	Experience Relevant to the Position	5
Development Officer (Community Development and Livelihoods)	Qualification	5
	Experience Relevant to the Position	5
Development Officer (NRM, Farm Forestry and Institutional Linkages)	Qualification	5
	Experience Relevant to the Position	5
Presentation by the NGO and interaction	Clarity of tasks, work methodology, innovations etc.	20
	<b>Total</b>	<b>100</b>

### Attachment 6.6.2 Village Selection Criteria of OFSDS

The following criteria have been proposed by OFSDS (2016).

<b>Minimum Requirements</b>			
	<ul style="list-style-type: none"> <li>- The village has not participated in OTELP (Odisha Tribal Empowerment and Livelihood Program) and, WORLP (Western Orissa Livelihoods Project), or any other major livelihood projects in the last 5 years, Except AJY. The village is within 3km<sup>1</sup> to forestland, and the forestland is having open or scrub forest</li> <li>- Majority of village household are dependent on forest resources.</li> <li>- The village is a revenue village (not an illegal settlement)</li> <li>- There is no conflict between the resource users in the village.</li> </ul>		
	<b>Prioritized Parameter</b>	<b>Rating</b>	
		<b>Point</b>	<b>Awarded</b>
<b>1</b>	<b>Forest Degradation</b>		
	Village is located in a severely degraded micro watershed identified through the vegetation / present land use map prepared by OFSDP.	5	
	Village is located at a fairly degraded micro watershed.	3	
	Only a portion of village is located within the degraded micro watershed.	1	
<b>2</b>	<b>Size of Forestland on which people are traditionally depending</b>		
	The size of forestland is more than 150 ha.	5	
	The size of forestland is more than 80 ha but less than 150 ha.	3	
	The total size of forestland is less than 80 ha.	1	
<b>3</b>	<b>Situation on the Catchment of any drainage system</b>		
	The forestland adjacent to the village is on the catchment of a major drainage system	5	
	The forestland adjacent to the village is on the catchment of a minor drainage system	3	
<b>4</b>	<b>Distance of the village from the adjoining forest</b>	1	
	Distance to forest is less than 0.5 km.	4	
	Distance from forest is between 0.5 – 1 km.	3	
	Distance from forest is between 1 – 2 km.	2	
	Distance from forest is more than 2 km.	1	
<b>5</b>	<b>Prevalence of ST/SC Population</b>		
	Percentage of ST/SC Households is more than 50%	3	
	Percentage of ST/SC Households is between 20 - 50%	2	
	Percentage of ST/SC Households is less than 20%	1	
<b>6</b>	<b>Poverty in terms of BPL families</b>		
	Percentage of BPL family to the total population is more than 70%	5	
	Percentage of BPL family to the total population is between 30 – 70%	3	
	Percentage of BPL family to the total population is less than 30%	1	
<b>7</b>	<b>Approachability (Distance to all season Motorable road)</b>		
	On road head or less than 2 km	5	
	Motorable road is 2-5 km	3	
	Motorable road is more than 5KM	1	
<b>8</b>	<b>Water Availability</b>		
	The village experience more than 6 months of water scarcity period in a normal year.	5	
	The village experience more than 4 months of water scarcity period.	3	
	The village experience less than 4 months of water scarcity period.	1	

<sup>1</sup> It is the proximity to define forest fringe village adopted by the Forest Survey of India and by others.

<b>9</b>	<b>NTFP</b>		
	The village collects more than 10 types of NTFP.	5	
	The village collects more than 5 but less than 10 types of NTFP	3	
	The village collects less than 5 types of NTFP.	1	
<b>10</b>	<b>VSS</b>		
	There is already a existing and functional VSS in the village.	5	
	There is already a existing but non functional VSS in the village	3	
	There is no VSS yet in the village.	1	
<b>11</b>	<b>Conflict</b>		
	There is no forest boundary conflict with neighbouring villages or other socio-political problems.	4	
	There is limited conflict and socio-political problems.	1	

**Village Scoring above 40% will be eligible for Prioritisation.**

Source: OFSDS (2016)

## Attachment 6.6.3 Terms of Reference of Animator

### Draft Engagement of Animators by the VSSs

#### 1. Rationale

Odisha Forestry Sector Development Project, Phase 2 will be working with 1,200 Van Samrakshana Samitis (VSSs) for sustainable forest management and biodiversity conservation in community participation. The Project will facilitate support to 3,600 SHGs for enhancement of livelihood opportunities.

The Project will have rigorous engagements with the communities to evolve sustainable forest management practices, and diversification of livelihood activities including forest based livelihood. The Project will have partnership with local NGOs to mobilise and organise communities and establish sustainable forest management as well as sustainable livelihood practices. The Project will emphasize leadership development and institutional strengthening of VSSs and SHGs for addressing issues in sustainability of these institutions.

The Project intends to support VSSs to engage two persons (One male and one female) from the community as Animators to assist in community mobilization, sensitising the communities on sustainable forest management, implementation of project activities, maintenance of records etc. The Partner NGO to be deployed by the Project will build the capacity of the Animators and guide him/her in carrying out different project activities.

#### 2. Number of Animators to be engaged

Each VSS will engage two Animators – one male and one female. The VSSs will be adopted by the Project in 4 batches (First batch 300 VSSs, Second batch 400, Third batch 350 VSSs, and Fourth batch 150). The following table provides information on the number of Animators to be engaged during the Project period.

Batch	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Yr. 6	Yr. 7	Yr. 8	Yr. 9
Batch 1 – 300 nos. of VSSs (core deployment period – 4 years)	600 (0.5 year)	600	600	600 (0.5 year)				
Batch 2 – 400 nos. VSSs (core deployment period – 4 years)		800	800	800				
Batch 3 – 350 nos. VSSs (core deployment period – 4 years)			700	700	700			
Batch 4 – 150 nos. VSSs (core deployment period – 4 years)				300	300	300		
Batch 1 – follow up period for two years				300 (0.5 year)	300 (0.5 year)			
Batch 2 – follow up period for two years					400			
Batch 3 – follow up period for two years						350		
Batch 4 – follow up period for two years							150	

### **3. Period of engagement**

Each VSS will be supported by the Project to engage two Animators (One male and one female) for 3 years depending on the need and annual performance of the Animator. An additional one year, one Animator per VSS will be engaged.

### **4. Essential qualifications**

- 4.1. Resident of the village where VSS has been formed. If the VSS is unable to find a suitable person, it may consider candidates from adjoining villages belonging to the same Gram Panchayat.
- 4.2. Willing and committed to work as an Animator/ Development Cadre with a small honorarium. The person should not consider it as an employment and relate it to wages and other benefits.
- 4.3. Commitment to reside in the village for the next 4-5 years.
- 4.4. Willingness to work in the fields of participatory forest management, farm forestry, livelihood improvement activities through SHGs.
- 4.5. Good leadership qualities.
- 4.6. Good communication and facilitation skills.
- 4.7. Fluency in Odia/ local dialect – should be able to maintain records and prepare reports.
- 4.8. Educational qualification – 10<sup>th</sup> Pass. In case of woman Animator 7<sup>th</sup> Pass candidates can also be considered.

### **5. Key responsibilities**

- 5.1. To create awareness among the members of VSS on a) the duties and responsibilities of the VSS, b) goals, objectives and activities of the Project, and c) need for their participation in project activities.
- 5.2. To provide necessary assistance to the FMU, Partner NGO and Microplanning Working Group for
  - 5.2.1. Preparation of micro plan
  - 5.2.2. Preparation of annual plans
  - 5.2.3. Preparation of convergence plan
  - 5.2.4. Presentation of micro plan in Gram Panchayat
  - 5.2.5. Revisiting the micro plan
  - 5.2.6. Consultation with Line Department Officials
- 5.3. To motivate resource poor and socially disadvantaged groups to participate in activities of VSS and SHG.



- 5.4. To work with the Partner NGO for formation of SHGs, if necessary
- 5.5. To help VSS in the following activities:
  - 5.5.1. Organisation of meetings (GB, EC and Working Groups)
  - 5.5.2. Sensitization of members to participate in the activities of VSS and Project
  - 5.5.3. Record maintenance
  - 5.5.4. Implementation of different project activities
  - 5.5.5. Organisation of training programmes
  - 5.5.6. Institutionalization of MIS and M&E System at the VSS level
- 5.6. To help SHGs for the following:
  - 5.6.1. Adoption of pancha sutras (Five cardinal principles for SHG management)
  - 5.6.2. Identification of appropriate IGAs with the help of Partner NGO.
  - 5.6.3. Preparation of business plans for IGA/ livelihood activities.
  - 5.6.4. Facilitation of obtaining loan from the revolving fund of VSS (Loan application, appraisal by VSS, signing of MoU, release of funds to SHGs etc.).
  - 5.6.5. Implementation of IGA/ livelihood improvement activities
  - 5.6.6. Repayment of loan to VSS
  - 5.6.7. Regular contact with Partner NGO for bank linkage and market support.
  - 5.6.8. Preparation of reports on the SHGs and their activities.
- 5.7. To prepare necessary progress reports on the implementation of project activities in the VSS.
- 5.8. To assist the VSS, Partner NGO and FMU for organisation of social audits, financial audits, project monitoring and evaluation activities.
- 5.9. To act as a point person of VSS to communicate and coordinate with the Project, other Line Departments, PRIs, NGO and other external agencies

The woman Animator will have more responsibility for organizing women in the VSS to enhance their participation in VSS GB, EC and implementation of different activities. The woman Animator will have the key responsibility of organizing women SHGs and their institution development.

## **6. Compensation to the Animator**

The monthly honorarium for the Animator will be Rs. 2,500 per month. The VSS will be supported for 3 4 years to engage two Animators. One more year's support will also be provided especially to keep the one Animator, preferably woman Animator but the VSS will be requested to share the cost of Animator i.e. 25 per cent of the honorarium.

Efforts will be made to build the capacity of the Animators to function as Community Resource Persons/ Service Providers for agriculture, livestock, forest based livelihood etc. so that s/he can provide services to the villagers – members of SHGs, VSS against some payments. The FMU, Partner NGO and VSS will explore possibilities of engagement of the Animator as a service provider from the 5<sup>th</sup> year onwards. This would help the VSS to get the services of the Animator even after the closure of the Project.

## **7. Selection procedures**

It is the sole responsibility of the VSS to find a suitable candidate from the village to work as Animator. The Project will help the VSS in selection process, formalization of the engagement, capacity building etc. The PMU will finalize the guidelines for selection, which will include selection methods, approvals, MoU/ letter of offer etc. Based on the guidelines the FMU and Partner NGO will organise orientation programmes for the VSS leaders to initiate the process of selection.

The Partner NGO and the FMU will assist the VSS to select the Animator. The VSS may follow the steps provided below for the selection of Animator:

- 7.1. Organisation of a meeting of the Executive Body of VSS to discuss the Qualifications and Job Description of the Animator and procedure for recruitment.
- 7.2. Announcement in the village – notice to be placed in common places/ community centres, VSS Office, if any, notice board of the Gram Panchayat etc.
- 7.3. Receiving the application and screening by the Executive Committee with the help of Partner NGO to prepare a list of eligible candidates.
- 7.4. Interviews of the eligible candidates by the Executive Committee, FMU Chief and Team Leader of Partner NGO and shortlisting of the Animators.
- 7.5. Organisation of General Body of the VSS for final selection of Animators.
- 7.6. Submission of the name of the Animators and resolutions of EC and GB to the FMU Chief and DMU Chief for their consent.
- 7.7. Issue of letter of engagement to the Animator by the VSS signed by the President and Member Secretary.

## Attachment 6.7.1: Description of Potential SMC Works for Drainage Line Treatment

### 1. List of Potential SMC Works

The following table describes potential SMC works for the drainage line treatment for both JFM and Non JFM modes. For convenience, potential SMC works are grouped into following four groups. However, certain interventions are interchangeable between the groups.

- A) Gully Bed/ Head Stabilization
- B) Gully Bank Protection
- C) Water Harvesting
- D) In-Situ SMC Works and Others

Also within each group, certain interventions are interchangeable, say for example, stone masonry water harvesting structures can be changed with earthen embankments depending on site conditions and specific requirements for such interventions.

### Potential SMC Works

Type of SMC Work	Description
<b>A) Gully Bed/ Head Stabilization</b>	
1. Live hedges	Placement of woody plant and tree cuttings in lines to grow and stabilize the gully beds and banks by the formation of roots and aboveground growth.
2. Brush-wood check dams / gully plugs	Established at steeper slopes (>20%) by using locally available brushwood supported by wooden stakes. Brushwood check dams made of posts and brush are placed across the gully. Major expected functions/ outputs are as follows: <ul style="list-style-type: none"> <li>• To hold fine material carried by flowing water in the gully.</li> <li>• To stabilise small gully heads, no deeper than 1 meter</li> </ul>
3. Loose boulder check dams / gully plugs	Made up of loose stones and boulders in upper reach gullies. It reduces velocity of runoff water and trap silt and soil which promotes vegetation in the upstream side. Major expected functions/ outputs are as follows: <ul style="list-style-type: none"> <li>• To reduce runoff available rain water inside the forest area of particular catchment.</li> <li>• To enhance forest regeneration</li> <li>• To provide protective moisture retention in the forest area for plant growth</li> </ul>
4. Earthen check dams / gully plugs	Generally constructed on a nallah in order to break the flow of water and allows it to percolate in the soil. Major expected functions/ outputs are as follows: <ul style="list-style-type: none"> <li>• Cuts the velocity and reduces erosive activity</li> <li>• Improves soil moisture of the adjoining area and allows stored water percolation to recharge the aquifers</li> </ul>
5. Concrete check dams/ gully plugs	Used to act as a control point along the gully bed. and also used at the gully head. Major expected functions/ outputs are as follows: <ul style="list-style-type: none"> <li>• To control gradient in slope either natural or in constructed channel</li> <li>• To control tail water at the outlet of a spillway or conduit</li> <li>• To serve as reservoir spillway where the total drop is low</li> <li>• To serve as inlet/ outlet structure of tile drainage system</li> </ul>
6. Earthen bund	Earthen walls built across a slope, normally along contours, to act as a barrier to runoff particularly for shallow slopes (2-5 percent), and are frequently established together with contour plantation. Earthen bunds help in reducing soil erosion and increasing water retention capacity of soil

Type of SMC Work	Description
7. Stone bund	<p>A single line of stones, or a stone bund, is laid along a contour. For rehabilitation of barren and crusted soils, a combination of stone bunds are used. Major expected functions/ outputs are as follows:</p> <ul style="list-style-type: none"> <li>• To Arrest runoff partly, to enable spread of surface water in order to recharge the ground water table.</li> <li>• To enhance water infiltration and reduces soil erosion (Runoff water can pass through the stone lines slowly the water gets filtered and spread over the field).</li> <li>• To provide protective moisture retention</li> </ul>
<b>B) Gully Bank Protection</b>	
	<p>Gully bank protection works are intended to stabilise banks of gullies/gully beds to avoid further runoff and erosions into gullies Following structures can be considered.</p> <ol style="list-style-type: none"> <li>1. Vegetative spurs</li> <li>2. Crate-wire spurs</li> <li>3. Retaining walls</li> <li>4. Earthen bund</li> <li>5. Stone bund</li> </ol>
<b>C) Water Harvesting</b>	
Water harvesting Structure	<p>Water harvesting structures are intended to store rainwater flowing from the catchment for ground water recharge and irrigation Small-scale water harvesting is most effective when operated as a system with three components:</p> <ol style="list-style-type: none"> <li>1)The watershed or catchment area that generates the runoff,</li> <li>2)The reservoir which holds or collects the runoff,</li> <li>3)The serviced area where the harvested water is used for production.</li> </ol> <p>Major expected functions/ outputs are as follows:</p> <ul style="list-style-type: none"> <li>• To reduce runoff of the available rain water inside of particular catchment.</li> <li>• To create irrigation potential in small commands</li> <li>• To enhance forest regeneration</li> <li>• To provide protective/assured irrigation/moisture retention to the lands</li> <li>• To intercept and reduce runoff thereby inducing larger and extensive absorption of available rain water.</li> <li>• To trap eroded materials thus reduces sediment production rate either in to streams or to the reservoirs.</li> </ul> <p>Following structures can be considered</p> <ol style="list-style-type: none"> <li>1. Earthen embankments (check dams)</li> <li>2. Concrete structures (check dams)</li> <li>3. Stone masonry structures (check dams)</li> <li>4. Ponds</li> </ol>
Run Off Water Harvesting Structure	<p>Runoff harvesting structures are meant to preserve rainwater flowing from the catchment for ground water recharge in forest areas and assured irrigation Construction of earthen embankment across a natural basin to store water for various uses is always not feasible and in such cases dug out or excavated ponds can be constructed in a relatively flat terrain. In this method storage space is manmade. Similar structures as the water harvesting structure can be considered.</p>
<b>D) In-Situ SMC Works and Others</b>	
Staggered trench	<p>Staggered trenching is mainly aimed to slope stabilization and drainage line treatment. Major expected functions/ outputs are as follows:</p> <ul style="list-style-type: none"> <li>• To reduce runoff available rain from bald hills/barren hills in forest area.</li> <li>• To enhance ground water recharge for moisture retention</li> <li>• To provide protective moisture retention in the forest area for plant growth</li> </ul>
Contour trench	<p>A single line of continuous trench on the contour line is laid along a contour. The contour trench arrest runoff for percolation in the ground. Bunds are formed downstream along the trenches with material taken out of them. Major expected functions/ outputs are as follows:</p> <ul style="list-style-type: none"> <li>• To arrest runoff fully, to enable percolation of water in order to recharge the ground water table.</li> <li>•To create more favourable moisture conditions and thus accelerate the growth of vegetation.</li> </ul>

Type of SMC Work	Description
Percolation Pit and trench ridge	Percolation Pit is constructed in relatively permeable soils in the upper reaches of the hilly area to facilitate groundwater recharge. The runoff from the catchment gets harvested in the percolation pit where it gets sufficient time to slowly recharge the groundwater. Major expected functions/ outputs are as follows: <ul style="list-style-type: none"> <li>• To arrest runoff, to enable collection and percolation of surface water in order to recharge the ground water table.</li> <li>• To provide protective moisture retention in the forest area for plant growth</li> </ul>
Half moon Terraces	Saucer pits (larger for hardwood plants and smaller for fuelwood plants) on upper side and half-moon trench-ridge on the downhill side near the pit will be made for water harvesting purpose.
vegetative barriers (seed sowing and protection)	Ecologically pioneer tree/ shrub species with soil binders (grasses/legumes/creepers) will be directly sown with protection against fire and grazing for stabilisation of forest floors..

*Source: Compiled by JICA Survey Team (2016) based on existing/ available information.*

## 2. Indicative Drainage Line Treatment Models

The following items are indicative work quantities assumed for the cost estimation of the drainage line treatment for JFM mode and Non JFM mode, respectively. The actual types and quantities of SMC works to be introduced shall not be confined to below models and shall be determined based on results of the site specific planning.

### Indicative JFM Mode Model Drainage Line Treatment (per 10 ha)

Items	Specification	Unit	Quantity
Concrete Core Check Dam	Head length 10m	no	0
Earthen Check Dam	Head length 10m	no	0
Brushwood Check Dams	L12m x Ht 1m	no	5
Loose Boulder Check Dam (LBCD)	10' x 5' (9.9 cum)	no	30
Water Harvesting Structure	Size: 30mX30mX3m Earthen Excavation	no	0
Run-off Water Harvesting Structure	Size: 10mX10mX3m Earthen excavation	no	2
Continuous Contour Trench	1m depth x 1 m width	running m	0
Percolation Pit	1mX1mX1m/ pit	pit	0
Stone Bund	1mX1mX100m	no (per 100m)	3
Staggered Contour Trenches	1mX1mX4m	no	0

*Source: JICA Survey Team (2016)*

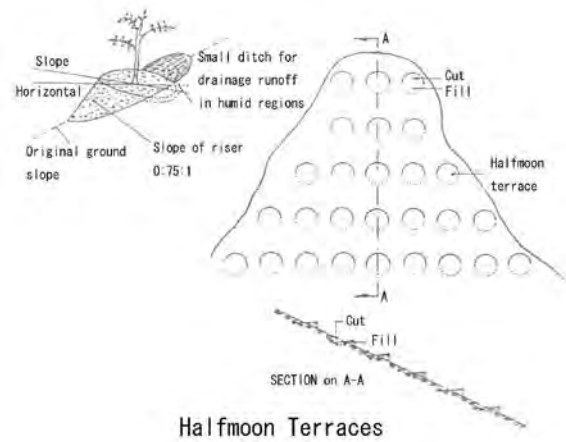
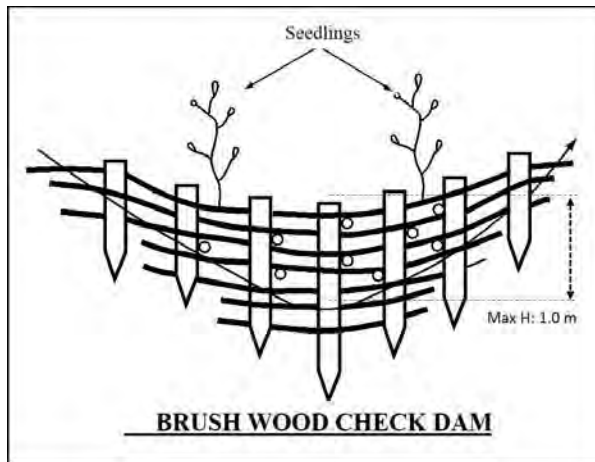
### Indicative Non JFM Mode Model Drainage Line Treatment (per 20 ha)

Items	Specification	Unit	Quantity
Concrete Core Check Dam	Head length 10m	no	1
Earthen Check Dam	Head length 10m	no	
Brushwood Check Dams	L12m x Ht 1m	no	10
Loose Boulder Check Dam (LBCD)	10' x 5' (9.9 cum)	no	60
Water Harvesting Structure	Size: 30mX30mX3m Earthen Excavation	no	
Run-off Water Harvesting Structure	Size: 10mX10mX3m Earthen excavation	no	4
Continuous Contour Trench	1m depth x 1 m width	running m	1000
Percolation Pit	1mX1mX1m/ pit	pit	300
Stone Bund	1mX1mX100m	no (per 100m)	10
Staggered Contour Trenches	1mX1mX4m	no	150

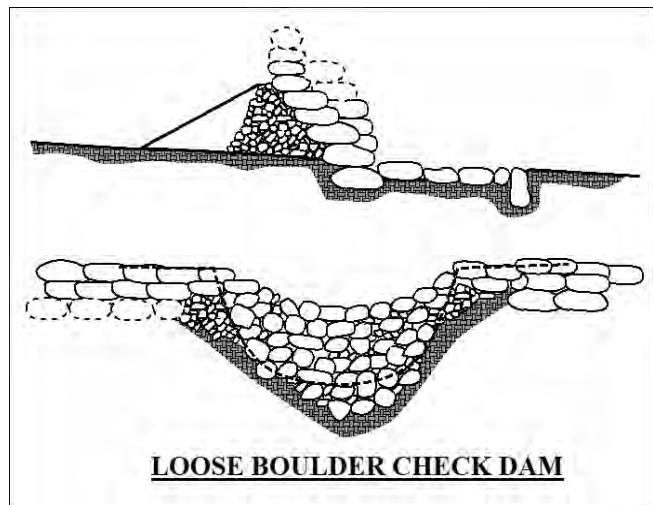
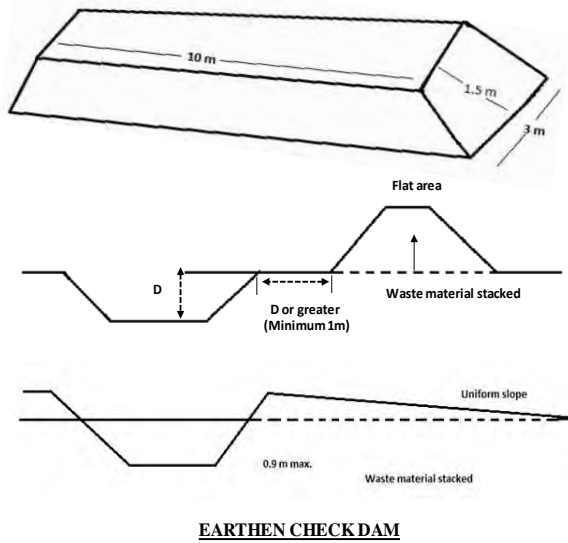
*Source: JICA Survey Team (2016)*

### 3. Indicative Designs of Major SMC Works

Indicative designs of some of potential SMC works are described hereunder.

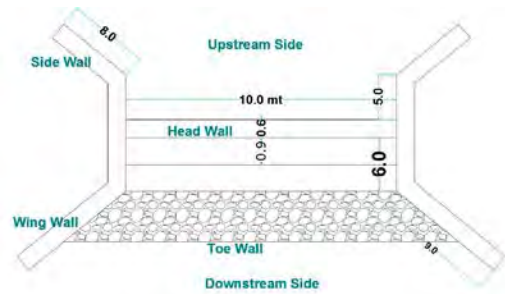


Ref: Odisha Tribal Empowerment Livelihoods Project(OTELP),  
Govt of Odisha SMC Structures

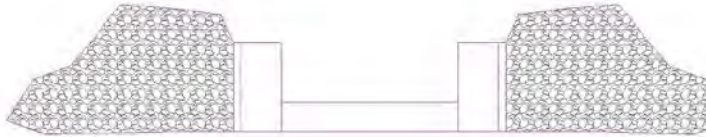




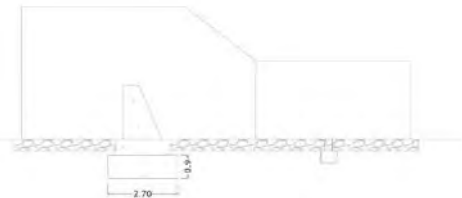
**Downstream Elevation**



**Layout Plan**

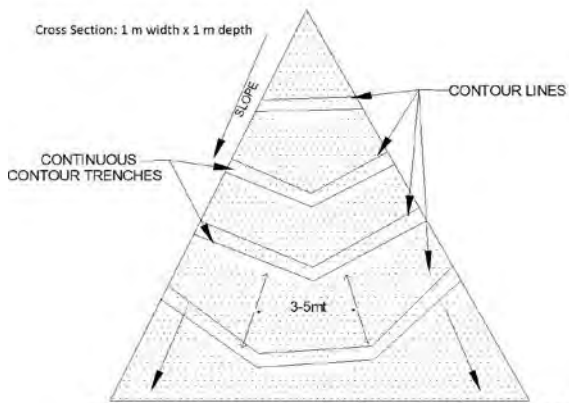


**Upstream Elevation**



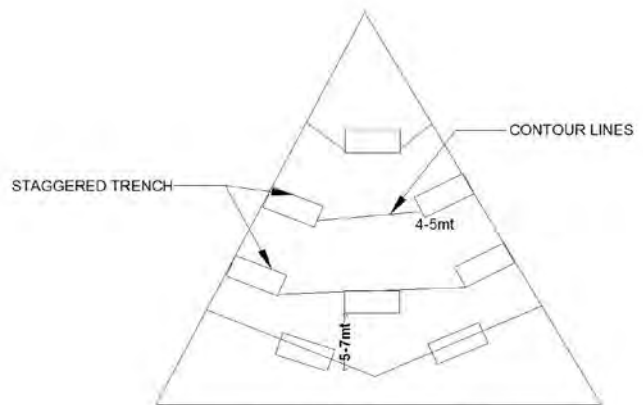
**Side Sectional Elevation**

**CONCRETE CHECKDAM**

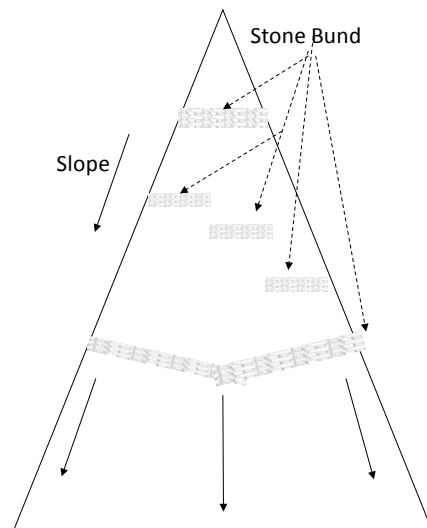
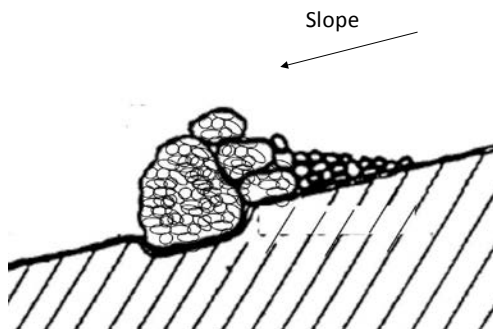


PICTORIAL REPRESENTATION OF DIGGING CONTINUOUS CONTOUR

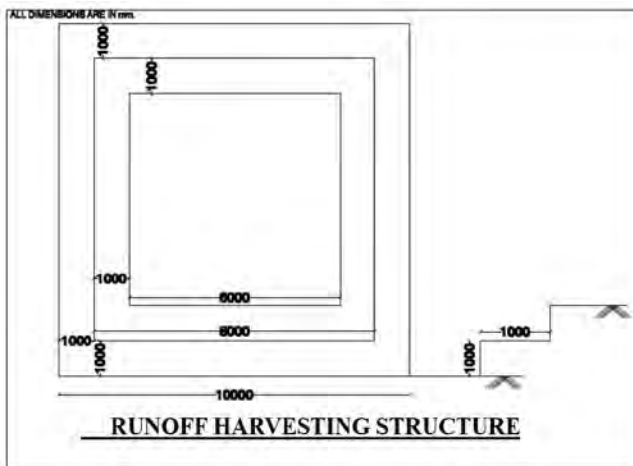
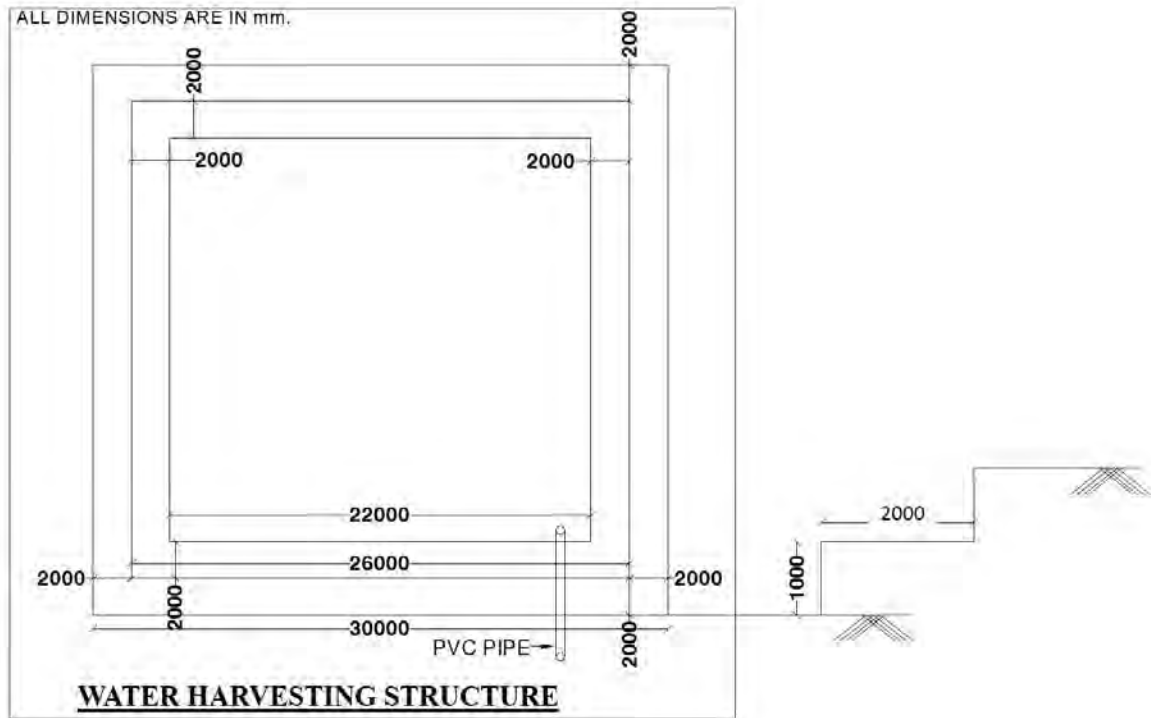
**CONTOUR TRENCH**



**STAGGERED TRENCH**



**STONE BUND**





## Attachment 6.7.2 Potential Types, Species for ANR and Block Plantation.

### 1. Types of ANR and Plantation

**Table 1 Indicative Spacing/Planting Density and Description of ANR and Block Plantation**

Types of plantation	Indicative Spacing	Indicative Planting Density (Seedlings/ Ha)	Description
Assisted Natural Regeneration (ANR)	Not applicable	Without Gap Planting	Prescription of following silvicultural operations to facilitate natural regeneration: <ul style="list-style-type: none"> <li>- High-stump cutting</li> <li>- Singling of coppice shoots</li> <li>- Climber cutting</li> <li>- Clearance of weeds</li> </ul>
ANR with Gap Planting		Gap Planting (200~ 800 t)	In addition to the above silvicultural prescriptions, gap planting/ enrichment planting of timber, fuel wood, fodder, fruit, medical and other NTFP species to be conducted.
Fuelwood and Fodder plantation	2m x 2m	2,500	Fast growing species will be planted for production of soft timber, fuel wood and fodder. Planting arrangement should ensure alternating plants of Large tree with Medium and Small tree species for formation of canopy layers in future.
NTFP plantation	5m x 5m	400	Mixed planting of NTFP species of smaller trees and larger trees on the alternate rows shall be considered. Inter cropping of NTFPs, medicinal plants grasses shall be also introduced based on desires of VSSs as well as site suitability
Other Block Plantation	2.5m x 2.5m	1,600	Plantation of timber species and other economically valuable species

Following information has been already described in 6.3.1 of this report. However, since it is important aspects to be considered during the planning and implementation of JFM treatment area interventions, re-stated here under:

For the ANR operations, following aspects shall be taken in to account upon planning.

- Natural regeneration shall also be promoted at sites where rootstock is available.
- For the gap planting, planting density, target species and operations shall be decided based on site conditions/ suitability and desires of the VSSs.
- For ANR with gap plantings, models for 400 seedlings/ ha and 800 seedlings/ ha were only provided for the cost estimate purpose and number of seedlings to be planted can be reduced/ adjusted to match with requirements by VSSs and site suitability.
- In gaps and open areas, apart from gap planting, inter cropping of NTFPs (shrub, herbaceous, grass species), fuelwood, fodder (both woody species and grass), and medicinal plants shall be also adopted based on the desires of VSSs and the site conditions of the concerned sites.
- If conditions allow, grass production shall be introduced as intercropping not only for fodder production but also to stabilise the forest floor.
- If VSSs have bamboo concentrated areas within their JFM areas or have demand for bamboo production, in principle, the same norms and practices for bamboo cultural operation/ plantation by OFD shall be applied.

**Block Plantation:**

For the block plantation operations, following aspects shall be taken in to account upon planning.

- Planting density, target species and operations shall be decided based on site conditions and desires of the VSSs.
- Procurement and production of seedlings for target species to be confirmed and arranged well in advance so that required seedlings to be available on time for planting.
- If required, planting intensity can be reduced from that of the planting density indicated above. This will allow more growing spaces for introducing grasses, shrubs and other NTFP species desired by VSS members.
- If conditions allow, grass production shall be also introduced as intercropping not for fodder production but also to stabilise the forest floor.
- If VSSs have demand for bamboo production, in principle, the same norms and practices for bamboo cultural operation/ plantation by OFD shall be applied.

## 2. Potential Species

### 1) Species for Gap Planting and Enrichment Planting in ANR areas

NTFP and medicinal plant species regarded as suitable for gap planting/ enrichment planting in different zones of Odisha is listed below. Certain numbers of species may be chosen for a site by VSSs in consideration of following factors.

- Decision and resolution of the VSS
- Shrubs and herbs of traditional utility
- Suitability for the locality considering topography, soil & climate
- Herbs/shrubs which expected to grow without extra input and merge with the existing plant community
- Herbs/shrubs which would adopt the site as its natural habitat and would regenerate annually

In addition to the NTFP and medicinal species, timber, fuel wood and fodder species indicated in the table under “2) Fuel Wood and Fodder Plantation” can be also planted in consideration of desires of VSSs, local suitability, site availability for such species.

**Table 2 Potential Species for Planting in ANR Area**

No.	Species	Family	Local Name	Utility	Habit	Growth Preference
1	<i>Amorphophallus paeoniifolius</i>	Araceae	Olua	Vegetable	Shrub	Shade tolerant
2	<i>Andrographis paniculata</i>	Acanthaceae	Bhuin nim	Medicinal	Herb	Shade tolerant
3	<i>Annona squamosa</i>	Annonaceae	Ata	NTFP	Shrub	Light demanding
4	<i>Asparagus racemosus</i>	Liliaceae	Satabari	Medicinal	Climber	Shade tolerant
5	<i>Bauhinia vahlii</i>	Caesalpinaceae	Siali	NTFP	Woody Climber	Shade tolerant
6	<i>Bixa orellana</i>	Bixaceae	Kunkum	NTFP	Shrub	Light demanding
7	<i>Celastrus paniculata</i>	Celastraceae	Pengulai	Medicinal	Climber	Shade tolerant
8	<i>Curculigo orchioides</i>	Amaryllidaceae	Talmuli	Medicinal	Herb	Shade tolerant
9	<i>Curcuma aromatica</i>	Zingiberaceae	Palua	NTFP	Herb	Shade tolerant
10	<i>Dioscorea alata</i>	Dioscoreaceae	Khamba Alu	Vegetable	Climber	Shade tolerant
11	<i>Dioscorea bulbifera</i>	Dioscoreaceae	Pita Alu	Medicinal	Climber	Shade tolerant
12	<i>Embelia ribes</i>	Myrsinaceae	Bidang	Medicinal	Shrub	Light demanding
13	<i>Eulaliopsis binata</i>	Poaceae	Sabai	NTFP	Herb	Light

No.	Species	Family	Local Name	Utility	Habit	Growth Preference
						demanding
14	<i>Gymnema sylvestre</i>	Asclepiadaceae	Gudmari	Medicinal	Climber	Shade tolerant
15	<i>Ipomoea mauritiana</i>	Convolvulaceae	Bhuin Kakharu	Medicinal	Climber	Shade tolerant
16	<i>Leptadenia reticulata</i>	Asclepiadaceae	Jivanti	Medicinal	Climber	Shade tolerant
17	<i>Momordica dioica</i>	Cucurbitaceae	Kankad	Vegetable	Climber	Shade tolerant
18	<i>Murraya koenigii</i>	Rutaceae	Bhursunga	NTFP	Shrub	Light demanding
19	<i>Operculina turpethum</i>	Convolvulaceae	Tihudi	Medicinal	Climber	Shade tolerant
20	<i>Piper longum</i>	Piperaceae	Pippali	Medicinal	Climber	Shade tolerant
21	<i>Piper nigrum</i>	Piperaceae	Golamaricha	NTFP	Climber	Shade tolerant
22	<i>Plumbago indica</i>	Plumbaginaceae	Rakta Chitaparu	Medicinal	Herb	Light demanding
23	<i>Pueraria tuberosa</i>	Fabaceae	Bidari kanda	Medicinal	Woody Climber	Shade tolerant
24	<i>Rauwolfia serpentina</i>	Apocynaceae	Sarpagandha	Medicinal	Herb	Light demanding
25	<i>Solanum nigrum</i>	Solanaceae	Kakmachi	Medicinal	Herb	Shade tolerant
26	<i>Solanum violaceum</i>	Solanaceae	DengaBheji	Medicinal	Shrub	Shade tolerant
27	<i>Thysanolaena maxima</i>	Poaceae	Phuljhadu	NTFP	Shrub	Light demanding
28	<i>Tinospora cordifolia</i>	Minispermaceae	Guduchi	Medicinal	Climber	Shade tolerant
29	<i>Uraria picta</i>	Fabaceae	Pusniparni	Medicinal	Shrub	Light demanding
30	<i>Woodfordia fruticosa</i>	Lythraceae	Dhatki	NTFP	Shrub	Light demanding

Note: The light demanding species may be planted in boundaries, road sides and in open areas.

Source: Compiled by JICA Survey Team (2016 based on existing literature and interviews from concerned stake holders.

## 2) Fuel Wood and Fodder Plantation.

Species regarded as suitable for fuel wood and fodder plantations in different zones of Odisha is listed below. About 6-9 different species may be chosen for a site by VSSs in consideration of following factors.

- Decision and resolution of the VSS
- Suitability for the locality considering topography, soil & climate
- Customary use and convenience of management
- Preferably indigenous

**Table 3 Potential Species for Fuelwood and Fodder Plantation**

No.	Species	Local Name	Utility-1	Utility-2	Habit
1	<i>Acacia auriculiformis</i>	Sunajhari	Fuel wood	Small wood	Medium Tree
2	<i>Acacia mangium</i>	Rupajhari	Fuel wood	Small wood	Medium Tree
3	<i>Acacia nilotica</i>	Babul	Fuel wood	Fodder	Small Tree
4	<i>Alangium salvifolium</i>	Ankula	Fuel wood	Fodder	Small Tree
5	<i>Albizia lebbeck</i>	Siris	Fodder	Timber	High Tree
6	<i>Albizia procera</i>	Dhala Siris	Fodder	Timber	High Tree

No.	Species	Local Name	Utility-1	Utility-2	Habit
7	<i>Anogeissus acuminata</i>	Phasi	Fodder	Timber	High Tree
8	<i>Anogeissus latifolia</i>	Dhaura	Fodder	Timber	High Tree
9	<i>Antidesma acidum</i>	Nunnunia Koli	Fuel wood	Fodder	Small Tree
10	<i>Bauhinia variegata</i>	Kanchan	Fuel wood	Fodder	Small Tree
11	<i>Bridelia retusa</i>	Kasi	Fodder	Timber	Medium Tree
12	<i>Cassia siamea</i>	San Chakunda	Fuel wood	Small wood	Small Tree
13	<i>Casuarina equisetifolia</i>	Jhaun	Fuel wood	Small wood	Medium Tree
14	<i>Chloroxylon swietiana</i>	Bheru	Fuel wood	Fodder	Medium Tree
15	<i>Cleistanthus collinus</i>	Karada	Fuel wood	Small wood	Small Tree
16	<i>Cordia macleodii</i>	Samarsinga	Fodder	Timber	Medium Tree
17	<i>Garuga pinnata</i>	Mai	Fodder	Small wood	Medium Tree
18	<i>Gmelina arborea</i>	Gahmar	Fodder	Timber	Medium Tree
19	<i>Grewia tiliifolia</i>	Dhaman	Fodder	Timber	High Tree
20	<i>Holoptelea integrifolia</i>	Dhauranj	Fodder	Timber	High Tree
21	<i>Kydia calycina</i>	Bankapasia	Fodder	Fuel wood	Small Tree
22	<i>Lagerstroemia parviflora</i>	Sidha	Fodder	Timber	High Tree
23	<i>Lannea coromandelica</i>	Raj Moi	Fodder	Timber	Medium Tree
24	<i>Premna latifolia</i>	Gandhana	Fodder	Fuel wood	Small Tree
25	<i>Samanea saman</i>	Bada Chakunda	Fuel wood	Fodder	High Tree
26	<i>Terminalia tomentosa</i>	Asan	Fodder	Timber	High Tree
27	<i>Trewia nudiflora</i>	Jandakhai	Fodder	Fuel wood	Small Tree

Source: Compiled by JICA Survey Team (2016) based on existing literature and interviews from concerned stake holders.

### 3) NTFP Plantation.

#### Possible Species:

The important NTFP and medicinal plant species of Odisha is listed below. About 6- 9 different species may be chosen for a site by VSSs in consideration of following factors.

- Species that grows well in the locality
- Customary use and convenience of management
- Produces which traditionally traded in village markets
- Combination of species to get products in various seasons of the year

**Table 4 Potential Species including Medicinal Plants for NTFP Plantation**

No.	Species	Family	Local Name	Utility 1	Utility 2	Habit	Seed Ripening
1	<i>Acacia catechu</i>	Mimosaceae	Khaira	NTFP	Small Wood	Small Tree	Jan
2	<i>Aegle marmelos</i>	Rutaceae	Bela	NTFP	Medicinal	Medium Tree	April
3	<i>Aphanamixis polystachya</i>	Meliaceae	Gilakusum	NTFP	Medicinal	High Tree	May
4	<i>Artocarpus heterophyllus</i>	Moraceae	Panasa	NTFP	Timber	High Tree	June
5	<i>Azadirachta indica</i>	Meliaceae	Neem	NTFP	Timber	High Tree	July
6	<i>Boswellia serrata</i>	Burseraceae	Salai	NTFP	Timber	High Tree	May
7	<i>Buchanania lanzan</i>	Anacardiaceae	Char	NTFP	Small	Small	April

No.	Species	Family	Local Name	Utility 1	Utility 2	Habit	Seed Ripening
					Wood	Tree	
8	<i>Calophyllum inophyllum</i>	Clusiaceae	Polanga	NTFP	Timber	Medium Tree	April
9	<i>Dalbergia latifolia</i>	Fabaceae	Rose Wood	Medicinal	Timber	High Tree	Feb
10	<i>Litsea glutinosa</i>	Lauraceae	Mosania	NTFP	Medicinal	Medium Tree	Nov
11	<i>Madhuca longifolia</i>	Sapotaceae	Mahul	NTFP	Small Wood	High Tree	June
12	<i>Morinda pubescens</i>	Rubiaceae	Achhu	NTFP	Small Wood	Medium Tree	Feb
13	<i>Oroxylum indicum</i>	Bignoniaceae	Phenphena	Medicinal	Small Wood	Medium Tree	March
14	<i>Phyllanthus emblica</i>	Euphorbiaceae	Amla	Medicinal	NTFP	Medium Tree	April
15	<i>Pongamia pinnata</i>	Fabaceae	Karanj	NTFP	Timber	Medium Tree	Jan
16	<i>Pterocarpus marsupium</i>	Fabaceae	Bija	Medicinal	Timber	High Tree	October
17	<i>Pterocarpus santalinus</i>	Fabaceae	Raktachandan	Medicinal	Timber	High Tree	Sept
18	<i>Sapindus emarginatus</i>	Sapindaceae	Ritha	NTFP	Small Wood	Medium Tree	May
19	<i>Saraca asoca</i>	Caesalpinaceae	Ashok	Medicinal	Small Wood	Medium Tree	Sept
20	<i>Schleichera oleosa</i>	Sapindaceae	Kusum	NTFP	Timber	High Tree	July
21	<i>Simarouba glauca</i>	Simaroubaceae	Simaruba	NTFP	Small Wood	Medium Tree	April
22	<i>Sterculia urens</i>	Sterculiaceae	Genduli	NTFP	Small Wood	Medium Tree	May
23	<i>Sterospermum chelonoides</i>	Bignoniaceae	Padhal	Medicinal	Timber	High Tree	Jan
24	<i>Strychnus nox-vomica</i>	Strychnaceae	Kochila	Medicinal	NTFP	Medium Tree	Jan
25	<i>Strychnus potatorum</i>	Strychnaceae	Nirmala	Medicinal	NTFP	Medium Tree	Dec
26	<i>Symplocos racemosa</i>	Symplocaceae	Lodha	NTFP	Medicinal	Medium Tree	April
27	<i>Tamarindus indica</i>	Caesalpinaceae	Tentuli	NTFP	Timber	High Tree	Feb
28	<i>Terminalia arjuna</i>	Combretaceae	Arjuna	Medicinal	Timber	High Tree	Feb
29	<i>Terminalia bellirica</i>	Combretaceae	Bahada	Medicinal	Timber	Medium Tree	Dec
30	<i>Terminalia chebula</i>	Combretaceae	Harida	Medicinal	Timber	Medium Tree	Dec

Source: Compiled by JICA Survey Team (2016) based on existing literature and interviews from concerned stake holders.

Other major NTFP/ fruit species such as Mahua (*Madhuca indica*), Mango (I), Tamarind (*Tamarindus indica*), and Amla (*Emblca officianalis*) can be also introduced based on desires of VSSs as well as site suitability

#### 4) Other Block Plantation

For barren lands with better site quality (moderate soil depth and moisture regime), timber species and other economically valuable species can be selected and planted for future timber production. Teak (*Tectona grandis*), Sisso (*Dalbergia sissoo*), Sal (*Shorea robusta*) and other species desired by VSSs and suitable for the concerned sites shall be selected.

In order to produce profits in the early years, the plantation can be mixed with bamboos (Salia :*Dendrocalamus strictus*, Daba: *Bambusa arundinaceae*) and other NTFPs medicinal species described in the following section.

### 5) Inter Cropping

For the block plantation, especially in case planting densities to be reduced from the standard density, inter cropping of medicinal herbs, agro-forestry species can be undertaken by VSSs which desire for such operation.

The National Medicinal Plant Board (NMPB) provides support for raising ex-situ plantations of medicinal plants, including as components in boundary plantations, strip plantation, agro forestry models to VSSs and SHGs. The resources of NMPB may be availed by forming clusters of adjoining VSS for intercropping (strip) and boundary planting of medicinal plants. The tables of medicinal plants suitable for intercropping and planting along boundaries are listed below. The detail farming practice of most of these plants listed has been published by National Medicinal Plants Board in ‘Agro-techniques of selected medicinal plants’, Vol. I & II; 2008.

Wherever intercropping of medicinal plants are not possible due to lack of market linkage, legumes, pulses and millets can be cultivated in the interspaces for first few years and later on, after crown development of trees, shade-bearing tuber crops can be raised. Also intercropping of broom grass, thorn broom (*Aristida setacea*), thatch grass, hill broom (*Arundinella setosa*) is options for intercropping if site conditions allow.

**Table 5 Potential Species for Inter Cropping**

No.	Species	Family	Local Name	Utility	Habit
1	<i>Andrographis paniculata</i>	Acanthaceae	Bhuin nim	Medicinal	Herb
2	<i>Asparagus racemosus</i>	Liliaceae	Satabari	Medicinal	Climber
3	<i>Bixa orellana</i>	Bixaceae	Kunkum	NTFP	Shrub
4	<i>Clerodendrum phlomidis</i>	Verbenaceae	Dankari	Medicinal	Tree
5	<i>Curculigo orchioides</i>	Amaryllidaceae	Talmuli	Medicinal	Shrub
6	<i>Curcuma aromatica</i>	Zingiberaceae	Palua	NTFP	Shrub
7	<i>Cymbopogon winterianus</i>	Poaceae	Lemon Grass	NTFP	Shrub
8	<i>Dioscorea bulbifera</i>	Dioscoreaceae	Pita Alu	Medicinal	Climber
9	<i>Embelia ribes</i>	Myrsinaceae	Bidang	Medicinal	Shrub
10	<i>Eulaliopsis binata</i>	Poaceae	Sabai	NTFP	Herb
11	<i>Gloriosa superba</i>	Liliaceae	Lahlanglia	Medicinal	Climber
12	<i>Gymnema sylvestre</i>	Asclepiadaceae	Gudmari	Medicinal	Climber
13	<i>Ipomoea mauritiana</i>	Convolvulaceae	Bhuin Kakharu	Medicinal	Climber
14	<i>Momordica dioica</i>	Cucurbitaceae	Kankad	Vegetable	Climber
15	<i>Phyllanthus amarus</i>	Euphorbiaceae	Bhuin Amla	Medicinal	Herb
16	<i>Piper longum</i>	Piperaceae	Pippali	Medicinal	Climber
17	<i>Rauwolfia serpentina</i>	Apocynaceae	Sarpagandha	Medicinal	Herb
18	<i>Tinospora cordifolia</i>	Minispermaceae	Guduchi	Medicinal	Climber
19	<i>Withania somnifera</i>	Solanaceae	Ashwagandha	Medicinal	Herb

Source: Compiled by JICA Survey Team (2016 based on following literatures and interviews from concerned stake holders.  
B. K. Swain & S. K. Dash, 2007, Visual Guide to Wild Medicinal Plants of Orissa, State Medicinal Plant Board, Government of Odisha  
H. O. Saxena & M. Brahman, 1996, The Flora Of Orissa, Odisha Forest Development Corporation Ltd.

Central Sector Scheme on Conservation, Development and Sustainable Management of Medicinal Plants, 2015,  
National Medicinal Plants Board, Ministry of Ayush, Government of India

**Table 6 Potential Species for Planting along Boundaries**

No.	Species	Family	Local Name	Utility	Habit
1	<i>Acacia farnesiana</i>	Mimosaceae	Gaya babul	Medicinal	Tree
2	<i>Annona squamosa</i>	Annonaceae	Ata	NTFP	Tree
3	<i>Caesalpinia bonduc</i>	Caesalpinaceae	Gila	Medicinal	Thorney Climber
4	<i>Lawsonia inermis</i>	Lythraceae	Manjuati	Medicinal	Shrub
5	<i>Murraya koenigii</i>	Rutaceae	Bhursunga	NTFP	Shrub
6	<i>Thysanolaena maxima</i>	Poaceae	Phuljhadu	NTFP	Shrub
7	<i>Woodfordia fruticosa</i>	Lythraceae	Dhatki	NTFP	Shrub

Source: Compiled by JICA Survey Team (2016 based on following literatures and interviews from concerned stake holders.  
B. K. Swain & S. K. Dash, 2007, *Visual Guide to Wild Medicinal Plants of Orissa*, State Medicinal Plant Board, Government of Odisha  
H. O. Saxena & M. Brahmam, 1996, *The Flora Of Orissa*, Odisha Forest Development Corporation Ltd.  
Central Sector Scheme on Conservation, Development and Sustainable Management of Medicinal Plants, 2015,  
National Medicinal Plants Board, Ministry of Ayush, Government of India

### Attachment 6.7.3 Key Principles and Processes of the Farm Forestry Component of OFSDP-II

Farm forestry is to be implemented through VSS in a cluster approach.

Each VSS, for implementation of the programme, should have at least 4 ha of area for farm forestry but not exceed more than 50 ha. For each farmer minimum area available should be 0.5 acre for block plantation and minimum of 100 plants for planting on the field bunds.

VSS will be selected on the basis of availability of fallow land, willing of the farmers for tree planting and tree based farming systems, form farmer interest groups (FIGs), SHGs or cooperatives to implement farm forestry, committing to keep and maintain the land under tree cover till the final harvest, proximity to market, no diversion of land under food crops to tree planting alone etc.

A sub-committee for planning and execution of farmer forestry shall be formed at the VSS level with a member of executive committee, member secretary, forest guards, farmer, member of NGO and also representative of industry (pulp and paper), if the VSS is promoting farm forestry of pulpwood model. The VSS will be responsible for farmers' mobilization and capacity building, formation of FIGs, SHGs etc., payment towards planting materials, transfer of incentives to farmers based on performance etc.

A cluster/VSS level plantation team will be formed by FMU chief (Range Officer) to take up planting operation.

Wherever pulpwood model will be implemented in collaboration with the pulp and paper industry, Industry will provide Quality Planting Materials (QPM) at subsidized rate, onsite technical back up, buy back arrangement, mobilization of farmers, 50 per cent of capacity building cost and bank linkages, if required.

A farmer has to apply with necessary land documents and undertaking to be part of the programme. S/he has to prepare the land and take post-plantation care. Pit digging and tree planting shall be undertaken by the Project through central planting team (CPT). In case of pulpwood model, the farmer has to sign a MoU with the industry.

Survival based incentives shall be paid to the farmer through the VSS. CPT shall visit each site for 100 % tree count and report the survival to the FMU chief and then the FMU chief will undertake 10 % sample check.

For timber/ TBO/ NTFP model:

- Survival of plants (plants growing well) in the second year should above 60 % and the incentive will be Rs. 2.5 per plant.
- Survival of plants (plants growing well) in the fourth year should above 60 % and the incentive will be Rs. 3.5 per plant.

For pulpwood model:

- Survival of plants (plants growing well) in the second year should above 60 % and the incentive will be Rs. 1.5 per plant.
- Survival of plants (plants growing well) in the fourth year should above 60 % and the incentive will be Rs. 1.5 per plant.

Hedgerow model:

- Plants growing well in the second year – above 2 km of planted hedgerows – the incentives will be Rs. 500 per km and proportion thereof.



**Table 1 Agro-forestry Models Promoted by OFSDP-I**

Zone and Divisions	Models
Zone I: Angul, Sambalpur, Deogarh, Keonjhar and Mayurbhanj	<p>Model 1 – Eucalyptus with Harida, Horse gram, Black gram, Colocasia, Yam, Groundnut, Broom grass, Til, Ragi, Maize or Teak with Colocasia, Pineapple and Ginger.</p> <p>Model 2 – Cashew or Eucalyptus with Paddy as intercrop</p> <p>Model 3 – <i>Acacia mangium</i>, Sisoo, Gambhari, Grafted Mango, Jackfruit and agricultural crops (1-3 year) – Ground nut, Arhar, Black gram and Til. After 3<sup>rd</sup> year – Pineapple, Turmeric, Ginger, Colocasia</p> <p>Model 4 - Gambhari, Sisoo, <i>Sesbania grandiflora</i>, Subabul, Bamboo. Intercropping – grass – Stylo and Dinanath.</p> <p>Model 5 – Eucalyptus and Acacia. Subabul planted along the boundary. Intercropping – Turmeric</p>
Zone II: Rourkela and Bonai	<p>Model 1 – Gambhari or Eucalyptus with Paddy and Arhar. Teak or Mango with Ginger, Arhar and Colocasia.</p> <p>Model 2 – Fodder crop along the boundary and tree crop with every 5<sup>th</sup> plant is a NTFP species. Intercropping – Groundnut, Black gram, Green gram, Til, Millets, Arhar, Ginger, Turmeric, Sweet Potato</p>
Zone III – Balliguda, Phulbani and Rayagada	<p>Model 1 – Teak with Arhar, Kandula, Til, Horse gram, Green gram, Turmeric. Teak or Cashew or Eucalyptus with Turmeric, Arhar, Kandula and Pineapple</p> <p>Model 2 – Gambhari, Grafted Cashew and Grafted Mango. Intercropping – First 10 rows - Arhar and last 10 rows – Black gram.</p> <p>Model 3 – Slope land/ Shifting cultivation areas – Above 20% slope – Bamboo. Between 10-20% slopes – Hill broom. Between 5-10% slopes – Tapioca. Below 5% of slope and plain area – Bird chilli.</p>
Zone IV – Koraput, Jeypore and Paralakhemundi	<p>Model 1 – Teak or Eucalyptus or Cashew with Niger, Ragi, Black gram, Arhar</p> <p>Model 2 – Grafted Mango/ Cashew/ Jackfruit/ Tamarind Intercropping – Maize, Arhar, Turmeric, Ginger</p> <p>Model 3 – Eucalyptus</p> <p>Intercropping – Niger, Ragi, Maize, Arhar, Turmeric, Ginger</p>
Zone V – Balasore and Bhadrak	<p>Model 1 – Bund Plantation – Acacia, Eucalyptus, Teak, <i>Sterculia foetida</i> and <i>Callophylum inophyllum</i></p> <p>Model 2 – Trees - Eucalyptus</p> <p>Intercropping – Paddy, Arhar, Green gram, Black gram</p> <p>Model 3 – Trees - Eucalyptus/ Acacia/ Chakunda – 2000 plants per ha</p> <p>Fodder – Subabul/ <i>Sesbania grandiflora</i> – 2000 plants per ha</p> <p>Agriculture crop – Groundnut, Til</p>

Source: Farm Forestry Guidelines, Nov 2012, OFSDP

## **Attachment 6.9.1 Potential IGAs for SHGs**

### **Potential Small Income Generating Activities (IGAs) for Self Help Groups (SHGs)**

#### **A: Vegetable Cultivation and Marketing**

##### **1.0 Background**

In recent years, the demand for vegetables is on an increasing trend. This increasing trend in demand is attributed to increase in income and rise in health consciousness among people. Increase in urbanization has also triggered demand for vegetables from rural areas. This has resulted in increase in price of vegetables like tomato, brinjal, cauliflower, cabbage and beans.

In rural areas, the cultivation and marketing of vegetable has emerged as a profitable livelihood activity. As cultivation of vegetable is quite labour intensive involving women taking up different intercultural operations like sowing, nursery raising, weeding, irrigating and harvesting; this could be taken up by women self help groups.

##### **2.0 Profile of Potential Small IGA**

##### **2.1 Key Activities**

The following details the key activities related to vegetable cultivation and marketing:

- Identification of potential agriculture land with access to irrigation for vegetable cultivation
- Leasing of agriculture land for specific season
- Preparation of land including ploughing and leveling
- Purchase of seed and seedlings
- Nursery raising of seedlings, as required
- Inter cultural operations like weeding, irrigating; and applying fertilizer/manure and pesticides
- Developing linkage with traders for farm gate sale
- Staggered harvesting linking to market demand
- Grading of vegetables, as required; and temporary storage at village level
- Sale at farm gate, weekly market or in nearby daily local market

Depending on demand in market, SHG may consider to focus on cultivation of one key vegetable, besides taking up cultivation of other vegetables.

##### **2.2 Marketing**

The vegetables produced could be sold in local market. Assessment of demand for vegetables in local market would be important before taking up this income generating activity. As far as possible, the timing for cultivation could be planned linking to market demand, like to be able to supply early or off season vegetables. Emphasis would be given on staggered harvesting, to be able to optimize income. There can be three approaches to marketing i.e. sale to traders at farm gate, sale in weekly market and sale in local daily market.

### 2.3 Profitability of IGA and realization of Income for SHG Member

The following details profitability of the vegetable cultivation in 1 acre and for 2 seasons spread over 1 year:

Sl. No.	Items for Expenditure	Unit	Year		
			Qty.	Rate (in INR)	Amount (INR)
<b>CAPEX (Capital Expenses in INR)</b>					
1	Fencing	LS			10,000
2	Agriculture Implements like sprayer	Nos	1	2,000	3,000
3	Baskets for Marketing	Nos	10	2,000	20,000
	<b>Sub Total – CAPEX</b>				<b>33,000</b>
<b>OPEX (Operational Expenses in INR)</b>					
1	Land leveling @ Rs 5000 per Acre	Seasons	2	5,000	10,000
2	Seeds and seedlings @ Rs.1000 per Acre	Seasons	2	1,000	2,000
3	Fertilizers and Manures @ Rs. 4500 per Acre	Seasons	2	4,500	9,000
4	Pesticides @ Rs.500 per Acre	Seasons	2	400	800
5	Irrigation	Seasons	2	4,000	8,000
6	Labour - 100 per Acre per season	Seasons	200	200	40,000
7	Depreciation on CAPEX @ 10%				3,300
	<b>Sub Total: OPEX</b>				<b>73,100</b>
	<b>Total: CAPEX + OPEX</b>				<b>106,100</b>
<b>REVENUE (in INR)</b>					
1	Farm Gate Sale	Seasons	2	15,000	30,000
2	Sale in Weekly Market	Seasons	2	40,000	80,000
3	Sale in Daily Local Market	Seasons	2	30,000	60,000
	<b>Gross Income</b>				<b>170,000</b>
	<b>Net Income: Gross Income – OPEX</b>				<b>96,900</b>

Note: As vegetables would have varying sales rate, lump sum amount has been considered

Assuming 10 members in SHG and all are involved in cultivation activities, wage income would be Rs. 4000/- (Rs.40, 000 for 10 members); and net income of Rs. 9690/- (Rs.96900 for 10 members), total increase in income being Rs. 13,690/- per SHG member per year.

### 2.4 Key Assumptions

The key assumption relating to this IGA includes:

- Access of SHG to productive agriculture land, with irrigation facility
- Prior experience of some of the members in vegetable cultivation
- Support and encouragement of villagers to take up this activity, including for buying inputs and accessing market

### **3.0 Support required from Project**

#### **3.1 Amount of Loan from VSS**

The amount of loan required would depend on size of land. However, considering capital expense of Rs.33,000/- and Rs.36,550/- of operational expense per season, the credit requirement would be Rs.69,550/- or Rs.70,000 (approx).

#### **3.2 Skill Training**

Project can impart skill training on cultivation practices involving horticulture department and/or progressive farmer. Besides this, the key SHG members can be taken on exposure visit to nearby villages to understand experience of collective vegetable cultivation; and to local market to observe and understand marketing practices.

#### **3.3 Others**

With support of horticulture department, project may consider demonstration on use of new seeds and/or following Package of Practices (PoP). Besides this, the project could facilitate linkage with trader for farm gate sale.

### **B: Goat Trading**

#### **1.0 Background**

In India, there is high demand for goat meat. Goat meat is consumed mainly in small towns and cities. Most of the consumers generally prefer fresh meat. Traditionally, poor families including some of the forest dependant households are associated with rearing of goats at village level. Poor families take up rearing of goats along with other livelihood activities like wage earning. Most of the families rear 1 to 5 goats.

Depending on need, the goat rearing families sale 1 or 2 goats to trader in weekly market and/or at village level. The trader in turn aggregate goats and sale to nearby or distant city/town based traders. With increase in communication and transportation network, there is possibility of aggregating goats at village level and selling to distant city/town based trader. As women are already associated with rearing of goats at family level, women SHGs could take up aggregation and trading of goats.

However, goat, on the other hand, is also seen as a cause of degradation of vegetation in the forest areas. Therefore, the grazing must be carefully planned and self-monitored by the SHG members.

#### **2.0 Profile of Potential Small IGA**

##### **2.1 Key Activities**

The following details the key activities related to goat trading:

- Creating awareness on relevance of collective marketing of goats at village level
- Developing linkage with distant city/town based traders
- Identifying land for construction of low cost shed
- Construction of shed using low cost material
- Purchase of goats from SHG members and non members; both within village and nearby villages
- Stall feeding of goats – for transit period from purchase till sale; purchase of feed as required
- Vaccination of goats – may depend on season, and as required
- Sale of goats to distant city/town based trader preferably at village aggregation point

## 2.2 Marketing

Developing linkage with city based trader would be important for success of this income generating activity. The women SHG involved in this activity is expected to take up role performed by local trader. As linkage with trader gets developed, it is desirable to sale the aggregated goats at village level. However, in the initial stage there may be need to transport the goats to city market for sale to city based traders.

## 2.3 Profitability of IGA and realization of Income for SHG Member

The following details profitability of the goat trading for SHGs for 1 year:

Sl. No.	Items for Expenditure	Unit	Per Year		
			Qty.	Rate (in INR)	Amount (INR)
<b>CAPEX (Capital Expenses in INR)</b>					
1	Shed	Sq. ft	300	50	15,000
2	Weighing Machine	No.	1	5,000	5,000
	<b>Sub Total - CAPEX</b>				<b>20,000</b>
<b>OPEX (Operational Expenses in INR)</b>					
1	Cost of buying Goats i.e. 20 per month X 24 cycles	Goats	480	6,000	2,880,000
2	Supplementary Feed/Fodder - Stock Size 20 Goats	Months	12	600	7,200
3	Maintenance of Shed	Months	12	200	2,400
4	Vaccination and Healthcare Expenses	Months	12	200	2,400
5	Depreciation on CAPEX @ 10 %	Year			2,000
	<b>Sub Total: OPEX</b>				<b>2,894,000</b>
	<b>Total: CAPEX + OPEX</b>				<b>2,914,000</b>
<b>REVENUE (in INR)</b>					
1	Sale of Goats	Goats	480	6,300	3,024,000
	<b>Gross Income</b>				<b>3,024,000</b>
	<b>Net Income: Gross Income - OPEX</b>				<b>130,000</b>

Assuming 10 members in SHGs involved in this group based IGA, additional income to SHG member is expected to be Rs.13,000 (Rs.130,000 for 10 members) per year. Members may have to contribute time and labor for managing the activity.

## **2.4 Key Assumptions**

The key assumptions relating to this IGA includes:

- No major spread of disease leading to death of animals
- Access to animal health care and vaccination services
- City based trader willing to buy at village level
- No delay in payment of sale proceeds by city based traders
- Support of villagers to SHG to transact the business

## **3.0 Support required from Project**

### **3.1 Amount of Loan from VSS**

The amount of capital required would be capital cost amounting Rs. 20, 000 and operational expense per batch would be Rs. 1, 20, 580. Hence credit requirement would be Rs. 140, 580/- i.e. Rs.1.4 lakh (approx).

In case SHG is able to buy goats on credit, the credit requirement can be reduced.

### **3.2 Skill Training**

Project can give exposure to key SHG members, to understand current market scenario and marketing practices. This could be done through observation and interaction with value chain actors in weekly market, trader locations and retail points.

### **3.3 Others**

The project can facilitate initial linkage with distant city/town market traders. There would be need for hand holding support for buying goats, especially from nearby villages, and for initial trading transactions. Besides this there would be need for facilitating linkage with animal husbandry department to be able to access animal health care including vaccination services. With support of animal husbandry department, orientation and training can be provided on rearing of goats.

## **C: Mohua Flower Trading**

### **1.0 Background**

Mohua tree is found on bunds of agriculture fields, common land and in forest. Most of the families in villages close to forest areas take up collection of Mohua flowers. Among NTFPs, it is one of the largest income providers to primary collectors. At family level, women are generally involved in collection of Mohua flower. The villagers, especially women collect Mohua flower and sale to agents of the local trader buying at village level.

The local trader obtains annual license from excise department to stock and trade Mahua flower. The local traders/stockists sales Mohua flowers to district/regional level traders or local country liquor shops. Mohua finally gets sold by regional level traders to traders based in Chhatisgarh, Jharkhand and Bihar. The trade of Mohua depends primarily on production during a year and also demand from neighboring States.

There is possibility of involvement of women SHGs in buying dried Mohua flowers, storing for few months and selling to licensed local trader. In fact, the SHG could take up business role performed by agents of local traders.

## **2.0 Profile of Potential Small IGA**

### **2.1 Key Activities**

The following details the key activities related to Mohua flower trading:

- Collection of Mohua flower at family level
- Proper drying of Mohua flower at family level
- SHG buying Mohua flower from SHG members and non-members

- Proper storage of Mohua flower at village level
- Regularly collecting information about market trends including price of Mohua flower in different markets
- Developing linkage with licensed traders
- Negotiation with buyer on price
- Sale of Mohua flower at village point

## 2.2 Marketing

Developing linkage with licensed city based trader would be important for success of this income generating activity. There would be need for regular collection of information on price in different markets. This would support for negotiation with trader.

## 2.3 Profitability of IGA and realization of Income for SHG Member

The following details profitability of the Mohua Flower trading for SHGs for 1 year:

Sl. No.	Items for Expenditure	Unit	Per Year		
			Qty.	Rate (in INR)	Amount (INR)
<b>CAPEX (Capital Expenses in INR)</b>					
1	Weighing Machine	1	1	2,000	2,000
	<b>Sub Total – CAPEX</b>				<b>2,000</b>
<b>OPEX (Operational Expenses in INR)</b>					
1	Purchase of Mohua Flower - 30 persons X 150 kg	Kgs	4500	20	90,000
2	Rent for Storage	Months	6	200	1,200
3	Gunny Bags	Nos	60	15	900
4	Miscellaneous including travelling	LS			500
5	Depreciation on CAPEX @ 10 %	Year			200
	<b>Sub Total: OPEX</b>				<b>92,800</b>
	<b>Total: CAPEX + OPEX</b>				<b>94,800</b>
<b>REVENUE (in INR)</b>					
1	Sale of Mohua Flower - considering 10 % weight loss	Kgs	4,050	40	162,000
	<b>Gross Income</b>				<b>162,000</b>
	<b>Net Income: Gross Income - OPEX</b>				<b>69,200</b>

Assuming 10 members per SHGs, and involvement of 6 months in this activity, the additional income per SHG members from group IGA activity comes to Rs.6,920/-.

This is besides increase in income on account of increase in collection at family level, which may be 25 % of 150 kg i.e. 37.5 kg. This would lead to increase in income of Rs. 750 per family (@Rs.20 per kg.)

## 2.4 Key Assumptions

The key assumption relating to this IGA includes:

- No major fluctuation in production of Mohua flower
- Availability of storage space at village level
- Support of local licensed trader for buying Mohua flower from SHGs
- No unexpected decline in sales price of Mohua flower

### **3.0 Support required from Project**

#### **3.1 Amount of Loan from VSS**

This capital expenses is Rs.2, 000/- and operational expense is Rs.92, 800/-. Hence loan requirement would be Rs. 94, 800/- i.e. Rs.95,000 (Approx)

#### **3.2 Skill Training**

Project could provide training on proper harvesting practices and post harvest activities like drying and storage. Awareness could be created for sales on cash basis, as in some interior places there may be prevalence of sales on kind basis.

#### **3.3 Others**

The project can facilitate linkage with local licensed trader. Besides this the project functionaries can collect market information like prevailing price in different markets and share with SHGs involved in trading. Project can also give preference for construction of village level SHG Common Facility Centre, where SHG can store Mohua flower.

### **D: Rearing of Chicks – Improved Backyard Poultry**

#### **1.0 Background**

In recent years, demand for eggs and chicken meat is on an increasing trend. The demand of eggs in Odisha is largely met by Andhra Pradesh based commercial poultry units, and demand for chicken meat is met by commercial broiler farms within and outside Odisha. However, consumers generally prefer eggs and meat of indigenous birds, which is always in high demand.

Most of the poor families in rural areas take up rearing of indigenous poultry birds as a supplementary livelihood activity. The key constraints related to rearing of indigenous poultry birds include low productivity (30 to 50 eggs per bird in a year), low hatching rate and high mortality. The high mortality is attributed to incidence of diseases and attack by predators.

In this context, there is potential for rearing of improved variety of poultry birds. Women SHG could buy day old chicks from hatchery, rear till 6 weeks and sale to women SHG members for rearing.

#### **2.0 Profile of Potential Small IGA**

##### **2.1 Key Activities**

The following details the key activities related to rearing of day old chicks and selling to SHG members as well as non-members:

- Creating awareness on rearing of improved poultry birds for eggs and meat
- Assessing potential for sale of 6 week old chicks in the village, and also nearby villages
- Construction of shed for rearing of chicks
- Buying related equipments like feeding trays and inputs like poultry feed
- Developing linkage with State farm, Central Poultry Development Organization (CPDO) or private hatchery to buy day old chicks
- Exposure and training of key SHG members on transportation and rearing of chicks
- Buying of chicks
- Vaccination of chicks
- Regular feeding and rearing of chicks
- Sale to women SHG members and others with in village and nearby villages

##### **2.2 Marketing**

As there is demand for eggs and meat of improved backyard poultry birds, families already involved in rearing of traditional birds would be interested to take up this rearing activity. At individual family level, 5-10 birds could be reared. However, it is difficult to get small number of chicks, as it is not locally available.



It is also equally difficult to rear 1 day old chicks, and hence demand for 6 week old chicks, as chances of mortality would be low.

Hence with creation of awareness and orientation about this activity, the market for 6 week old chicks could be created. Women SHG involved in this activity can plan to sale chicks to their SHG members and non members both within and outside the village.

### 2.3 Profitability of IGA and realization of Income for SHG Member

The following details profitability of the rearing chicks for SHGs for 1 year:

Sl. No.	Particulars	Unit	1 Year		
			Qty.	Rate (in INR)	Amount (INR)
<b>CAPEX (Capital Expenses in INR)</b>					
1	Shed	Nos	1	10,000	10,000
2	Water Trays, Feeding Trays, etc	LS			4,000
3	Weighing Machine	Nos	1	1,000	1,000
	<b>Sub Total - CAPEX</b>				<b>15,000</b>
<b>OPEX (Operational Expenses in INR)</b>					
1	Cost of Chicks - 6 batches @ 200 per batch	Chicks	1,200	10	12,000
2	Cost of Supplementary Feed for Chicks	Chicks	1,200	10	12,000
3	Vaccination Expenses	Chicks	1,200	8	9,600
4	Healthcare Expenses	LS			4,000
5	Maintenance Expenses of Shed	Months	12	200	2,400
6	Depreciation on CAPEX @ 10%				1,500
	<b>Sub Total: OPEX</b>				<b>41,500</b>
	<b>Total: CAPEX + OPEX</b>				<b>56,500</b>
<b>REVENUE (in INR)</b>					
1	Sale of 6 Weeks Old Chicks - 90 % Survival Rate	Chicks	1,080	90	97,200
	<b>Gross Income</b>				<b>97,200</b>
	<b>Net Income: Gross Income - OPEX</b>				<b>55,700</b>

Assuming 10 members in SHGs, and considering Rs.55, 700 as net profit, this activity has potential to generate additional income of Rs. 5570 per member per family.

Besides this, there would be additional income as some of the SHG members would be taking up rearing of birds at family level.

### 2.4 Key Assumptions

The key assumption relating to this IGA includes:

- Promotion of improved backyard poultry as IGA in planned manner; No aggressive promotion leading to oversupply in the market, and finally leading to fall in market price
- Predators are in control, and not seriously affecting rearing of birds
- Active involvement of some of the key members in SHGs as rearing of chicks need personal care
- Incidence of diseases not affecting rearing of birds
- Hatcheries are able to supply day old chicks. There is no major difficulty at their level like getting mother birds and incidence of disease
- Basic technical backstopping and extension services available locally
-

### **3.0 Support required from Project**

#### **3.1 Amount of Loan from VSS**

The capital expenses is estimated to be Rs.15,000/- and operational expense of Rs.6917 per batch. Hence loan requirement would be Rs. 21, 917/- i.e. Rs.20,000 (approximate).

#### **3.2 Skill Training**

The project can create awareness among women SHG members on the potential of rearing improved backyard poultry birds as an IGA. Interested members can be sent on exposure visit to nearby villages where rearing of improved backyard poultry is in practice. As required, training on rearing of improved poultry birds and chicks can be imparted at village level.

Once potential SHGs keen on taking up rearing of chicks are identified, special training on rearing of chicks can be imparted to key members, by developing linkage with Animal Husbandry department.

#### **3.3 Others**

Besides credit and skill training, other support required includes:

- Identifying potential SHGs keen on taking up this activity
- Support in developing Business Plan
- Developing linkage with Government scheme, to be able to expand business
- Facilitating linkage for credit, as required
- Support for construction of shed, including its design
- Support for sale of chicks in different villages, mainly introducing SHGs taking up this activity to SHGs in other villages
- Facilitating linkage for purchase of chicks and feed
- Support for transportation of chicks
- Facilitating initial sale of chicks
- Basic technical backstopping and extension services

## **E: Sal Leaf Plates Trading**

### **1.0 Background**

There is predominance of Sal forest in Odisha. The primary collectors collect Sal leaves from forest and prepare Sal leaf plates and cups. The primary collectors sell Sal leaf plates to local traders who further take up 'binding' into bundles. The local traders further sale to licensed trader at town level. Some proportion of Sal leaf plates are made "round cutting" and also processed as "press leaf plates".

In recent years, there has been decline in demand for Sal leaf plates i.e. mainly press Sal leaf plates. This is due to availability of substitute products like plates made of paper, paper boards and thermocol. However, the demand for Sal leaf plates prepared by primary collectors is likely to continue in future. Broad analysis and experience of implementation of OFSDP 1 project indicates scope for women SHG taking up aggregation, binding (as required) and collective marketing of Sal leaf plates, currently performed by local traders.

### **2.0 Profile of Potential Small IGA**

#### **2.1 Key Activities**

The following details the key activities related to trading of Sal leaf plates:

- Create awareness on sustainable harvesting practices
- Promoting close stitching, production of large size leaf plates at primary collector level
- Create awareness on proper drying and temporary storage

- Develop linkage with key market license traders
- Collect information on prevailing market price in different markets
- Negotiate with trader on price of purchase, including preferably lifting stock from village point
- Purchase of Sal leaf plates from members as well as non-members in the village
- Binding of Sal leaf plates
- Storage of Sal leaf plate bundles
- Sale to license trader

## 2.2 Marketing

Developing market linkage, preferably with traders at key trading places would be important to start this activity. At times, it may be required to sale to regional/city based trader. SHG involved in this IGA may require initial support of key informants at village level and project personnel to transact business.

## 2.3 Profitability of IGA and realization of Income for SHG Member

The following details profitability of trading of Sal leaf plates by SHG for 1 year:

Sl. No.	Items for Expenditure	Unit	Per Year		
			Qty.	Rate (in INR)	Amount (INR)
<b>CAPEX (Capital Expenses in INR)</b>					
1	Weighing Machine	1	1	2,000	2,000
	<b>Sub Total – CAPEX</b>				<b>2,000</b>
<b>OPEX (Operational Expenses in INR)</b>					
1	Purchase of Sal Leaf Plates - 8 cycles X 40 Persons X 30 Bundles	Small Bundles	9,600	20	192,000
2	Cost of Binding	Big Bundle	960	5	4,800
3	Rent for Storage	Months	4	200	800
4	Miscellaneous including travelling	LS			500
5	Depreciation on CAPEX @ 10 %	Year			200
	<b>Sub Total: OPEX</b>				<b>198,300</b>
	<b>Total: CAPEX + OPEX</b>				<b>200,300</b>
<b>REVENUE (in INR)</b>					
1	Sale of Sal leaf Plates	Leaf Plates	960	240	230,400
	<b>Gross Income</b>				<b>230,400</b>
	<b>Net Income: Gross Income – OPEX</b>				<b>3,2100</b>

Assuming 10 members per SHGs, and involvement of 4 months in this activity, the additional income per SHG members comes to Rs.3,210/-.

With access to market linkage, there would be 50 % increase in collection of Sal leaves. This amounts to Rs. 96,000/- for 40 persons i. e. Rs 2,400 per person or SHG member.

## 2.4 Key Assumptions

The key assumption relating to this IGA includes:

- Availability of quality Sal leaves, preferably at short distance from village
- Unsustainable harvesting practices not affecting availability of Sal leaves
- There is no sudden decline in demand for Sal leaves
- SHG is able to develop long term relationship with traders operating at key trading points

- Capacity to sustain loss in some trading transactions; Being trading activity, there could be loss in some transactions and profit in other transactions.

### **3.0 Support required from Project**

#### **3.1 Amount of Loan from VSS**

This capital expenditure is estimated to be Rs.2, 000/- and operational expense per cycle of Rs.24, 788/-. Hence loan requirement is estimated to be Rs. 26, 788/- i.e. Rs.27, 000 (Approx).

#### **3.2 Skill Training**

At SHG level, skill training on proper binding of Sal leaf plates would be required. There will be also need for orientation and training on negotiation skill and marketing. At primary collector level, quality requirements expected by buyers like close stitching, production of large leaf plates (14” – 16”), proper drying and storage could be promoted through orientation and training.

#### **3.3 Others**

It would be important for project to identify potential traders and link them with SHGs keen on taking up this trading activity. The project personnel may need to support SHG for execution of initial cycles of business. Besides this project can consider constructing drying yard and SHG Common Facility Centres at village level that can be used by the primary collectors and SHGs.

## **Attachment 6.9.2 Draft Terms of Reference for LRC Staff**

### **Terms of Reference (ToR) for Staff of Livelihoods Resource Centre (LRC)**

#### **1. Background**

In OFSDP 2, there would be efforts for promotion small Income Generating Activities (IGAs) involving women Self Help Groups (SHGs). Project would provide support for strengthening SHG as an institution, business planning, credit and market linkage. As at SHG level, it would be difficult to take up processing, bulk marketing and retailing of products, the project envisages promotion of product clusters which would involve:

- Formation and strengthening of producer organizations,
- Market assessment and value chain study,
- Developing business plan for producer organizations,
- Support for infrastructure and equipments,
- Revolving fund assistance and
- Facilitating market linkage.

As such efforts would require long term professional support, during and beyond the project period it is proposed to set up a Livelihoods Resource Centre (LRC).

#### **2. Objective**

The overall objective of LRC would be to provide long term support for promotion and strengthening of product clusters. It would help SHGs to traverse the business growth trajectory.

#### **3. Structure**

Initially, the LRC would be set up within PMU, to look after promotion of product clusters and also support small IGA promotion through SHGs. It would have 5 members team of professionals comprising of team leader and team members related to themes like finance & credit, market linkage, fund raising/CSR and R & D. The team members would have prior experience in managing and promotion of enterprises preferably in private sector.

Since inception, the LRC would be guided by an Advisory Committee comprising senior functionaries of OFSDS, other line departments and persons of repute having experience in promotion of clusters and producer organizations.

The functions and activities of LRC would be guided by a business plan. Initially, the business plan would be developed for 3 years by LRC team, with facilitation of a senior consultant. In 4th year, there would be an evaluation of performance of LRC that would determine its future institutional arrangement and functions.

#### **4. Functions**

The following would be some of the key functions of LRC:

- Identify potential product clusters based on value chain studies
- Support partner organizations in formation and strengthening of producer organizations
- Support developing by-laws and registration of producer organizations  
Support producer organizations to be able to access grant support under other schemes of Government
- Develop business plans for producer organizations
- Facilitate market linkage by identifying potential bulk buyers like private companies and distant market traders
- Support in retail marketing to producer organizations including brand promotion and direct retailing
- Organize trade fair, exhibitions, product conclaves, etc for promotion of products produced by producer organizations
- Facilitate provision of revolving fund assistance to producer organizations
- Additionally provide credit assistance to deserving producer organization from corpus fund
- Develop linkages for producer organizations to be able to access loan from Banks and financial institutions
- Identify requirement of equipments for processing and packaging
- As required, organize specialized training including skill training and exposure visit for promotion of product clusters
- Develop products through R & D in collaboration with research organizations

Each product cluster would involve 1000 SHG members, spread across 100 women SHGs in 50 villages. There would be two persons to support promotion of product clusters. They would work under the guidance of LRC.

Besides promotion of product clusters, LRC would guide partner NGOs engaged at FMU level for promotion of small IGAs, more specifically on skill training and market linkage.

#### **5. Sustainability**

The following could be potential options for long term sustainability of LRC.

##### **Option 1**

OFSDS can continue to support LRC for implementation of livelihood activities in different projects.

##### **Option 2**

OFSDS can provide basic operating cost like premises and utilities. The LRC can generate its own revenue from potential income sources.

##### **Option 3**

LRC may become a separate legal entity, preferably profit making company and continue to provide services in business mode.

The following could be potential sources of income for LRC:

- Fee for facilitating registration of producer organizations,
- Fee for developing business plan of producer organizations,
- Interest on lending to producer organizations from corpus fund,
- Market linkage fee for linking with bulk buyers,
- CSR fund,
- Fund for investment through crowd sourcing,
- Training and handholding services,
- Consultancy services,
- Grant from other schemes and projects and
- Raise funds by participating in bids related to enterprise development.

## **6. Job Description of the LRC Staff**

### **1.0 Operations (Partnership/ Business Planning/ Quality Control)**

#### **1.1 Scope of Work**

- Overall responsible for mandate of LRC including its day to day functioning and envisaged targets, activities and deliverables
- Support, supervise and monitor activities of Managers of LRC
- Execute activities related to partnership, business planning and quality control
- Report to State Program Manager, Livelihoods and Advisory Committee for LRC

#### **1.2 Job Description**

- Identify potential product clusters based on value chain assessment studies
- Support partner organizations in formation and strengthening of producer organizations
- Develop business plan for Livelihoods Resource Centre (LRC), with support of external Consultant and other team members
- Organize periodic Advisory Committee Meeting of LRC and support in review of business plan
- Identify and develop partnership with potential product specific resource organizations
- Develop ToR related to execution of specific tasks by LRC and/or through other resource organizations
- Support producer organizations in the area of institution development including framing of by-laws, registration and legal compliance
- Monitor contracts and activities of resource organizations and others, including supporting and monitoring of staff recruited by Resource Organizations for different clusters
- Responsible for quality control of products and services executed by LRC
- Develop tools for assessment of producer organizations and support for assessment of producer organizations
- Conduct capacity building of staff of DMU, resource organizations and partners organizations for institutional development of producer organizations
- Support in development of business plan for producer organizations
- Support in development of guidelines for promotion of IGAs through SHGs
- Assist in organizing Annual Workshop related to IGA

- Participate in different workshops and seminars to share experience of project related to cluster development
- Support in evaluation of LRC

### **1.3 Qualification**

- Post Graduation in Management or any other relevant discipline
- At least 15 years of experience of managing and/or promoting enterprises, preferably in private sector; Preference for prior experience in cluster development
- Proficiency in use of computers including MS Office
- Preferably proficient in Oriya language

## **2.0 Manager, Finance & Credit Linkage**

### **2.1 Scope of Work**

- Support to producer organizations to be able to access capital for doing business
- Responsible for management of finance and accounts of LRC
- Responsible for management of Corpus Fund of LRC
- Report to Program Manager, LRC

### **2.2 Job Description**

- Assist in development of business plan of producer organizations
- Develop linkages with Banks and Financial Institutions to enable producer organizations to access credit
- Develop guideline for sanction of revolving fund assistance of project to producer organizations
- Develop linkages for producer organizations to be able to access loan from Banks and financial institutions
- Develop linkages with other Government departments providing credit subsidy assistance to producer organizations
- Support producer organizations to be able to access capital subsidy assistance of other Government departments
- Facilitate provision of revolving fund assistance to producer organizations
- With support of other team members, develop guideline for management of corpus fund of LRC
- Conduct appraisal for credit assistance to deserving producer organization from corpus fund
- Facilitate the linkage between the private sector and cluster level organizations
- Support DMUs, Resource Organizations and NGO Partner Organizations in execution of their activities, mainly related to assisting CBOs to be able access to credit
- Conduct capacity building of personnel associated with promotion of clusters related to credit and financial linkage theme
- Participate in State level meetings, workshops and seminars related to financial linkage to CBOs
- Contribute to development of business plan of LRC
- Support in development of guidelines related to revolving fund assistance to SHGs for taking up small IGAs



## **2.3 Qualification**

- Post Graduation in Management or any other relevant discipline
- At least 7 years of experience related to managing enterprises or enterprise development, of which preferably 3 years experience related to financing enterprises and/or promoting access of CBOs like producer organizations to credit services
- Proficiency in use of computers including MS Office
- Preferably proficient in Oriya language

## **3.0 Manager, Value Chains & Marketing**

### **3.1 Scope of Work**

- Support producer organizations to be able to have sustained market linkage for bulk marketing to private companies and/or long distance big traders
- Responsible for execution of value chain assessment studies
- Report to Program Manager, LRC

### **3.2 Job Description**

- Develop linkage with potential bulk buyers including private companies and/or long distant big traders; including opportunities for export
- Develop Terms of Reference (ToR) for market assessment and value chain studies
- Execute value chain and market assessment studies
- Identify requirement of equipments for processing and packaging; and support producer organizations for purchase of such equipments
- As required, organize specialized training including skill training for promotion of product clusters
- Support in retail marketing to producer organizations including brand promotion and direct retailing
- Identify and develop linkages for exposure visit to successful clusters; and support for organizing exposure visits
- Organize trade fair, exhibitions, product conclaves, etc for promotion of products produced by producer organizations
- Support producer organizations related to legal compliance for marketing
- Support DMUs, Resource Organizations and NGO Partner Organizations for market linkage of producer organizations
- Support in development of approaches for facilitating local marketing for small IGAs through SHGs
- Conduct capacity building of personnel associated with promotion of clusters related to value chain assessment and marketing
- Contribute to development of business plan of LRC

### **3.3 Qualification**

- Post Graduation in Management or any other relevant discipline
- At least 7 years of experience related to managing enterprises or enterprise development, of which preferably 3 years experience related to marketing and/or facilitating market linkage for CBOs like producer organizations

- Proficiency in use of computers including MS Office
- Preferably proficient in Oriya language

#### **4.0 Manager, R & D and Product Development**

##### **4.1 Scope of Work**

- Identify potential ideas for product development
- Responsible for development of new products including niche market products through R & D
- Report to Program Manager, LRC

##### **4.2 Job Description**

- Visit LRC supported product clusters to be able to identify potential ideas for product development
- Participate in exhibitions and workshops to generate ideas for niche products
- Develop linkages with potential R & D institutions, more specifically with relevant persons in the R & D institutions
- Regularly collect information and develop understanding on ongoing R & D efforts, including launching of new products in the market
- Develop Terms of Reference (ToR) for product development through R & D Institutions
- Monitor contracts of LRC with R & D organizations
- With support of Manager, Marketing take up test marketing of new products developed through R & D
- Regularly support in improvement of processing of product clusters
- Support producer organizations to be able to get required quality certifications of products and process
- Support Manager, Marketing for purchase of equipments for processing for producer organizations
- Support Manager, Marketing for execution of activities related to skill training for master trainers and members of producer organizations
- Contribute to development of business plan of LRC

##### **4.3 Qualification**

- Post Graduation in Management or any other relevant discipline
- At least 7 years of experience related to research and product development, preferably related to products likely to be supported through product clusters
- Proficiency in use of computers including MS Office

#### **5.0 Manager, Fund Raising and CSR**

##### **5.1 Scope of Work**

- Responsible for fund raising for LRC
- Mobilize CSR support for LRC
- Report to Program Manager, LRC

## **5.2 Job Description**

- Develop linkages with private companies and CSR foundations for mobilization of financial assistance for CSR
- Provide content related to mobilizing CSR support to be posted in project website
- Develop linkages with Government departments supporting promotion of product clusters
- Formulate project proposal for mobilization of grant and/or loan assistance in line with business plan of LRC
- Scout business opportunities related to consultancy services for LRC
- Develop proposals including follow up for participation in bidding opportunities
- With support of other team members, responsible for execution of contracts related to successful bids for consultancy services to be provided by LRC
- Contribute to development of business plan of LRC
- Develop cost norms and/or financial proposals for different services of LRC including services to producer organizations

## **5.3 Qualification**

- Post Graduation in Management or any other relevant discipline
- At least 7 years of experience related to enterprise development, of which preferably 3 years experience in fund mobilization or providing management consultancy services
- Proficiency in use of computers including MS Office

## **Attachment 6.9.3 Value Chain Assessment**

### **A. Hill Broom Grass Value Chain**

#### **1.0 Background**

Hill grass grows on the hilly slopes of the forest. In context of Odisha, it is mainly found in forest land of Rayagada and Koraput district. The terrain and climatic condition supports growth of hill grass. In Odisha, the average length of grass grown ranges from 45-52 inches. The quantity and quality of product depends on monsoon. The inflorescence of the hill grass plant is used to prepare brooms. The brooms are used for sweeping the floor. Hill grass collection is one of the major sources of livelihoods for tribal people.

The major market for hill brooms is southern States in India. North East States (mainly Assam) is major supplier of hill brooms in India. The hill broom obtained from Assam is coarse and brittle, while the material obtained from Koraput is silky soft and flexible. The stem of hill grass obtained from Koraput is strong. Hence, the broom obtained from Koraput is preferred for its quality. However, the Assam variety has advantage of being longer size, and entering the market earlier (Jan – Feb) than brooms obtained from Koraput. The consumers generally prefer long brooms. In recent years, degradation of forest has affected availability of hill grass. The efforts for cultivation of hill grass started. This would lead to increase in availability of hill grass, there by supporting livelihood of forest dependant families.

#### Production of Hill Brooms

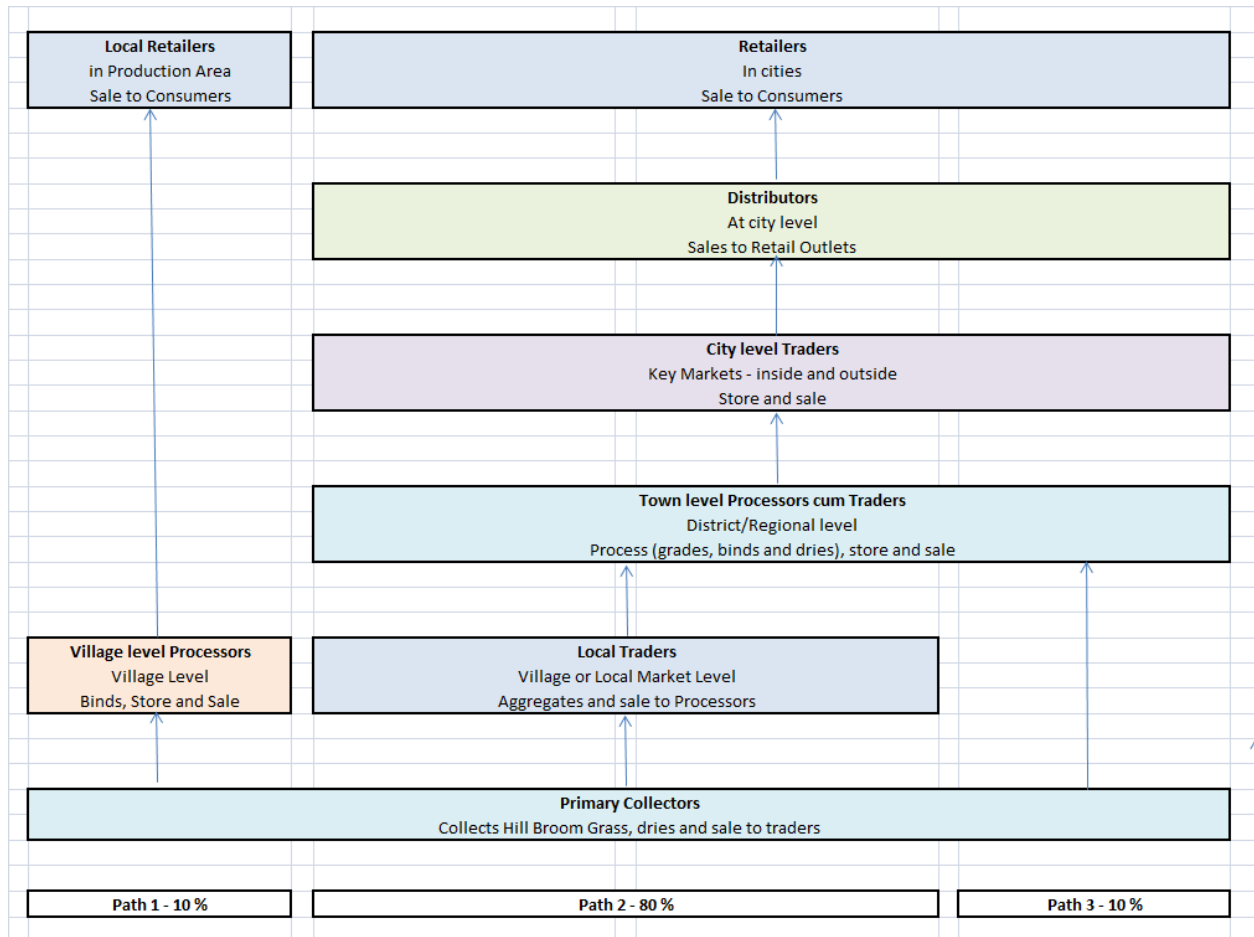
It is important to harvest matured hill grass of appropriate length having minimum moisture. The hill grass needs to be dried in shade for few days. Drying hill grass in single layer ensures proper drying of hill grass. Based on length, the hill grass is graded into 3 groups i.e. less than 42 inches, more than 42 inches and less than 45 inches; and 45 inches and above. Based on buyer requirement, 350 or 450 gm grass is weighed for production of broom. The handle part is tied with plastic binding wire with appropriate tension on both starting and ending part of broom handle. Usually, starting and end part is tied by iron wire. The expertise for binding is acquired through skill training and practice. After proper binding, plastic pipe is inserted to handle with appropriate trimming. The cost of binding is Rs 6 per broom. It takes approximately 20 minutes to bind one broom. The cost of binding wire is Rs.120 per kg, which can be used to bind 800 brooms. The finished broom may be further dried in shade for half day, to reduce chances of fungus attack and ensure longer life. The finished broom is further packed in polythene (with one side open) to enhance its look. It is desirable to store finished broom in well ventilated room, to be able to avoid contact with moisture.

#### **2.0 Hill Broom Grass Value Chain**

The primary collectors collect hill grass from forest. In case of cultivation of hill grass, the producer harvests the hill grass. The hill grass is dried and stored. The primary collectors' sale dried hill grass to village based traders, who in turn sale to city based processors cum trader. In some cases, there is also direct sale by primary collectors to city based processors cum trader. Some of the primary collectors may be selling local level processors producing hill brooms to be sold in local or weekly

market. The city based processors cum trader in turn sale to distant market traders. The distant market further sale finished hill brooms through city based distributors and their retail network.

The following details the value chain flow diagram of hill broom value chain:



### 3.0 Actors and Activities

The following table summarizes the key actors in the value chain and activities performed by them:

Actors	Activities
Primary Collectors	<ul style="list-style-type: none"> <li>• Travels to forest early in the morning; Women are mainly involved in this activity</li> <li>• Collects hill grass from forest in the month of January – February; Usually, one person is able to collect 5 -10 kg of hill grass per day</li> <li>• Cuts stalks of the plant and carry head load of hill grass to village</li> <li>• Dries hill grass on roof tops and roads</li> <li>• Sells dried hill grass to village level trader</li> <li>• In some cases, loosely binds the hill grass and sells to village level traders; Generally practiced in case of 10 % of hill grass; or in 10 % of villages</li> <li>• Some of the women make brooms (binding in Siali and sale in local market and/or weekly market</li> <li>• In Kandhamal, primary collectors get Rs. 30 per kg of dried hill</li> </ul>

Actors	Activities
	broom grass. About 4 brooms can be made from 2 kg dried hill broom grass.
Village level Traders	<ul style="list-style-type: none"> <li>• Buys dried hill grass from primary collectors on weight basis</li> <li>• In some cases, incidence of sale of loose hill grass on mutha basis i.e. amount of broom that can be hold in one hand. Usually, 1 mutha of broom weighs 1.5 kg</li> <li>• Sometimes traders buy bulk bundles from primary collectors, without measuring it</li> <li>• The village level trader sale dried hill grass to town level processors cum trader and makes a margin of Rs. 4 – Rs. 5 per kg.</li> </ul>
Village level Processors	<ul style="list-style-type: none"> <li>• Buys from hill grass collectors</li> <li>• Produce hill broom</li> <li>• Sale to local retail outlets</li> </ul>
Town level Processors cum Traders	<ul style="list-style-type: none"> <li>• Buys brooms from village level traders</li> <li>• In some cases, directly buys hill grass from primary collectors</li> <li>• Meets cost of transportation and labor (loading &amp; unloading)</li> <li>• Take up processing of hill brooms</li> <li>• Sales finished brooms to wholesalers</li> <li>• Sales broom at Rs.40- Rs.45 per broom</li> </ul>
City level Traders	<ul style="list-style-type: none"> <li>• Buys hill broom from town level processors cum traders</li> <li>• Sale to distributors</li> </ul>
Distributors & Retailers	<ul style="list-style-type: none"> <li>• Distribute hill brooms at city level</li> </ul>

#### 4.0 Constraints and Opportunities

The following table details constraints and opportunities faced in different stages of the value chain:

Stages in VC	Constraints	Opportunities
Collection of hill grass	<ul style="list-style-type: none"> <li>• Travelling long distance for collection of hill grass</li> <li>• Reduction in availability of hill grass</li> <li>• Cutting long stalks (6 ft instead of 3.5 ft) to be able get more weight</li> <li>• Require timely collection from forest as delay in collection lead to emergence of flowers</li> </ul>	<ul style="list-style-type: none"> <li>• Promoting sustainable harvesting practices like harvesting short stalks and on timing of harvest</li> <li>• Promote cultivation of hill brooms involving SHGs, VSSs and individual HHs</li> </ul>
Production of hill grass	<ul style="list-style-type: none"> <li>• Lack of access to land to take up collective cultivation</li> <li>• Free grazing affecting hill broom cultivation</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitate access of SHG to productive land</li> </ul>
Drying & Storage	<ul style="list-style-type: none"> <li>• Primary collectors not following practice of sorting and grading of hill grass</li> <li>• Unavailability of place for drying in shade</li> <li>• Inadequate place for storage</li> </ul>	<ul style="list-style-type: none"> <li>• Construction of drying yards and storage place</li> <li>• Promoting sales on weight basis</li> </ul>
Transportation	<ul style="list-style-type: none"> <li>• Loss of weight during transportation</li> </ul>	<ul style="list-style-type: none"> <li>• Proper drying at village level</li> </ul>
Processing	<ul style="list-style-type: none"> <li>• Lack of skill for making proper broom</li> <li>• Primary collectors using various quality of grass to make broom, affecting final quality of broom</li> <li>• Primary collectors making brooms do not bind properly, as required by consumers</li> </ul>	<ul style="list-style-type: none"> <li>• Potential to train primary collectors for binding of hill brooms</li> <li>• Promote division of labor and small group based production; small group dealing with grading and binding</li> </ul>
Marketing	<ul style="list-style-type: none"> <li>• Lack of market orientation of primary collectors for value addition</li> </ul>	<ul style="list-style-type: none"> <li>• Demand for hill broom throughout year</li> <li>• Promotion of brands for hill brooms</li> </ul>

Stages in VC	Constraints	Opportunities
	<ul style="list-style-type: none"> <li>• Low price of broom in monsoon season</li> <li>• Low price broom available from North East India</li> <li>• Early arrival of hill brooms from North East India</li> <li>• Emergence of plastic broom likely to affect demand for hill broom</li> </ul>	

## **5.0 Potential Interventions**

### **5.1. Proposed Activities**

The proposed activities for developing Hill Grass Value Chain include:

#### **Marketing**

- Exposure visit of key persons of producer organization
- Facilitation of market linkage with distributors
- Support for participation in exhibitions
- Working capital support for storage of hill grass and finished hill brooms
- Support to producer organization for branding and market promotion
- Product development linking to waste material (shorter grass) and exploring market opportunity

#### **Collection**

- Preparation of manual for sustainable harvesting practices
- Awareness and training on sustainable harvesting practices

#### **Production**

- Facilitate availability of seedlings of hill grass for cultivation
- Facilitate access to land for SHGs to be able to take up collective production of hill grass
- Promote cultivation of hill broom grass. It is a 5 – 7 year crop. Usually, the harvest of hill broom grass in 1<sup>st</sup> year is low. In subsequent years, the harvest increases.
- Prepare Package of Practices for cultivation hill grass; If the crop is cut at root level, and also on burning, the hill broom grass comes up next year.
- Support for fencing and facilitation of process for watch and ward

#### **Skill Training**

- Identification of right resource person for skill training
- Skill training to women SHG members for binding of hill brooms

#### **Infrastructure**

- Support for drying yard at village level
- Construction of storage space at village and cluster level

#### **Institution Development**

- Promote and strengthen producer organizations involving women primary collector
- Support for business plan development and implementation
- Support in book keeping and accounts

- Facilitate linkages with other Government departments and other organizations to leverage support
- Facilitate bank linkage to be able to access working capital
- Support registration and legal compliance including tax related issues

## 5.2 Cost Estimates

The cost estimates for covering 1000 farmers across 5 sub clusters in 20 villages is detailed below:

Sl No	Particulars	Unit	Qty	Cost - Rs.	Amount - Rs.
<b>1</b>	<b>Infrastructure Development</b>				
	Drying Yards - 1 per village	Nos	20	20,000	400,000
	Village level storage place - 200 sq ft - in 10 villages	Nos	10	300,000	3,000,000
	Weighing Machines	Nos	20	20,000	400,000
	Common Facility Centre - 1 per cluster (1000 sq ft)	Nos	1	1,500,000	1,500,000
	Equipment like weighing machines, storage racks, etc	Lump sum			60,000
<b>2</b>	<b>Skill Training</b>				
	Sustainable Harvesting Practices 1 day each - 5 Sub Clusters X 2 times X 3 Years	Trainings	30	15,000	450,000
	Exposure Visit	Nos	1	30,000	30,000
	Skill Training on binding of Brooms - 2days each - 5 Sub Clusters X 1 time	Trainings	5	30,000	150,000
<b>3</b>	<b>Cultivation of Hill Broom Grass</b>				
	Developing Package of Practices for Hill Broom Grass Cultivation - Prof Fees	Persondays	15	7000	105,000
	Inputs for demonstration of Package of Practices - 20 Villages X 1 Demonstration X 3 Years	Demonstrations	60	10,000	600,000
<b>4</b>	<b>Market Linkage</b>				
	Developing Market Linkage with Distributors and/or Traders - Prof Fee	Persondays	30	7,000	210,000
<b>5</b>	<b>Working Capital</b>				
	One time Revolving Fund Assistance - Rs.900 per member - Rs.30 per Kg X 5 Kg X 60 days; for 1000 members				900,000
<b>6</b>	<b>Coordination and Facilitation</b>				
	Professional Fee - for 3 years	Months	36	40,000	1,440,000
	<b>Total</b>				<b>9,245,000</b>

## 5.3 Key Assumptions

The following are some of the key assumptions related to proposed interventions:

- Market for hill broom is not affected by alternate product like broom made of plastic fiber
- Availability of nursery seedlings for cultivation of hill grass
- Cultivation of hill grass emerging as profitable cash crop from alternate land use perspective
- Large distributors willing to buy hill broom from producer organizations



## **B. Medicinal and Aromatic Plants (MAP) Value Chain**

### **1.0 Background**

Medicinal and Aromatic Plants (MAP) are widely available in forests of India. The collection and value addition of MAP products has potential to enhance livelihood of forest dwellers. In Odisha, different MAP products are available like Amla in Dec-Feb, Harida in Nov – April, Bahada in Nov – April, Dhatki flower in Feb – April, Satabari in Nov – Jan and Vidarikand in Nov – Jan.

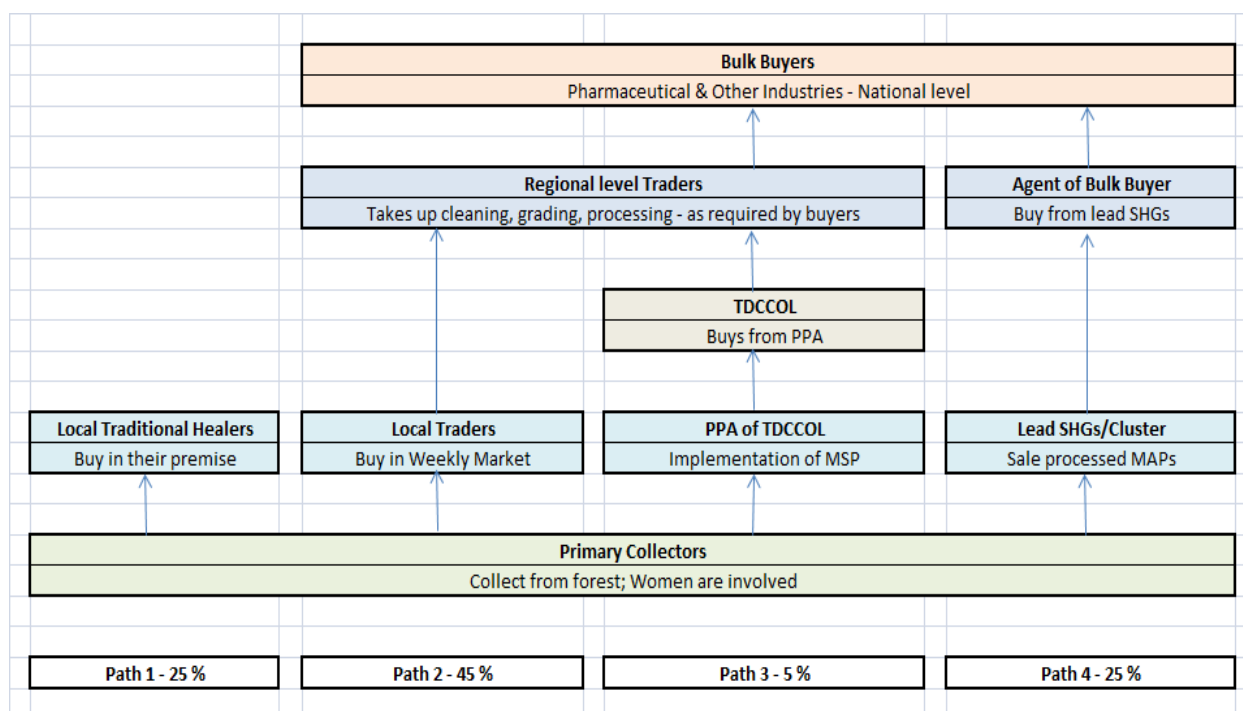
In recent years, some of the MAPs have been domesticated like plantation of Amla and cultivation of Satabari. The medicinal herbs and parts of different MAPs like flowers, fruits, seeds and roots are used by local traditional medicine practitioners. Over the years, the use of MAP products has also increased in pharmaceutical and other industries.

### **2.0 MAP Value Chain**

Traditionally, forest dwellers collect MAP products from nearby forest and sale to local traditional medicine practitioners. With increase in demand for MAP products from pharmaceutical and other industries, the supply chain for MAP products has also evolved. The bulk buyers, usually procures the raw materials through designated agents, who may be regional level trader. Such bulk buyers often require specific quality of MAP products. The agents of bulk buyers buy through local traders. The local traders in turn buy MAP products from primary collectors in weekly markets.

As both demand and supply (linked to availability) of MAP products fluctuates widely, the MAP value chain is considered to be quite dynamic value chain. The value chain is associated with both underutilization and over exploitation of MAP products. Sometimes primary collectors are able to get good income vis a vis their efforts, and in other context they are not able to get commensurate minimum wage income vis a vis their effort in collection of MAP products.

As the value chain is quite dynamic it is difficult to assess the proportion of MAP product movement in different paths related flow of MAP products in different paths may be viewed as indicative, which may need to be assessed through systematic study. The following details the MAP value chain diagram, broadly in context of Odisha.



### 3.0 Actors and Activities

The following table summarizes the key actors in the value chain and activities performed by them:

Actors	Activities
Primary Collectors	<ul style="list-style-type: none"> <li>Collects MAP products from forest</li> <li>As required by buyer, takes up post harvesting activities like cleaning, drying and grading</li> <li>Temporary store the MAP produces</li> <li>Sale to traditional medicine practitioners and/or local traders in weekly market</li> </ul>
Traditional Medicine Practitioners	<ul style="list-style-type: none"> <li>Traditional medicine practitioners buy MAP products from primary collectors</li> <li>Usually, transactions happen at place of traditional medicine practitioners</li> <li>Process the MAP products, as required</li> <li>Use the processed products for treatment</li> </ul>
Local Traders	<ul style="list-style-type: none"> <li>Takes license for collection from local GP</li> <li>Buy MAP products from primary collectors in weekly markets</li> <li>Temporarily store the produce</li> <li>Sales to regional level trader</li> <li>Meets cost of transportation</li> </ul>
Regional Market Traders	<ul style="list-style-type: none"> <li>Often function as agent of bulk buyers</li> <li>Buys MAP products from local traders</li> <li>Takes up further value addition activities like grading, sorting to meet requirement of bulk buyer</li> <li>Sales to bulk buyer</li> </ul>
Bulk Buyers	<ul style="list-style-type: none"> <li>Utilize MAP products to prepare medicinal and other products</li> </ul>

### 4.0 Constraints and Opportunities

The following table details constraints and opportunities faced in different stages of the MAP value chain:

Stages in VC	Constraints	Opportunities
Collection	<ul style="list-style-type: none"> <li>• Reduction in availability MAPs</li> <li>• MAP products are available in small quantities across different villages</li> <li>• Lack of information on availability of product</li> <li>• Increase in involvement of labor</li> <li>• Tedious effort in collection leads to drudgery for women. Women are generally associated with collection of MAPs</li> <li>• Fluctuation in price of MAP products (Buyers Market)</li> <li>• Less number of persons involved in collection</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of sustainable harvesting practices through demonstration and training</li> <li>• Use of equipment in collection process</li> <li>• Take up regeneration effort</li> <li>• Take up plantation effort</li> </ul>
Post Harvest	<ul style="list-style-type: none"> <li>• Manual processing is quite cumbersome; need for R &amp; D for development of user friendly equipment</li> </ul>	<ul style="list-style-type: none"> <li>• Use of equipment in post harvest and value addition activities</li> <li>• Opportunity for R &amp; D related to developing value addition equipment</li> </ul>
Storage	<ul style="list-style-type: none"> <li>• Contact with moisture leads to fungus attack</li> <li>• Infestation by insect</li> </ul>	<ul style="list-style-type: none"> <li>• Need for drying yard</li> <li>• Proper storage facility with racks</li> </ul>
Marketing	<ul style="list-style-type: none"> <li>• Practice of sale on approximation basis and transaction on kind payment basis – in some areas</li> <li>• Bulk buyers not giving firm orders to traders affecting the supply chain</li> <li>• At time of actual sale transaction, buyers demand higher quality specification of products, which was not expected by primary collectors</li> <li>• Difficult to plan for organized marketing due to uneven geographic spread of availability of MAPs and varying harvesting season in different geographies</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of sale on weight basis; and cash sale</li> <li>• Develop long term market linkage with bulk buyers</li> <li>• Promote standardization of product quality; and healthy norms and practices in market transaction</li> </ul>

## 5.0 Potential Interventions

### 5.1. Past Initiative under OFSDP 1

The proposed activities relate to past initiative taken up in OFSDP 1 project. In 2011, Dabur, a major pharmaceutical company initiated collection of Dhatki with support of OFSDP project. During 2012-14, the initiative was expanded to 30 VSSs across 6 DMUs for regeneration and 8 DMU for trading activity. After completion of OFSDP 1, it continued with efforts of Baitarani Initiative. Till date, about 80 tons of processed MAP products have been purchased under this initiative. This is equivalent to 250 tons of raw product. This includes 32.7 tons of Amla, 22.685 ton of Bahada, 7.265 ton of Harida, 17.385 ton of Dhatki, 27 kg of Dhatki and 171 kg of Vidarikand. This accounts to 4.223 tons of MAP products valued at Rs. 1.5 Lakh per aggregating SHG, 267 kg valued at Rs.10, 000 per village.

### **Case Study of Chhuriabahal Village; Barkote Range; Deogarh District – Based on Field Visit**

There are 42 households in Chhuriabahal village. There are 3 women SHGs functioning in the village i.e. Jagruti, Makara and Do Maa Shakti SHGs. Jagruti group, supported by Makara group took up business of MAP products with Dabur through Baitarani Initiative. They collected MAP products from their members and non members who may be from the village and/or neighboring villages. Dabur has been purchasing MAPs like Harida, Bahada, Dhatuki and Satabari for last 3 years. Earlier and even now, these products were purchased on a very limited scale by local traditional healers. There was also incidence of purchase by Balam (local market) based trader, who was selling to regional level traders at Kuchinda and Bhojpur.

Once Harida or Bahada is plucked, it is dried for 4-5 days, after which the seed is removed. The deseeded dried fruit is further dried and stored in gunny bags in racks. Deseeding is a cumbersome process, and at times during deseeding process, the finger may get damaged. During field visit women shared drudgery associated with this activity. Machine costing Rs.45, 000 is available for deseeding. However, the SHG members are not aware about its functioning and place where it is available. The processing of Harida and Bahada was partly done by SHG members and partly was done in group mode. On drying 1 kg of Harida or Bahada becomes 700 gm; and on deseeding of 1 kg of dried fruit, the yield is 700 gm. In current year, price of dried Harida was Rs.5 per kg, Bahada was Rs.4 per kg and Dhatki was Rs.20 per kg.

Many a times, the Harida and Bahada fruit get damaged when it hits stone on the ground. In case, the Bahada fruit is infested by insects, it tends to get further infested. Such infestation process is less in case of Harida. Meanwhile, Baitarani Initiative has imparted training on harvesting practices and on post harvesting practices like deseeding. Earlier women use to collect Harida from floor of trees and now after training, they are following suggested plucking method. The local traditional healer has been involved in training programs organized by the Baitarani Initiative and earlier by OFSDP 1 project.

During current year, Dabur purchased 135 kg of deseeded Harida, 261.3 kg of deseeded Bahada, 62.5 kg of Dhatki flower and 800 gm of Satabari. In case of deseeded Harida, SHG members were offered Rs.20 per kg in 1<sup>st</sup> year and Rs 20 in 2<sup>nd</sup> year. In 3<sup>rd</sup> year, deseeded Harida was sold to Dabur at Rs.25.50 per kg. During this year, deseeded Bahada was purchased from members at Rs.20 per kg, and sold to Dabur at Rs.22.10 per kg. During previous year, the price for deseeded Bahada was Rs.18 per kg. At times there was delay in lifting of stock by Dabur, thereby affecting quality of fruits. In case of long duration storage, it is desirable to store MAP fruits packed in sacks on racks, than putting on floor. According SHG members, it is desirable to have drying yards at hamlet/village level, and their own storage space for storing at least 2 truck loads in the storage space.

Although Satabari is available in forest, it has been difficult to process to get desired quality. The removal of skin and maintaining appropriate color is quite cumbersome process. However, in some villages of Riamal block people are able to process good quality Satabari using bamboo and warm water. The price of processed Satabari is Rs. 106 per kg. Earlier people use to sale raw Satabari at Rs.25 – Rs.30 per kg. The Kuchinda based trader was also purchasing at Rs.30 – Rs.40 per kg. There was incidence of one local trader selling to Jharsuguda and Raipur based trader. Meanwhile, the VSS in the village has taken up plantation of Satabari, in 1.5 acre of VSS assigned area. The field was ploughed 2 times prior to planting. The VSS purchased the seedling from traditional healer. The seedlings of Satabari are not available in central nursery of forest department. Meanwhile, the plants

have grown and can be harvested in future years. According to villagers, it is easy to cultivate Satabari plants, as these are less prone to browsing by goats and cows.

In case of Dhatki flower, it is dried for 1 day in half shade. After 2 days it is winnowed to remove the leaves, and finally it is stored in bags. SHG members find it difficult to get required quantity of Dhatuki flower. The Dhatuki flower needs to be optimally dried. The color of Dhatuki fades away with excessive drying.

TDCCOL has designated one Herbal Producer Group, promoted by NRLM as Primary Procurement Agency (PPA). It has 186 members covering 12 villages. The PPA was expecting A grade quality 'with seed Harida' which was difficult for villagers to supply. In case of Dabur, the quality requirement was relatively low. The network of TDCCOL for implementation of MSP is yet to be functional on wider scale.

Discussion with SHG members reveals involvement of women in collection of the MAP items. Sometimes, children assist in collection process. As part of Dabur initiative, with part time involvement of 10 days, SHG members could sale up to Rs. 500 to Rs.1000 worth of MAP products. This is considered to be additional income at family level. During this year, Ms. Ragini Pradhan of Jagruti SHG could sale Rs. 300 worth of Dhatki flower. Ms Tulasi Choudhury, SHG member could sale Rs.150 worth of Dhatki flower. Similarly, Saudamini Pradhan, Secretary of her SHG could sale Rs.300 worth of Dhatki and Rs.150 worth of deseeded Harida.

## **5.2 Proposed Interventions**

In line with experience of market linkage with Dabur in OFSDP 1, similar initiative could be taken up during implementation of the OFSDP 2 project. The specific activities could be:

### **Marketing**

- Study assessment of availability of MAP products in Odisha
- Identify potential bulk buyers including Dabur
- Facilitate and operationalise market linkage with institutional buyers
- Facilitate linkage with PPA; also facilitate so that producer organization could function as PPA
- Support producer organizations to be able to participate in e-tendering process related to disposal of MAP products procured under MSP scheme by TDCCOL; Also include advocacy for preferential bidding policy supporting producer organizations
- Develop linkage with regional level traders for sale of 'tamarind with seed'
- Support in packing and storage
- Promote brand for sale through retail outlets and exhibitions

### **Plantation**

- Support for nursery raising
- Support for plantation at individual and community level

### **Collection and Post Harvest Activities**

- Hand holding support for sustainable harvesting practices
- Ensure timely harvesting of produce
- Identify proven technology and equipment for harvesting and deseeding
- Support for appropriate post harvesting practices like drying and storage

### Skill Training

- Skill training would cover plantation, harvesting, post harvesting and processing
- Developing Package of Practices (PoP) related to plantation of MAPs
- Training and demonstration on PoP for plantation of MAPs
- Identifying best practices related to harvesting, post harvest and processing of MAPs
- Developing MAP specific manuals for harvesting, post harvesting and processing
- Skill training on harvesting and post harvest to primary collectors
- Skill training to persons likely to be involved in processing at cluster and/or lead SHG level
- Identify potential resource persons; training and exposure of resource persons
- Skill training on harvesting and post harvest operations to primary collectors

### Infrastructure

- Provision of drying yard at village level
- Storage space at village level
- Provision for processing equipment, packing facility at cluster and/or lead SHG level
- Provision of common facility centre including storage space and drying yard at cluster and/or lead SHG level

### Institution Development

- Mobilizing CSR support from leading companies like Dabur
- Formation of producer organization, and its registration
- Support for legal compliance including on aspects related to tax
- Support to lead SHGs and producer organizations for development of business plan
- Provision of working capital for lead SHGs and producer organizations
- Facilitating access to working capital including bank linkage for business
- Facilitating linkage for seeking subsidy assistance including for planting medicinal plants under schemes of other Government departments
- Hand holding support for implementation of business plan
- Facilitating linkage of SHGs and producer organizations with VSSs, other departments and market related value chain actors

### 5.3 Cost Estimates

The cost estimates for covering 1000 farmers across 5 sub clusters in 20 villages is detailed below:

Sl No	Particulars	Unit	Qty	Cost - Rs.	Amount - Rs.
1	<b>Infrastructure Development</b>				
	Drying Yards - 1 per village	Nos	20	20,000	400,000
	Village level storage place - 200 sq ft - 5 sub clusters/lead SHG level	Nos	5	300,000	1,500,000
	Common Facility Centre - 1 per cluster (1000 sq ft)	Nos	1	1,500,000	1,500,000
	Equipment for processing (deseeding), weighing, etc	Sub Clusters	5	100,000	500,000
	Nursery Development for MAP - land preparation, fencing, etc	Sub Clusters	5	80,000	400,000
	Assistance for Demonstration of plantation of MAPs - 1 Acre per village	Acres	20	10,000	200,000
2	<b>Skill Training</b>				
	Developing Package of Practices for key MAPs	MAPs	3	150,000	450,000
	Developing MAP specific Manuals for harvesting, post harvest and processing	MAPs	5	100,000	500,000
	Production Practices - 1 day each - 5 Sub Clusters X 2 times X 3 Years	Trainings	30	15,000	450,000

SI No	Particulars	Unit	Qty	Cost - Rs.	Amount - Rs.
	Harvesting Practices 1 day each - 5 Sub Clusters X 2 times X 3 Years	Trainings	30	15,000	450,000
	Post Harvesting & Processing Practices - 1 day each - 5 Sub Clusters X 1 time X 3 Years	Trainings	15	15,000	225,000
	Skill Training on Processing	Trainings	5	40,000	200,000
<b>3</b>	<b>Market Linkage</b>				
	Facilitating Institutional/Bulk Buyers Market Linkage - 3 linkages X 15 person days	Person days	45	7,000	315,000
	Support for sale through retail outlets	Person days	15	7,000	105,000
	Support for legal compliance	Person days	10	7,000	70,000
	Study on assessment of availability of MAPs in Odisha	Lump sum			1,000,000
<b>4</b>	<b>Working Capital</b>				
	One time Revolving Fund Assistance - Rs.600 per member - Rs.20 per kg X 30 kg; for 1000 members	Lump sum			600,000
<b>5</b>	<b>Coordination and Facilitation</b>				
	Professional Fee - for 3 years	Months	36	40,000	1,440,000
	<b>Total</b>				<b>1,0305,000</b>

#### 5.4 Key Assumptions

The following are some of the key assumptions related to proposed interventions:

- Steady long term demand for MAP products from pharmaceutical and other industry
- Continuance of market linkage with key bulk buyers
- Natural disasters like drought not affecting availability of MAP products
- Efforts for plantation being successful from cultivation and economic viability point of view
- Access to equipment for reduction of drudgery associated with harvesting and processing activities

## C. Siali Leaf Value Chain

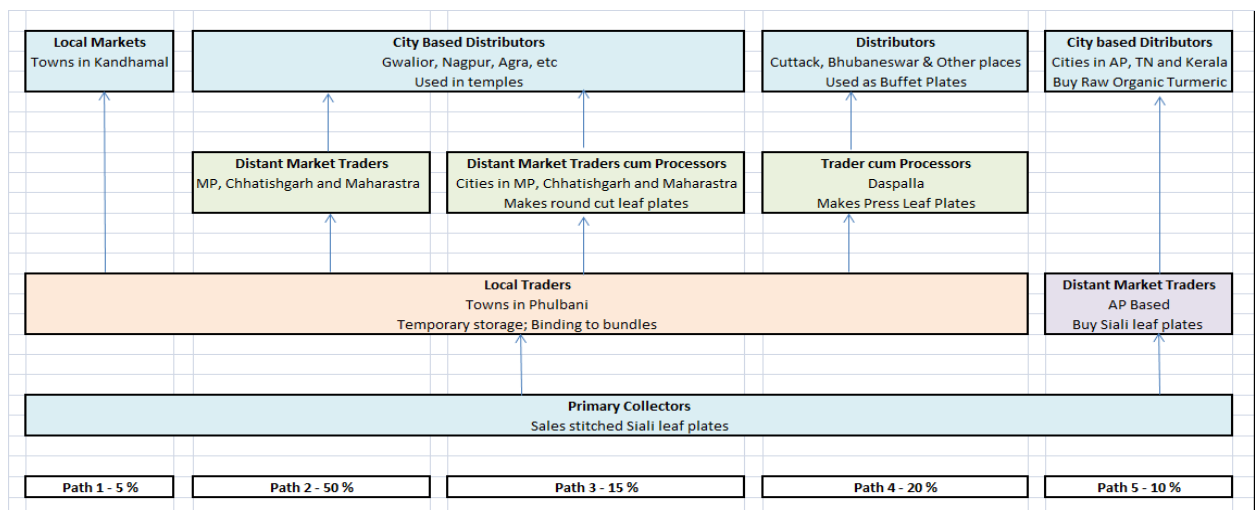
### 1.0 Background

Siali, is a creeper that grows mostly in Sal forests of Odisha, Chhatisgarh, Madhya Pradesh and parts of Andhra Pradesh. The moisture content in Sal forest is conducive for growth of this creeper. Availability of Siali is seasonal in nature. Siali leaves are known for its size, texture and durability. Hence, it is preferred as raw material for making Siali leaf plates and bowls for serving food. The leaf plates are made from clean, dry, green, thick and big leaves. The damaged leaves are used in pan and flower shops. The loose leaves are used in hotels for serving snacks.

The predominant product made from Siali leaves include Siali leaf plates. The leaf plates manually stitched could be rough stitched, medium stitched and close stitched. There are also machine stitched leaf plates which are stitched using sewing machine. Besides this there is also production and use of press moulded leaf plates. Poor and tribal families residing in villages close to forest get involved in collection of Siali leaves, prepare hand stitched Siali leaf plates and cups; and sale in the local market. At family level, women are associated with this activity. Women are able to take up this as full time or on part time basis. Women associated with this activity are able to get ‘off season cash income’, when agriculture based wage earning opportunity is not available.

### 2.0 Siali Leaf Value Chain

The primary collectors collect Siali leaves from forest and make Siali leaf plates. The local trader obtain license from GP to be able to buy Siali leaf plates. The local traders buy Siali leaf plates both from individuals and SHGs spread across 25 villages. The quality of Siali leaf plates are judged by ‘not having holes’, extent of drying and preferred size of 15 inch or 16 inch. The local traders sale to traders in other places of Odisha like Berhampur and Daspalla; or distant market traders outside the State. The distant market trader, may further take up ‘round cutting’ of leaf plates, to enhance the look. Some of the traders get into production of press leaf plates used for serving buffet food in feasts. The trader or trader cum processors further sales in the market through distributors and retailers. The following details the value chain flow diagram in context of Kandhamal district:





#### 4.0 Actors and Activities

The following table summarizes the key actors in the value chain and activities performed by them:

Actors	Activities
Primary Collectors	<ul style="list-style-type: none"> <li>Collects leaves from forest</li> <li>Stitch leaf plates and cups</li> <li>Dry the leaf plates and cups</li> <li>Makes bundle of 80 plates</li> <li>Store the leaf plates, till marketing</li> <li>Carry leaf plates to local market and sale to trader</li> <li>At times, sale to trader visiting the village or sale in weekly market; prevailing price is Rs.13 per 80 plates</li> </ul>
Local Trader	<ul style="list-style-type: none"> <li>Obtain license from GP for purchase of Siali leaves</li> <li>Buys leaf plates from primary collectors</li> <li>Bounds the leaf plate small bundles into big bundle</li> <li>Temporarily store the bundles for 4-6 days, till one truck load lot is generated</li> <li>Sale to distant market trader; In case it is key market like Daspalla which is within the State the buyer meets the transportation cost</li> <li>Sale at Rs.18 per 80 plates excluding transportation cost</li> </ul>
Distant Market Traders	<ul style="list-style-type: none"> <li>Place order with local traders for buying leaf plates</li> <li>Alternatively, through agents visit villages for buying of Siali leaf plates</li> <li>Makes payment on delivery of leaf plates</li> <li>Sale to distributors at Rs.20- Rs40 per 80 plates; depends on cost for transportation</li> </ul>
City based Distributors	<ul style="list-style-type: none"> <li>Buys from the trader; At times, trader may be Distant market trader who may be also performing role of distributor</li> <li>Stock the leaf plates</li> <li>Sale to retailers in the city</li> </ul>
Retailers	<ul style="list-style-type: none"> <li>Sale to HH and Bulk Consumers</li> <li>Retail sale to consumers at Rs. 40 to Rs.50 per 80 plates</li> </ul>
Distant Market Traders cum Processors	<ul style="list-style-type: none"> <li>Buys Siali leaf plates from local traders</li> <li>Buys card boards as required</li> <li>Install machines for making press leaf plates and/or cups</li> <li>Employs local people to make press leaf plates</li> <li>Take up round cutting of Siali leaf plates</li> <li>Pack finished products in polythene</li> <li>Sale press leaf plates to distributors at Rs. 220 per 100 plates</li> </ul>

#### 5.0 Constraints and Opportunities

The following table details constraints and opportunities faced in different stages of the value chain:

Stages in VC	Constraints	Opportunities
Harvesting of Leaves	<ul style="list-style-type: none"> <li>Unavailability of leaves in nearby forest areas due to deforestation</li> <li>Harvesting of immature leaves</li> <li>Unsustainable practice of plucking leaves like pulling and cutting the creeper</li> <li>Highly perishable resource</li> </ul>	<ul style="list-style-type: none"> <li>Promoting sustainable harvesting practices</li> <li>Grading of leaves at time of harvesting</li> <li>Supporting regeneration of creeper</li> </ul>
Production	<ul style="list-style-type: none"> <li>Urgent need for cash lead to distress sale</li> <li>Efforts for plucking and production leaf plates not compensating opportunity loss of wage income</li> </ul>	<ul style="list-style-type: none"> <li>Production of close stitch leaf plates</li> <li>Production of machine stitched leaf plates</li> </ul>

<b>Stages in VC</b>	<b>Constraints</b>	<b>Opportunities</b>
Post Harvest	<ul style="list-style-type: none"> <li>• Improper drying practices leads to wastage of leaves</li> <li>• Lack of space for drying</li> <li>• Lack of space for storage at village level</li> <li>• Lack of awareness on market scenario including price in different market</li> </ul>	<ul style="list-style-type: none"> <li>• Scope for sorting and grading</li> <li>• Introducing price linked to size of Siali leaf plates and other quality aspects</li> <li>• Skill training in binding of leaf plate bundles to support aggregation at community level</li> </ul>
Processing	<ul style="list-style-type: none"> <li>• Availability of alternate products like thermocol buffet plates</li> <li>• Unavailability of skilled manpower for round cutting</li> </ul>	<ul style="list-style-type: none"> <li>• Skill training for round cutting of leaf plates</li> <li>• Skill training for press leaf plates</li> </ul>
Marketing	<ul style="list-style-type: none"> <li>• Ignorance about quality requirement in market</li> <li>• Primary collectors lack negotiation skill for marketing</li> <li>• Lack of space for storage near weekly market, to be able to store Siali leaf plates</li> <li>• Fear factor developed relating likely decline in price, thereby sale at low price</li> </ul>	<ul style="list-style-type: none"> <li>• Developing direct linkage of community with distant market buyers</li> <li>• Market linkage with institutional buyers like religious institutions</li> <li>• Aggregation and collective marketing at village level</li> <li>• Promotion of brands</li> <li>• Exploring potential for other use of Siali leaves</li> </ul>

## **6.0 Potential Interventions**

### **6.1. Proposed Activities**

The proposed activities for developing Turmeric Value Chain include:

#### **Marketing**

- Support SHGs and Producer Organizations to obtain license for trading from Gram Panchayat
- Enhancing access to market information like quality and price offered in different markets
- Facilitate aggregation and collective marketing by SHGs to trader in distant market
- Facilitate linkage with institutional buyers like religious institutions
- Exploring opportunity for new product development and marketing; including alternate use of existing products

#### **Preproduction, Production and Post Harvest Activities**

- Orientation of VSS to focus on regeneration of Siali creeper, while protecting the assigned forest
- Developing manual on sustainable harvesting practices
- On the field observation and hand holding support related to best practices of sustainable harvesting, post harvest and production activities

#### **Skill Training**

- Training to SHG members on sustainable harvesting practices
- Training to primary collectors on post harvest practices like hygienic drying and grading
- As per market linkage, skill training on close stitching, round cutting and machine stitching
- Skill training on press leaf plate making

#### **Infrastructure**

- Construction of drying yards
- Construction of storage space in villages and near weekly markets
- Provision of stitching machine, press leaf plate making machine, weighing machine as per business plans of producer organizations

#### **Institution Development**

- Formation of producer organization, and its registration
- Support for legal compliance including on aspects related to tax
- Support to SHGs and producer organizations for development of business plan
- Provision of working capital for producer organizations
- Facilitating access to working capital including bank linkage for business
- Hand holding support for implementation of business plan
- Facilitating linkage of SHGs and producer organizations with VSSs, other departments and market related value chain actors

## 6.2 Cost Estimates

The cost estimates for covering 1000 farmers across 5 sub clusters in 20 villages is detailed below:

Sl No	Particulars	Unit	Qty	Cost - Rs.	Amount - Rs.
<b>1</b>	<b>Infrastructure Development</b>				
	Drying Yards - 1 per village	Nos	20	20,000	400,000
	Village level storage place - 200 sq ft - in 10 villages	Nos	10	300,000	3,000,000
	Common Facility Centre - 1 per cluster (1000 sq ft)	Nos	1	1,500,000	1,500,000
	Press Leaf Plate and Leaf Cup Machines	Lump sum			150,000
	Other equipment like weighing machines, round cutting equipment, etc	Lump sum			80,000
<b>2</b>	<b>Skill Training</b>				
	Sustainable Harvesting Practices 1 day each - 5 Sub Clusters X 2 times X 3 Years	Trainings	30	15,000	450,000
	Post Harvesting Practices - 1 day each - 5 Sub Clusters X 1 time X 3 Years	Trainings	15	15,000	225,000
	Skill Training on close stitching and round cutting - 2 days each - 5 Sub Clusters X 1 time	Trainings	5	30,000	150,000
	Use of Press Plate Making Machines - 3 days each - 5 Sub Clusters X 1 time	Trainings	5	45,000	225,000
<b>3</b>	<b>Market Linkage</b>				
	Market Study for Institutional Market Linkage	Lump sum			400,000
<b>4</b>	<b>Working Capital</b>				
	One time Revolving Fund Assistance - Rs.600 per member - Rs.20 per bundle X 2 bundles per day X 15 days; for 1000 members				600,000
<b>5</b>	<b>Coordination and Facilitation</b>				
	Professional Fee - for 3 years	Months	36	40,000	1,440,000
	<b>Total</b>				<b>8,620,000</b>

## 6.3 Key Assumptions

The following are some of the key assumptions related to proposed interventions:

- Acceptance of consumers to use Siali leaf plates; as preference over thermocol plates
- Increase in awareness among consumers to use biodegradable leaf plates
- VSS willing to support regeneration of Siali leaves in assigned forest
- Institutional buyers including religious institutions proactively developing long term business engagement with producer organizations
- Access to 3 phase electricity connection to be able to use press leaf plates making machines
- Supportive policy for procurement and marketing of Siali leaves and related products

## **D. Tamarind Value Chain**

### **1.0 Background**

Tamarind is an important tree found in India. The fruit pulp of tamarind is sweetish and/or acidic in taste. The fruit pulp is used for preparation of curries, chutneys, sauces, soups and pickles. The States of Odisha, Andhra Pradesh, Tamil Nadu and Maharashtra are major production centers of tamarind in India. Tamarind is grown in forests, inside villages, common land, on bunds of agriculture fields and also grown in orchards. In Odisha, tamarind is mainly found inside villages, common land and bunds of agriculture fields; and also to some extent in forest.

Usually, tamarind trees grow slowly, and in 10-15 years young tree begins to bear seed pods. The tamarind tree continues to bear fruit up to 60 years. It takes 6-8 months for seed pod to reach mature stage. The fruits are pods of 5-16 cm long and 2 cm broad, curved or straight with rounded ends. The pod has an outer epicarp i.e. scaly; and light grey or brown in color. A full grown tree produces 2 quintals of tamarind. As tamarind is prone to attack by beetles and fungi, it is desirable to harvest mature fruits and store in cool condition. The collection of tamarind starts in the month of Feb- March and continues till June. Each pod contains 1-12 seeds. Seed could be flattened, glossy and rhomboid shape. The seed size varies and could be 320, 700 or 1000 per kg of tamarind.

In Odisha, tamarind fruit of long staple grade is available, which is suitable for preparing deseeded tamarind. The AGMARK has specified standards for seedless tamarind which is as follows:

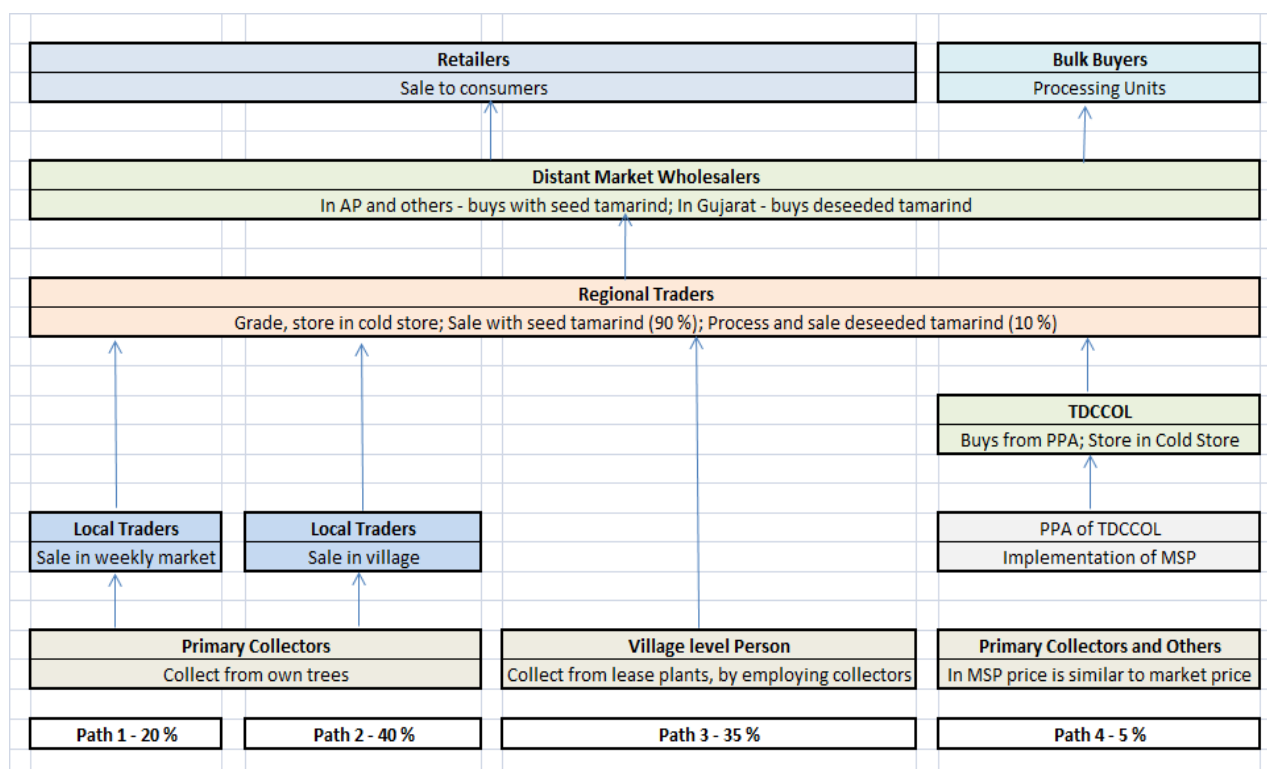
<b>Parameters</b>	<b>Special quality standard</b>	<b>Standard A</b>
Moisture	15%	17%
Seed	10%	5%
Organic foreign Matter	4%	6%
In-organic foreign matter	1%	1.5%

### **2.0 Tamarind Value Chain**

The primary collectors collect tamarind from own trees or leased trees. In tribal areas of south Odisha, there is practice of purchase of tamarind trees, before the season or on onset of flowering in trees. Usually, a village based collector or trader staying in the village purchase the tree. The primary collectors sales 'with seed tamarind' to local traders who visit the village. There is also incidence of sale in weekly markets. The local trader sales collected tamarind to regional level traders.

The regional traders may store tamarind in cold store. Depending on price scenario, the regional trader supplies to wholesalers in consumption cities mainly in Andhra Pradesh and Gujarat; and also Kolkotta in West Bengal. The city based wholesalers finally sale to consumers through retailers.

The following details the value chain diagram tamarind value chain:



### 3.0 Actors and Activities

The following table summarizes the key actors in the value chain and activities performed by them:

Actors	Activities
Primary Collectors	<ul style="list-style-type: none"> <li>Collects tamarind from month of Feb- March to June</li> <li>During good production season, one person by working from 7 AM to 4 PM may be able to collect 30-50 kg of tamarind</li> <li>Male members of the primary collector family climb up the tree, and either shake the branches or beat them using a long stick</li> <li>Women and children are involved in collection of tamarind from the ground</li> <li>If tamarind fruits are dried on the tree, de-shelling (removing the shell from pulp) is done immediately on ground by beating with a small stick</li> <li>If tamarind fruit are not dried, 1 day sundry is given and then de-shelling is done.</li> <li>Fiber is removed and tamarind is finally cleaned</li> <li>Tamarind is dried on roof top and/or in courtyard</li> <li>About 10 man days are required to handle 10 quintals of tamarind</li> <li>Primary collector sales to traders visiting the village or in weekly market. The prevailing price is Rs.22 per kg</li> </ul>
Local Trader	<ul style="list-style-type: none"> <li>Buys tamarind with seed from village or weekly market</li> <li>Packs tamarind in bags, and store for few days</li> <li>Sale 'tamarind with seed' to regional level traders</li> <li>Meets transportation cost</li> <li>Gets small margin in trading of tamarind</li> </ul>
Regional Market Traders	<ul style="list-style-type: none"> <li>Buys tamarind from local traders</li> <li>In some cases, grade the produce for quality</li> <li>Quality relates to size, color and free from infestation</li> <li>Stores tamarind in cold store, on hiring basis; The prevailing hiring charges per season is Rs. 145 per quintal</li> <li>Depending on demand sale to city based wholesalers</li> <li>In some cases, take up deseeding of tamarind</li> </ul>
City based Wholesalers	<ul style="list-style-type: none"> <li>Buys tamarind from regional market level traders</li> <li>Sale to retailers and bulk buyers</li> </ul>
Retailers	<ul style="list-style-type: none"> <li>Sale to consumers</li> </ul>

#### 4.0 Constraints and Opportunities

The following table details constraints and opportunities faced in different stages of the value chain:

Stages in VC	Constraints	Opportunities
Collection	<ul style="list-style-type: none"> <li>Practice of sale/leasing of plants</li> <li>Difficulty to harvest tamarind from top branches, risk of falling</li> <li>Delay in harvesting may affect quality</li> <li>Fluctuation in market price</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of MSP for 'with seed tamarind'; Selling to PPA appointed by TDCCOL</li> <li>Competition among value chain players lead to getting better price at village level</li> <li>Local traders offering similar or better price at village level compared to weekly market</li> </ul>
Post Harvest	<ul style="list-style-type: none"> <li>At times rain lead to increase in moisture content</li> <li>High moisture content lead to discoloration of tamarind</li> <li>Unavailability of suitable place for drying</li> </ul>	<ul style="list-style-type: none"> <li>Construction of drying yard</li> </ul>
Storage	<ul style="list-style-type: none"> <li>Unavailability of storage place at village level, and hence difficult to hold stocks to take advantage of increase in price</li> <li>Cost of hiring cold storage, may not compensate increase in price</li> <li>Distance to cold storage thereby cost of transportation, loading and unloading</li> </ul>	<ul style="list-style-type: none"> <li>Possibility of construction of cold storage to enhance shelf life of tamarind and deal with fluctuation in market</li> <li>However, viability of cold storage may need to be analyzed considering other produces like potato and flowers; and its optimum utilization</li> </ul>
Processing	<ul style="list-style-type: none"> <li>Primary collectors lacking access to technology</li> <li>Key market players buying deseeded tamarind, but primary collectors do not have access to such markets</li> </ul>	<ul style="list-style-type: none"> <li>Production of deseeded tamarind</li> <li>On deseeding of 1 kg of tamarind with seed, 500 gm of flower tamarind is produced</li> </ul>
Marketing	<ul style="list-style-type: none"> <li>At times primary collectors not selling tamarind on weight basis, there by not getting right price for the produce</li> <li>Low margin and at times loss in trade due to fluctuation in demand and supply</li> <li>Higher production of tamarind in AP leads to fall in price in Odisha</li> </ul>	<ul style="list-style-type: none"> <li>Emerging demand for deseeded tamarind</li> <li>Potential for developing institutional market linkage</li> </ul>

#### 5.0 Potential Interventions

##### 5.1. Proposed Activities

The proposed activities for developing Tamarind Value Chain relates to production and marketing of deseeded tamarind and also sale tamarind with seed to regional level traders. It can start with facilitating institutional market linkage followed with organizing primary collectors. After identification of suitable technologies, there would be requirement of skill training in harvesting, post harvest operations and processing. Besides this infrastructure support like drying yards and storage space at village level; and processing facility and cold storage at cluster level may need to be supported. The details of activities include:

### **Marketing**

- Marketing would cover 4 aspects viz.
  - Sale to PPA involved in MSP (if required, depending on price),
  - Sale of deseeded tamarind to institutions/bulk buyers,
  - Sale through conventional trade channel by linking with regional level traders, and
  - Retail sale
- Market study in major consumption cities and identification of potential organization for market linkage
- Facilitation of market linkage
- Facilitate linkage with PPA; also facilitate so that producer organization could function as PPA
- Developing linkage with regional level traders for sale of ‘tamarind with seed’
- Support in packing
- Brand promotion for sale in retail market

### **Collection and Post Harvest Activities**

- Facilitate early leasing of plants, if leasing is practiced in the area
- Ensure timely harvesting of produce
- Support for appropriate post harvesting practices like drying and storage

### **Skill Training**

- Skill training would cover harvesting, post harvesting and processing
- Identify best practices and related equipment for harvesting and post harvesting activities
- Develop manual to promote best practices in harvesting and post harvesting
- Identify proven technology for deseeding and brick making at cluster level
- Identify resource persons
- Skill training on harvesting and post harvest operations to primary collectors
- Skill training on processing at cluster level

### **Infrastructure**

- Provision of drying yard at village level
- Storage space at village level
- Provision for processing equipment, packing facility at cluster level
- Provision of common facility centre including storage space and drying yard at cluster level
- Support for construction of cold storage which may depend on business potential – linkage for subsidy and seed money support

### **Institution Development**

- Formation of producer organization, and its registration
- Support for legal compliance including on aspects related to tax
- Support to SHGs and producer organizations for development of business plan
- Provision of working capital for producer organizations
- Facilitating access to working capital including bank linkage for business
- Facilitating linkage for seeking subsidy assistance under other Government department schemes
- Hand holding support for implementation of business plan
- Facilitating linkage of SHGs and producer organizations with VSSs, other departments and market related value chain actors

## 5.2 Cost Estimates

The cost estimates for covering 1000 farmers across 5 sub clusters in 20 villages is detailed below:

Sl No	Particulars	Unit	Qty	Cost - Rs.	Amount - Rs.
<b>1</b>	<b>Infrastructure Development</b>				
	Drying Yards - 1 per village	Nos	20	20,000	400,000
	Village level storage place - 200 sq ft - in 10 villages	Nos	10	300,000	3,000,000
	Common Facility Centre - 1 per cluster (1000 sq ft)	Nos	1	1,500,000	1,500,000
	Cake making machines	Nos	3	50,000	150,000
	Other equipment like weighing machines, implements, etc	Lump sum			50,000
<b>2</b>	<b>Skill Training</b>				
	Harvesting Practices 1 day each - 5 Sub Clusters X 2 times X 3 Years	Trainings	30	15,000	450,000
	Post Harvesting Practices - 1 day each - 5 Sub Clusters X 1 time X 3 Years	Trainings	15	15,000	225,000
	Skill Training on deseeding, cake making and packing	Trainings	5	40,000	200,000
<b>3</b>	<b>Market Linkage</b>				
	Facilitating Institutional/Bulk Buyers Market Linkage - 5 linkages X 8 person days	Person days	40	7,000	280,000
	Support for brand promotion	Person days	15	7,000	105,000
	Support for legal compliance	Person days	10	7,000	70,000
<b>4</b>	<b>Working Capital</b>				
	One time Revolving Fund Assistance - Rs.2200 per member - Rs.22 per kg X 100 Kg; for 1000 members				2,200,000
<b>5</b>	<b>Coordination and Facilitation</b>				
	Professional Fee - for 3 years	Months	36	40,000	1,440,000
	<b>Total</b>				<b>10,070,000</b>

## 5.3 Key Assumptions

The following are some of the key assumptions related to proposed interventions:

- Continuation of market linkage with potential institutional and bulk buyers
- Higher 'Minimum Support Price' not affecting procurement of tamarind
- Unforeseen major fluctuation in demand of tamarind
- Occurrence of disease not affecting production of tamarind
- Access to cold storage on hiring basis; and ability to access subsidy support from Government if there is business potential to construct cold storage



## E. Turmeric Value Chain

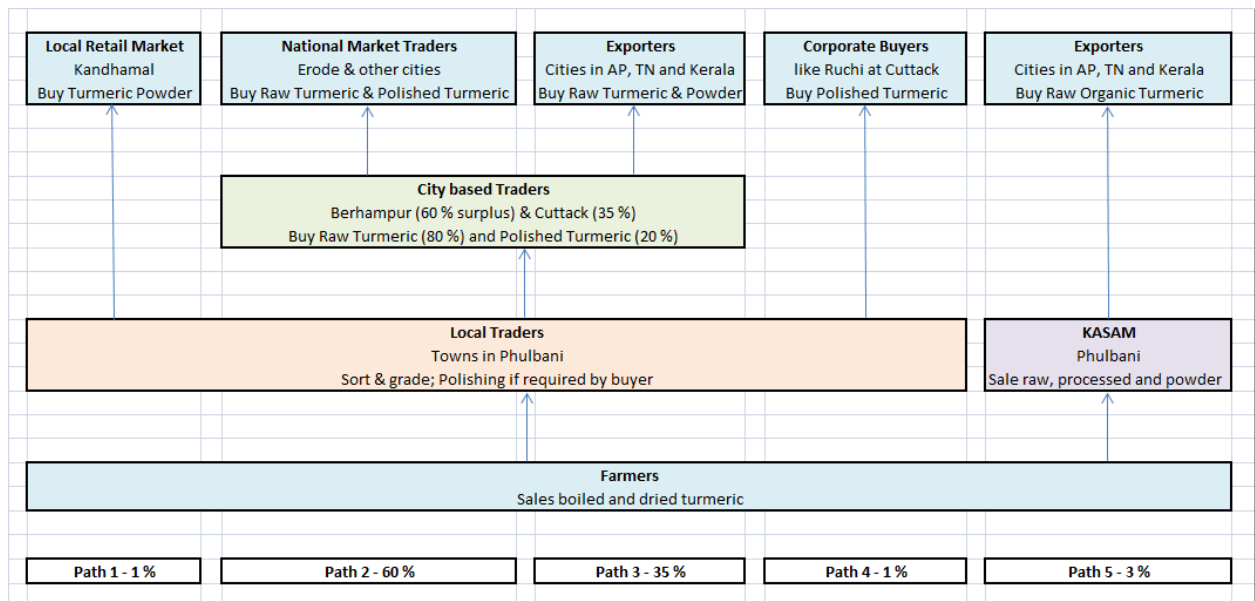
### 1.0 Background

Turmeric, also called as “Indian Saffron” is a major spice produced in India. It is used for preparation of tasty dishes. It adds both flavour and colour to the dish. The colour ingredient of turmeric is known as curcumin, which varies across different varieties of turmeric. Turmeric can be grown in diverse tropical conditions. However, it grows best in well drained sandy or clay loam soils. Turmeric is considered to be cash crop, providing livelihood opportunities to farmers including forest dwellers.

India is largest producer, consumer and exporter of turmeric in World. It accounts for 80 % of production of turmeric in the World. It produces approximately 4 lakh tons of turmeric in a year. Out of this, 90 % is consumed in India, rest being exported to other countries like US, UK, Middle East, Japan, Singapore, Malaysian, South Africa and Australia. In India, turmeric is produced mainly in States like Tamil Nadu, Andhra Pradesh, Kerala, Maharashtra and Odisha. Erode in Andhra Pradesh is the major market for turmeric in India. The market in Erode mainly gets turmeric from States like Tamil Nadu and Andhra Pradesh. There is wide scale turmeric cultivation in districts around Erode like Nizamabad.

### 2.0 Turmeric Value Chain

In Odisha, turmeric is predominantly cultivated in Kandhamal, Mayurbhanj and Koraput district. According to key traders associated with this value chain, Kandhamal district accounts for 93 % of turmeric produced in Odisha. In Kandhamal, mainly local varieties of turmeric are cultivated by farmers. About 1% of turmeric produced in Kandhamal is consumed locally, rest being sold outside the district. The turmeric from Kandhamal mainly goes to Berhampur (60 %) and Cuttack (35 %) market. In Cuttack, 5 % gets locally consumed, rest being sent to other distant markets. In case of Berhampur, about 3 % may be locally consumed, rest being sent to distant market, the key market being Erode market. The Erode based buyers prefer to buy through Berhampur based trader than directly buying from Kandhamal district. The following details the value chain flow diagram in context of Kandhamal district:



#### 4.0 Actors and Activities

The following table summarizes the key actors in the value chain and activities performed by them:

Actors	Activities
Farmers	Production of Turmeric <ul style="list-style-type: none"> <li>• Collection and/or storage of seed</li> <li>• Preparation of land including ploughing</li> <li>• Sowing</li> <li>• Collection leaves/branches and mulching</li> <li>• Inter cultural operation</li> <li>• Harvesting</li> </ul> Post Harvest <ul style="list-style-type: none"> <li>• Collection and/or purchase of fuel wood</li> <li>• Boiling of turmeric</li> <li>• Drying</li> </ul> Selling to local trader at Rs.70 per kg
Local Traders	<ul style="list-style-type: none"> <li>• Buy turmeric from farmers either from village point and/or at weekly market</li> <li>• Farmers also bring their produce to trader point for sale</li> <li>• After examining the quality, trader and farmers negotiate on the price</li> <li>• Turmeric could be stored at village or trader point</li> <li>• Inform city based trader for lifting the turmeric at pre-negotiated price; Sale at Rs. 72 per kg</li> </ul>
City based Trader	Transportation <ul style="list-style-type: none"> <li>• Packs turmeric in bags at local trader point</li> <li>• Transports turmeric to his trading location</li> </ul> Post Harvest <ul style="list-style-type: none"> <li>• Opens collected bags and check quality</li> <li>• Depending on market requirement, take up sorting and grading of turmeric</li> <li>• Store turmeric on open floor in a closed godown/store room</li> <li>• Develop market linkage with long distant trader or institutional buyer</li> <li>• Repack the graded turmeric and transport to buyer location</li> <li>• Sale to Distant City trader at Rs. 80/-; Incurs transportation cost</li> </ul>
Distant City Trader	<ul style="list-style-type: none"> <li>• Receives stock supplied by city based trader</li> <li>• Checks quality and make payment to city based traders</li> <li>• Sale to processors and exporters at Rs. 85/-</li> </ul>
Processors	<ul style="list-style-type: none"> <li>• Depending on location buy directly from farmers, local traders, city based traders or distant city trader</li> </ul> Value Addition <ul style="list-style-type: none"> <li>• Take up polishing of turmeric</li> <li>• Sale polished turmeric to distant city based traders or exporter</li> <li>• Process polished turmeric to powder</li> <li>• Sale turmeric powder to bulk buyers at Rs.100/- per kg</li> <li>• Sale turmeric powder in retail pack at Rs.110/- per kg</li> </ul>

#### 5.0 Constraints and Opportunities

The following table details constraints and opportunities faced in different stages of the value chain:

Stages in VC	Constraints	Opportunities
Pre-production	<ul style="list-style-type: none"> <li>• Difficulty for collection of mulching materials like leaves and branches</li> </ul>	<ul style="list-style-type: none"> <li>• Soil testing</li> <li>• Take up proper land preparation</li> </ul>
Production	<ul style="list-style-type: none"> <li>• Low productivity</li> <li>• Low purchase price on account of advance provided by trader</li> <li>• Drudgery related to harvesting</li> </ul>	<ul style="list-style-type: none"> <li>• Use improved variety of seeds</li> <li>• Use of fertilizer and pesticides</li> <li>• Access technical know how to improve production</li> <li>• Take up organic production of turmeric</li> <li>• Possibility of promoting organization of farmers to access inputs, extension services and market linkage</li> </ul>
Post Harvest	<ul style="list-style-type: none"> <li>• Un-hygienic practices in boiling and drying</li> </ul>	<ul style="list-style-type: none"> <li>• Access to market information of distant market can facilitate timely sale</li> </ul>

Stages in VC	Constraints	Opportunities
	<ul style="list-style-type: none"> <li>• Improper drying place leads discolour and damage</li> <li>• Unavailability of storage space</li> <li>• Unfair practices in sale by producers like putting in foreign materials to gain weight</li> <li>• Reluctance of traders to offer higher price for higher quality produce</li> </ul>	<ul style="list-style-type: none"> <li>• Opportunity for sorting and grading to be able to get higher price</li> </ul>
Marketing	<ul style="list-style-type: none"> <li>• Fear factor created by traders of likely decline in price lead to distress sale</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitating linkage with multiple buyers including institutional buyers</li> </ul>
Export	<ul style="list-style-type: none"> <li>• Unavailability of direct linkage for export</li> </ul>	<ul style="list-style-type: none"> <li>• Scope for export of organic turmeric</li> </ul>
Processing	<ul style="list-style-type: none"> <li>• Limited demand for end product like turmeric powder from distant market</li> <li>• Turmeric of Kandhamal contains less curcumin (3.5 %) and more oil, thus not suitable for packing or preferred by consumer</li> </ul>	<ul style="list-style-type: none"> <li>• Installation of polishing unit</li> <li>• Supply of large size polished turmeric to corporate buyers</li> <li>• Bulk sale of turmeric powder as natural product</li> </ul>
Retail Sale	<ul style="list-style-type: none"> <li>• Limited local market for retail sale</li> </ul>	<ul style="list-style-type: none"> <li>• Possibility of developing brand for producer organizations including sale in city markets</li> </ul>

## 6.0 Potential Interventions

### 6.1. Proposed Activities

The proposed activities for developing Turmeric Value Chain include:

#### Market Linkage with Institutional Buyers

- Detail turmeric value chain study focusing on identification of bulk institutional buyers. Bulk institutional buyer could be corporate entities selling branded turmeric powder, or exporter dealing with organic turmeric.
- Understanding supply chain of potential bulk buyers, and organic produce exporter.
- Identifying and assessing potential producer organization, with experience in turmeric business
- Promotion of producer organization for marketing of turmeric, polished turmeric and turmeric powder
- Facilitating market linkage of producer organization with bulk institutional buyer and/or exporter dealing with organic turmeric

#### Facilitating Retail Marketing

- Support for packaging and developing brand
- Market promotion support
- Handholding support for developing retail distribution network

### Skill Training for Enhancing Production

- Developing linkage with horticulture department, agriculture university, research institutes and KVKs to understand gap adoption of technology related to production
- Developing package of practices for both conventional turmeric cultivation and organic turmeric cultivation
- Demonstration of specific package of practices
- Training of master trainers
- Training of farmers through promotion of Farmer Field School (FFS)
- Visit of resource persons to project villages and demonstration plots

### Skill Training for Post Harvest Activities

- Understanding and identifying best practices to enhance quality in post harvest activities
- Developing manual for best practices for farmers to take up post harvest activities like boiling, drying, cleaning and grading
- Skill training to members

### Processing

- Installation of polisher, grinding machine (to make powder) and retail packaging machine
- Hands on training on use of polishing machine
- Support for maintenance of the machine
- Skill training for grading, after polishing

## 6.2 Cost Estimates

The cost estimates for covering 1000 farmers across 5 sub clusters in 20 villages is detailed below:

Sl No	Particulars	Unit	Qty	Cost - Rs.	Amount - Rs.
<b>1</b>	<b>Infrastructure Development</b>				
	Drying Yards - 2 per village	Nos	40	20,000	800,000
	Common Facility Centre - 1 per cluster (1000 sq ft)	Nos	1	1,500,000	1,500,000
	Polishing Machine	Nos	1	400,000	400,000
	Powder Making Machine including motor	Nos	1	100,000	100,000
	Packing Machine	Nos	1	40,000	40,000
<b>2</b>	<b>Skill Training</b>				
	Production Practices - 5 Sub Clusters X 3 times X 3 Years	Trainings	45	30,000	1,350,000
	Post Harvesting Practices - 5 Sub Clusters X 2 times X 3 Years		30	30,000	900,000
	Use of Machineries	Lumpsum			20,000
	Inputs for Field Demonstration - 2 per Village	Nos	40	10,000	400,000
<b>3</b>	<b>Market Linkage</b>				

<b>SI No</b>	<b>Particulars</b>	<b>Unit</b>	<b>Qty</b>	<b>Cost - Rs.</b>	<b>Amount - Rs.</b>
	Value Chain Study	Lumpsum			1,000,000
	Market Promotion - Brand building and advertizing	Lumpsum			2,00,000
	Developing Systems and Documentation related to Organic Certification	Lumpsum			50,000
<b>4</b>	<b>Working Capital</b>				
	Revolving Fund Assistance - one time estimated Rs. 5000 per member	Lumpsum			5,000,000
<b>5</b>	<b>Coordination and Facilitation</b>				
	Professional Fee - for 3 years	Months	36	40,000	1,440,000
	<b>Total</b>				<b>13,200,000</b>

### **6.3 Key Assumptions**

The following are some of the key assumptions related to proposed interventions:

- Bulk buyers like corporate and exporters would be willing to get into long term business engagement with producer organizations, as part of their supply chain development or as CSR initiative
- No major fluctuation in the market due to change in demand supply scenario at National and International market
- No major natural disaster like drought affecting turmeric crop
- Turmeric continues to be cash crop in Kandhamal and other areas, where it is cultivated. It is not replaced by other commercial crops.
- Capacity and performance of facilitating agency; and continuity of staff supporting development of the cluster
- Other stakeholders including line departments like horticulture supporting implementation of project activities

## **Attachment 6.10.1 Draft Terms of Reference for Training Needs Assessment (TNA)**

### **1. Tasks to be carried out by the Agency/ Individual**

The agency/ individual will undertake the following specific tasks using consultative and participatory approaches and methods:

- Undertake a Stakeholder analysis (as per institutional arrangements) to identify all stakeholders and actors in the project at PMU, DMU, FMU and VSS/ EDC levels
- Asses the knowledge and skill gaps and identify the capacity-building needs for each stakeholder;
- Undertake a Situational analysis in order to establish baseline capacity
- Identify required training and modes of training for identified stakeholder needs (who, what training, how and when)
- Present the findings at a stakeholder workshops at PMU level (key stakeholders from DMU/ FMU, PNGO and RCCF level to participate for feedback)

### **2. Skills and Experience Required**

The agency/ individual is expected to have the following skills and expertise:

- Agency/ individual undertaken similar assignments
- Advanced degrees in economics, development studies, social sciences or related discipline;
- A minimum of ten (10) years' experience in conducting organizational capacity needs assessments, experience with self-assessment processes will be an advantage;
- At least 5 years of experience working in organizational development, capacity building in the specified area;
- Excellent writing and communication skills in English;
- Strong interpersonal skills and the ability to communicate and work well with diverse people.

### **3. Study Duration**

2~3 months

## **Attachment 6.10.2 Draft Terms of Reference for Institutional Capacity Impact Assessment**

### **1. Tasks to be carried out by the Agency/ Institution**

The agency/ institution will undertake the following specific tasks using consultative and participatory approaches and methods:

- Collect and analyses information on capacity initiatives undertaken so far, and compare with baseline situation;
- Assess the relevance of various capacity building initiatives taken so far vis-à-vis project implementation requirements
- Assessment of the effectiveness of training by comparing learning objectives against learning outcomes
- Asses the knowledge and skill gaps vis-à-vis annual training calendars/ training master plan;
- Identify the capacity gaps at sector levels (agriculture, rural development, panchayati raj, dairy sectors etc.) and in the implementation of REDD+, gender mainstreaming, leveraging funds for convergence, marketing of SHG products etc., considering key thematic areas
- On the basis of gaps, identify opportunities and training needs for strengthening and coordinating the capacity of relevant stakeholders on priority areas including REDD+;
- Prepare a report that includes – a) the findings of the capacity assessment – gender segregated (existing capacities as well as gaps); b) a set of measures to address capacity development needs identified including gender, convergence, marketing, REDD+ etc.; c) recommendations to further enhance project implementation;
- Present the findings at a stakeholder workshops at PMU level (key stakeholders from DMU/ FMU, PNGO and RCCF level to participate for feedback)

### **2. Skills and Experience Required**

The agency/ institution is expected to have the following skills and expertise:

- Agency/ individual undertaken similar assignments for past 5 years
- Carry a team of experienced experts with advanced degrees in economics, development studies, social sciences or related discipline; and having
- Team members carries a minimum of ten (10) years' experience in conducting organizational capacity needs assessments, experience with self-assessment processes will be an advantage;
- Team members carries at least 5 years of experience working in organizational development, capacity building in the specified area;
- Excellent writing and communication skills in English;
- Strong interpersonal skills and the ability to communicate and work well with diverse people.

### **3. Study Duration**

4~5 months

## **Attachment 6.12.1 Monitoring and Evaluation Odisha Forest Department**

**Additional Chief Conservator of Forests (Monitoring, Evaluation and Internal Vigilance)** heads the M&E and Internal Vigilance Wing. He is supported by Conservator of Forests (Human Resource Development), Deputy (Dy.) Conservator of Forests (Evaluation), Dy. CF (Research & Training), Statistical Officer, (ACF) and other ministerial staff.

<b>Forest Statistics</b>	<b>This wing</b> deals with matters relating to Forest Statistics, Forest Area, Forest Road, Forest Status Report, Economic Survey Report, Annual Administration Reports, Forest Settlement and consolidation works, Monitoring of Assembly and Parliamentary Questions, matter related to Forest Survey of India, Dehradun & Monitoring of Field verification works like I.D Points given by FSI Dehradun, assisting in preparation of data base on DLC records. This section also monitors the Tour Diaries of DFOs and co-ordinate the visit of various committees of State Assembly and Parliament.
<b>Monitoring &amp; Evaluation of different Projects &amp; Schemes</b>	<b>This wing</b> deals with Monitoring and Evaluation of Plantations under different Projects & Schemes like State Plan, Finance Commission, CAMPA: The Monitoring & Evaluation Cell, at present, is functioning in the office of the PCCF, Odisha with one Dy. Conservator of Forests (Evaluation) and One Deputy Ranger (Evaluation) under the supervision of Conservator of Forests (HRD) and control of Chief Conservator of Forests (ME & IV). After receipt of the list of the plantation activities allotted to different Divisions from the Chief Conservator of Forests (PP&A) and Addl. Principal Chief Conservator of Forests (CAMPA) the monitoring and evaluation works are taken up on randomly selection basis adhering to certain feasible percentage of area. (a) Evaluation of planting activity in the 2nd year with reference to the achievement of the targeted area, boundary verification, posting of the pillars, and delineation of 4 ha plots, etc. (b) Evaluation of the plantation with reference to species suitability, height growth of the seedlings, percentage of survival, impact of Entry Point Activity, General observation on the growing stock of the plantation with reference to the protection from grazing and fire etc. Celebration of different ceremonies & Publication of Information, Education and Communication (IEC) materials on the occasion of special days like World Forestry Day (21st March), International Earth Day (22nd April), World Day to combat Desertification and drought (17th June), Van Mahotsava (1st Week of July) are also an important task of this section. Matters related to Forest Policy, approval of Tours of Regional Chief Conservator of Forests / Chief Conservator of Forests / Conservator of Forests, supply of Government Diary / Calendar and issue of Secretariat Pass, matters related to the All India Forest Sports meet and State Forest Sports meet are also handled by this wing.
<b>Capacity building &amp; Training</b>	<b>This wing</b> deals with Mid-Career Training (MCT) of the IFS Officers, compulsory Training / Training Workshops of IFS Officers and Joint Training of IAS, IPS & IFS Officers as per nominations communicated and accepted by Department of Personnel & Training (DoPT) as well as, Ministry of Environment & Forests (MoEF), Government of India (GOI). Other training programmes like Training organized by IGNFA Forest Survey of India, Directorate of Forest Education, Forest Research Institute, CASFOS and many other National and State Level Training Institutes for Officers of various ranks are processed in the wing.
<b>Internal Vigilance</b>	On receipt of allegations complaints from the different Government authorities/ persons /NGOs/ Agencies, the said petitions are forwarded to the different related offices/ authorities like Principal Chief Conservator of Forests (Wildlife), Principal Chief Conservator of Forests (Kendu Leaves), Managing Director, Odisha Forest Development Corporation Ltd., Regional Chief Conservator of Forests and Divisional Forest Officers, etc. for enquiry. After receipt of enquiry report it is examined and if required, it is forwarded to the related offices/authorities like Govt. of Odisha in Forest & Environment Department and others

Source: OFD (2016)



## Log Frame Narrative Summary

Last Revised on December 2016

Strategy	Indicators	Source/ Verification	Means of	Assumptions/ Risks
<b>Goal</b>				
The forest ecosystem <sup>1</sup> in Odisha is improved.				Macro economy of Odisha is stable.
<b>Objectives/ Purpose</b>				
1) To enhance sustainable forest and biodiversity management practices and livelihood improvement in the project areas	<ul style="list-style-type: none"> <li>• Crown density of forest's within the project area is maintained and change from open to moderately close &amp; close forest is by minimum of 40% at the end of the Project (EoP).</li> <li>• Improved species diversity over the project areas with reduced biotic interface (To be further defined)</li> <li>• Carbon stock of the project areas are improved by xx%.</li> </ul>	<ul style="list-style-type: none"> <li>• Impact Assessment by GIS based data.</li> <li>• Report of DMU and FMU.</li> <li>• Annual outcome survey</li> <li>• Output to purpose monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>• There is no major natural disaster that adversely impact the project areas.</li> <li>• There is continued commitment by Government and its agencies to implement other programmes.</li> </ul>	
<b>Outputs:</b>				
1. To improve the forest in degraded forest areas	<ul style="list-style-type: none"> <li>• Area of degraded forest is reduced by 40% in the project area by EoP.</li> <li>• Area affected by forest fire is reduced by 50% by EoP.</li> <li>• Soil Erosion in tons/ ha. is reduced by 30% in the catchment of the project area by EoP.</li> </ul>	<ul style="list-style-type: none"> <li>• Impact Assessment by GIS based data.</li> <li>• External evaluation by independent agencies.</li> <li>• Report of DMU and FMU.</li> <li>• Annual outcome survey</li> <li>• Output to purpose monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• There are no major natural disaster that adversely impact the project areas.</li> <li>• There is continued commitment by Government and its agencies to implement other programmes.</li> <li>• The law and order situation is stable.</li> </ul>	
2. To enhance livelihoods to the forest fringe dwellers	<ul style="list-style-type: none"> <li>• At least 75% of the Self Help Groups graduate to Grade-A (NABARD rating) after 5 years of formation and at least 50% access to institutional credit.</li> <li>• Increase of at least xxx% in income of the House Holds and 50% of below poverty level families showing sustainable increase in assets in the project area by EoP.</li> </ul>	<ul style="list-style-type: none"> <li>• External evaluation by independent agencies.</li> <li>• Report of DMU and FMU.</li> <li>• Annual outcome survey</li> <li>• Output to purpose monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• There are no major natural disaster that adversely impact the project areas.</li> <li>• There is continued commitment by Government and its agencies to implement other programmes.</li> <li>• The law and order situation is stable.</li> </ul>	

<sup>1</sup> Forest Ecosystem: Community of living and non-living things which affect each other and create an environment. Forest can be considered as an ecosystem comprised of trees and other plants, wildlife, water, air, soil grass, microorganisms and etc.

Strategy	Indicators	Source/ Means of Verification	Assumptions/ Risks
3. To improve governance in sustainable forest management	<ul style="list-style-type: none"> <li>• 1,200 VSS are organized/ reconstituted.</li> <li>• MoUs signed with 1,200 VSS</li> <li>• At least xxxx% of the VSS so formed are effectively functioning and regularly audited by EoP.</li> <li>• Women attends minimum xxx% of the General Body meetings</li> <li>• Xxx% of the VSS/EDC chair person is women.</li> <li>• At least xxx% of the VSS are actively engaged in maintenance of project created assets by EoP.</li> </ul>	<ul style="list-style-type: none"> <li>• Impact Assessment by MIS based data.</li> <li>• External evaluation by independent agencies.</li> <li>• Report of DMU and FMU.</li> <li>• Annual outcome survey</li> <li>• Output to purpose monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• There are no major natural disaster that adversely impact the project areas.</li> <li>• There is continued commitment by Government and its agencies to implement other programmes.</li> <li>• The law and order situation is stable.</li> </ul>
4. To enhance the capacity of other stakeholders	<ul style="list-style-type: none"> <li>• xxx nos. of staff members of PMU, DMU, FMU are trained by OFSDS.</li> <li>• Sufficient Infrastructure in shape of buildings, professional manpower communication and vehicle is at the disposal of PMU/DMU/FMU.</li> </ul>	<ul style="list-style-type: none"> <li>• Impact Assessment by MIS based data.</li> <li>• External evaluation by independent agencies.</li> <li>• Report of DMU and FMU.</li> <li>• Annual outcome survey</li> <li>• Output to purpose monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• There are no major natural disaster that adversely impact the project areas.</li> <li>• There is continued commitment by Government and its agencies to implement other programmes.</li> <li>• The law and order situation is stable.</li> </ul>
5. To enhance biodiversity in the project areas	<ul style="list-style-type: none"> <li>• Threatened and endangered population of species in the project areas are recovered by xxx% by EoP</li> <li>• Sustainable Biodiversity Management based on the outcome of scientific studies to bridge the knowledge gaps in 4 protected areas.</li> <li>• Reduction in incidence of man-animal conflict by xxx%</li> </ul>	<ul style="list-style-type: none"> <li>• Impact Assessment by GIS &amp; MIS based data.</li> <li>• Through census &amp; assessment.</li> <li>• External evaluation by independent agencies.</li> <li>• Report of DMU and FMU.</li> <li>• Annual outcome survey</li> <li>• Output to purpose monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• There are no major natural disaster that adversely impact the project areas.</li> <li>• There is continued commitment by Government and its agencies to implement other programmes.</li> <li>• The law and order situation is stable.</li> </ul>

## Attachment 7.1.1: Applicable International Policies related to Environmental and Social Considerations

### 1. Lender Safeguard Policies/ Guidelines

**Table 1** elucidates the international environment and social policy frameworks, vis-à-vis., the Environment and Social Considerations (ESC) of JICA and the applicable safeguard policies of the World Bank.

**Table 1: Applicable International Policies related to Environmental and Social Considerations**

	Law/ Policy	Description/ Outline	Responsible Ministry/ Agency
1	Guidelines for Environmental and Social Considerations April 2010	This guideline classifies projects into four categories (A, B, C, FI) based on the extent of environmental and social impacts. It lays emphasis on assessment of impacts on human health and safety, natural environment, air, water, soil, waste, accidents, water usage, climate change, ecosystems, fauna and flora, migration of population and involuntary resettlement, local economy and livelihood, utilization of land and local resources, social institutions, existing social infrastructures and services, vulnerable social groups, indigenous peoples, gender, children's rights, cultural heritage, local conflicts of interest, infectious diseases, working conditions including occupational safety. The guidelines advocate consultations with local stakeholders to induce broader public participation to reach appropriate consensus and gives special attention to human rights of vulnerable social groups, women, indigenous peoples, persons with disabilities, and minorities when implementing cooperation projects, and on information disclosure. There is emphasis that project comply with legal frameworks related to environment and local communities in the central and local governments of the host countries, and that project do not deviate significantly from the World Bank's safeguard policies, which it refers to as a benchmark for internationally recognized standards and good practices.	Concerned Ministries and Departments related to Environment and Social Justice Executing Agency/ Implementing Agency (EA/ IA)
2	World Bank's Operational Policy 4.01: Environmental Assessment	Environmental assessment is used to identify, avoid, and mitigate potential negative environmental impacts associated with the Bank lending operations early in the project cycle. The environmental assessment considers natural environment (air, water, and land), human health and safety; social aspects (involuntary resettlement, indigenous peoples, and physical cultural resources) and trans-boundary and global environmental aspects. Environmental assessment should include analysis of alternative designs and sites, or consideration of "no option" requiring public consultation and information disclosure should be done throughout the project cycle. The purpose of environmental assessment is to improve decision making, ensure that project options under consideration are sound and sustainable and that potentially affected people have been properly consulted and their concerns addressed.	EA/ IA
3	World Bank's Operational Policy 4.12: Involuntary Resettlement	Involuntary resettlement gets triggered in situations involving involuntary taking of land and involuntary restrictions of access to legally designated parks and protected areas. The policy aims to avoid involuntary resettlement to the extent possible, or to minimize and mitigate its adverse social and economic impacts. It promotes participation of displaced people in resettlement planning and implementation, and its key economic objective is to assist displaced persons in their efforts to improve or at least restore their incomes and standards of living after displacement. The policy prescribes compensation and other resettlement measures to achieve its objectives and requires that borrowers prepare adequate resettlement planning instruments prior to the Bank appraisal of proposed projects.	EA/ IA

	<b>Law/ Policy</b>	<b>Description/ Outline</b>	<b>Responsible Ministry/ Agency</b>
<b>4</b>	World Bank's Operational Policy 4.10: Indigenous Peoples	This World Bank policy stresses the need for borrowers and the Bank staff to identify indigenous peoples, consults with them, ensures their participation in, and benefit from the Bank-funded operations in a culturally appropriate way. The adverse impacts are avoided, or where not feasible, minimized or mitigated.	EA/ IA
<b>5</b>	World Bank Policy Operational Policy 4.11: Physical Cultural Resources	Physical cultural resources include movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. The borrower addresses the impacts on physical cultural resources in projects proposed for Bank financing, as an integral part of the environmental assessment process. The Physical cultural resources may be located anywhere (urban/ rural/ above or below ground/ under water), and its cultural interest could be at any level (local, provincial, national, or within the international community). The Bank assists countries to avoid or mitigate adverse impacts on physical cultural resources from development projects that it finances.	EA/ IA
<b>6</b>	World Bank Policy Operational Policy 4.04: Natural Habitat	That Bank-supported development projects are given proper consideration to conservation of natural habitats, thereby safeguarding their unique biodiversity and ensuring sustainability of the environmental services and products which natural habitats provide to human society. This policy gets triggered when there is the potential to cause significant conversion (loss) or degradation of natural habitats, whether directly (through construction) or indirectly (through human activities induced by the project).	EA/ IA
<b>7</b>	World Bank Policy Operational Policy 4.36: Forest Policy	Both policies (Natural Habitats OP 4.04 and this policy OP 4.36) apply to any project that affects forests or other natural habitats, whether positively or negatively. This forest policy applies to all investment projects that may have some impact on the health and quality of forests; may affect the rights and well-being of forest-dependent people; or seek to bring about changes in the management, protection, or use of natural forests or plantations. Although the emphasis is on the "do no harm" safeguard provisions, OP 4.36 also promotes "doing good" by pursuing opportunities for the conservation and sustainable use of forests and other natural habitats within World Bank-supported projects, analytical work, and policy dialogue.	EA/ IA

Source: [www.jica.go.jp/english/](http://www.jica.go.jp/english/) [www.worldbank.org](http://www.worldbank.org)

## **Attachment 7.1.2 Major Institutions Involved in the Environmental and Social Consideration**

### **1. Union Level**

At the union/ national level, the Ministry of Environment, Forests and Climate Change (MoEF&CC) is the nodal agency that is responsible for planning, promotion, co-ordination and supervision of the implementation of India's environmental and forestry policies and programs. The MoEF&CC is bifurcated into a number of divisions under the environment sector and forestry/wildlife sector. The Ministry has regional offices at 10 locations (Refer **Table 1**), which are under the overall control of the Secretary, MoEF&CC and the headquarters at the MoEF&CC is responsible for supervision and coordination of all the activities in relation to the functions assigned to them, 8 subordinate offices<sup>1</sup>, 5 autonomous organisations<sup>2</sup>, 4 authorities<sup>3</sup>, 4 boards<sup>4</sup> and 1 public sector undertaking<sup>5</sup>.

The Government of India, under the MoEF&CC has set-up ten regional offices of the Ministry at Bangalore, Bhopal, Bhubaneswar, Chennai, Chandigarh, Dehradun, Lucknow, Nagpur, Ranchi and Shillong, with their headquarters at New Delhi. The main functions of these regional offices include monitoring and evaluation of on-going forestry development projects and schemes with special emphasis on conservation of forest land. They also provide advice to the State and Union Territory Governments in preparation of proposals relating to diversion of forest land for non-forestry purposes under the provisions of the Forest (Conservation) Act, 1980.

The Central Pollution Control Board (CPCB) is a statutory organisation under the MoEF&CC that was established in September, 1974 under the Water (Prevention and Control of Pollution) Act, 1974. Thereafter, it was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981. The CPCB serves as a field establishment and also provides technical services to the MoEF&CC of the provisions of the Environment (Protection) Act, 1986.

The National Green Tribunal, under the Policy and Law Division of MoEF&CC, was established in October 2010 under the National Green Tribunal Act 2010 for the purpose of specialized, speedy, effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and providing relief and compensation for damages to persons and property.

In the context of the present Project, the institutions, agencies, departments likely to be involved include the MoEF&CC at the apex, followed by its two wings, namely, environment wing and forestry / wildlife wing. The different departments within the forestry / wildlife wing could potentially include, the Regional Office Headquarters – Eastern Zone, Bhubaneswar, the Forest Conservation Division, the National Afforestation & Eco-development Board, the External Aided Projects and under it the Forest

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<sup>1</sup> Forest Survey of India ([www.fsi.nic.in](http://www.fsi.nic.in)), Botanical Survey of India (<http://bsi.gov.in>), Zoological Survey of India (<http://zsi.gov.in>), Indira Gandhi National Forest Academy ([www.ignfa.gov.in](http://www.ignfa.gov.in)), Directorate of Forest Education (<http://dfe.gov.in>), National Institute of Animal Welfare, National Zoological Park (<http://nznwdelhi.gov.in>) and National Museum of Natural History (<http://nmnh.nic.in>).

<sup>2</sup> Govind Ballabh Pant Institute of Himalayan Environment & Development (<http://gbpihed.gov.in>) and its 5 Units at Garhwal (Srinagar), Himachal (Mohal, Kullu), Sikkim (Gangtok), North-East (Itanagar) and Mountain Division (5th Unit of the Institute at MoEF&CC, New Delhi); Indian Council of Forestry Research and Education (<http://www.icfre.org>) and its 11 Institutes, namely, Tropical Forest Research Institute, Jabalpur, Arid Forest Research Institute, Jodhpur, Himalayan Forest Research Institute, Shimla, Institute of Forest Genetics and Tree Breeding, Coimbatore, Institute of Forest Productivity, Ranchi, Rain Forest Research Institute Jorhat, Institute of Forest Biodiversity, Hyderabad, Institute of Wood Science and Technology Bangalore, Centre for Social Forestry and Eco-Rehabilitation, Allahabad, Centre for Forestry Research and Human Resource Development Chhindwara and Research Centre for Bamboo and Rattan (ARCBR), Aizawl; Indian Institute of Forest Management (<http://www.iifm.ac.in>); Indian Plywood Industries Research and Training Institute ([www.ipirti.gov.in](http://www.ipirti.gov.in)) and Wildlife Institute of India (<http://wii.gov.in>)

<sup>3</sup> Central Zoo Authority (<http://www.cza.nic.in>), National Biodiversity Authority (<http://www.nbaindia.org>), National Ganga River Basin Authority and National Tiger Conservation Authority (<http://projecttiger.nic.in>)

<sup>4</sup> Animal Welfare Board of India (<http://www.awbi.org>), Central Pollution Control Board ([www.cpcb.nic.in](http://www.cpcb.nic.in)) and its 07 Zonal offices at Bengaluru, Bhopal, Kolkatta, Lucknow, Shillong, Vadodara and Agra, National Afforestation Eco-Development Board and Wildlife Crime Control bureau

<sup>5</sup> Andaman & Nicobar Islands Forest & Plantation Development Corporation Ltd (<http://forest.and.nic.in-anifpc1.htm>)

Protection Division and External Aided Project Division, and the Wildlife Division and Wildlife Crime Control Bureau. Under the Environment Wing, the probable departments that could be dovetailed could include National Bio-diversity Authority, National Coastal Zone Management Authority, among others as and when required.

**Table 1: Regional Offices of MoEF&CC**

S. No.	Headquarter of the Regional Office	States and UTs under jurisdiction
1	Bangalore	Karnataka, Kerala, Goa and Lakshadweep
2	Bhopal	Dadra & Nagar Haveli, Daman & Diu, Gujarat and Madhya Pradesh
3	Bhubaneswar	Orissa and West Bengal
4	Chennai	Andhra Pradesh, Tamil Nadu, Puducherry and Andaman & Nicobar Islands
5	Chandigarh	Chandigarh, Haryana, Jammu & Kashmir and Punjab
6	Dehradun	Himachal Pradesh and Uttarakhand
7	Lucknow	Delhi, Rajasthan and Uttar Pradesh
8	Nagpur	Chhattisgarh and Maharashtra
9	Ranchi	Bihar and Jharkhand
10	Shillong	Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura

The Ministries of Rural Development, Tribal Affairs and Social Justice and Empowerment are the potential institutions to take care of the social considerations pertaining to the proposed project.

The Ministry of Rural Development is the nodal agency for most of the development and welfare activities in rural areas, and plays a pivotal role in implementation of schemes for generation of self-employment and wage employment, extends provisions for housing and minor irrigation assets to the rural poor, provides social assistance to the destitute and reach-out to the most disadvantaged sections of society. It also provides assistance for establishment of rural roads, and area development programs, especially on watershed development programs. The Ministry is bifurcated into the Department of Rural Development and the Department of Land Resources<sup>6</sup>.

The Ministry of Tribal Affairs was established in 1999, after the bifurcation of the Ministry of Social Justice and Empowerment, with the objective of providing more focused approach on the integrated socio-economic development in a coordinated and planned manner<sup>7</sup>.

Subsequently, the name of the Ministry was changed to the Ministry of Social Justice & Empowerment in May, 1998. The Ministry of Social Justice and Empowerment is the nodal agency for the overall policy, planning and coordination of programs for the development of scheduled castes, socially and educationally backward classes, de-notified tribes, and economically backward classes and the welfare of senior citizens. The Ministry has 2 departments, namely, the Department of Social Justice & Empowerment and the Department of Empowerment of Persons with Disabilities. Special schemes of the Ministry are aimed at social, educational and economic empowerment of the groups, except senior citizens, e.g. scholarships, hostels, residential schools, skill training, concession loans and subsidy for self-employment, etc., through the Department of Social Justice and Empowerment. The Ministry, through the Department of Empowerment of Persons with Disabilities facilitates empowerment of the persons with disabilities, which includes persons with seeing, hearing, speech, movement, mental retardation, mental illness, multiple disability and any other disabilities.<sup>8</sup>

Major roles and responsibilities as well as relevant laws/policies of the above mentioned major institutions related to environment and social considerations are described in **Table 2**.

<sup>6</sup> [http://rural.nic.in/netrural/rural/sites/downloads/annual-report/Annual\\_Report\\_2013\\_14\\_English.pdf](http://rural.nic.in/netrural/rural/sites/downloads/annual-report/Annual_Report_2013_14_English.pdf) and <http://rural.nic.in/netrural/rural/sites/about-the-ministry.aspx>

<sup>7</sup> <http://www.tribal.nic.in/index.aspx>

<sup>8</sup> <http://socialjustice.nic.in/>

**Table 2: Major Institutions related to Environmental and Social Considerations**

Organisation	Major Roles and Responsibilities	Relevant Laws/ Policies
<b>Ministry of Environment, Forests and Climate Change<sup>9</sup></b>	<ul style="list-style-type: none"> <li>• Nodal agency in the administrative structure of the Central Government for the planning, promotion, co-ordination and overseeing the implementation of India's environmental and forestry policies and programs.</li> <li>• Primary concerns include implementation of policies and programs related to:                             <ul style="list-style-type: none"> <li>✓ conservation of the country's natural resources, viz., lakes and rivers, biodiversity,</li> <li>✓ conservation of fauna, flora, forests and wildlife,</li> <li>✓ ensuring the welfare of animals,</li> <li>✓ prevention and abatement of pollution,</li> <li>✓ Protection of the environment and</li> <li>✓ sustainable development and enhancement of human well-being</li> </ul> </li> <li>• Acts as a Nodal Agency in the country for:                             <ul style="list-style-type: none"> <li>✓ the United Nations Environment Program (UNEP),</li> <li>✓ South Asia Co-operative Environment Program (SACEP),</li> <li>✓ International Centre for Integrated Mountain Development (ICIMOD)</li> </ul> </li> <li>• Entrusted with issues relating to multilateral bodies:                             <ul style="list-style-type: none"> <li>✓ Commission on Sustainable Development (CSD),</li> <li>✓ Global Environment Facility (GEF) and</li> </ul> </li> <li>• Matters pertaining to the environment with regional bodies:                             <ul style="list-style-type: none"> <li>✓ Economic and Social Council for Asia and Pacific (ESCAP)</li> <li>✓ South Asian Association for Regional Co-operation (SAARC)</li> </ul> </li> <li>• Besides, the legislative measures, the Ministry's work is also guided by:                             <ul style="list-style-type: none"> <li>✓ The National Conservation Strategy and Policy Statement on Environment and Development, 1992;</li> <li>✓ National Forest Policy, 1988;</li> <li>✓ Policy Statement on Abatement of Pollution, 1992;</li> <li>✓ The National Environment Policy, 2006</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The National Conservation Strategy and Policy Statement on Environment and Development, 1992;</li> <li>• National Forest Policy, 1988;</li> <li>• Policy Statement on Abatement of Pollution, 1992;</li> <li>• The National Environment Policy, 2006</li> <li>• Environment (Protection) Act, 1986 and Amendment 1991</li> <li>• EIA Notification 2006 and Amendments 2007, 2008, 2009, 2011 and 2012</li> <li>• The National Green Tribunal Act 2010</li> <li>• Indian Forest Act 1927</li> <li>• The National Forest Policy 1988</li> <li>• Forest Conservation Act 1980 and Amendment 1988</li> <li>• Wildlife (Protection) Act 1972 and Amendment 1993</li> <li>• Biological Diversity Act 2002</li> <li>• Water (Prevention and Control of Pollution) Act 1974 and Amendment 1988</li> <li>• Air (Prevention and Control of Pollution) Act 1981</li> </ul>
<b>Central Pollution Control Board<sup>10</sup></b>	<ul style="list-style-type: none"> <li>• Central Pollution Control Board under the MoEF&amp;CC makes recommendations and advises the central government on matters related pollution</li> <li>• The Water and Air Acts, and other Acts related to environment are implemented through CPCB, from time to time.</li> </ul>	<ul style="list-style-type: none"> <li>• Water (Prevention and Control of Pollution) Act 1974 and Amendment 1988</li> <li>• Air (Prevention and Control of Pollution) Act 1981</li> <li>• Environment (Protection) Act, 1986 and Amendment 1991</li> <li>• EIA Notification 2006 and Amendments 2007, 2008, 2009, 2011 and 2012</li> <li>• Other rules and Notifications framed under the Environment (Protection) Act 1986</li> </ul>
<b>The National Green Tribunal<sup>11</sup></b>	<ul style="list-style-type: none"> <li>• The National Green Tribunal was established in October 2010 under the National Green Tribunal Act</li> </ul>	<ul style="list-style-type: none"> <li>• The National Green Tribunal Act 2010</li> </ul>

<sup>9</sup> <http://envfor.nic.in/>

<sup>10</sup> <http://cpcb.nic.in/index.php>

<sup>11</sup> <http://www.greentribunal.gov.in/Home.aspx>

Organisation	Major Roles and Responsibilities	Relevant Laws/ Policies
	<p>2010</p> <ul style="list-style-type: none"> <li>• It falls under the POLICY &amp; LAW DIVISION of the MoEF&amp;CC</li> <li>• Mandated for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources</li> <li>• Enforcement of any legal right relating to environment</li> <li>• Giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.</li> <li>• Specialized body equipped with the necessary expertise to handle environmental disputes involving multi-disciplinary issues.</li> <li>• The Tribunal shall not be bound by the procedure laid down under the Code of Civil Procedure, 1908, but shall be guided by principles of natural justice.</li> <li>• The Tribunal is mandated to make and endeavor for disposal of applications or appeals within 6 months of filing of the same.</li> <li>• The Tribunal is comprised of a Chairperson, 7 Judicial and 8 Expert Members. The Chairperson of the Tribunal is a former/ retired Judge of the Supreme Court of India. The Judicial Members are drawn from the Judiciary, retired Judges of High Court; while the Expert Members, comprising of experts in physical and life sciences, engineering and law, persons having practical knowledge and administrative experience in the field of environmental policy and regulation, having a minimum of 15 years of experience.</li> <li>• The Tribunal has powers to hear all civil cases related to environmental issues and questions linked to the implementation of the following laws listed in Schedule I of the NGT Act: (i) The Water (Prevention and Control of Pollution) Act, 1974; (ii) The Water (Prevention and Control of Pollution) Cess Act, 1977; (iii) The Forest (Conservation) Act, 1980; (iv) The Air (Prevention and Control of Pollution) Act, 1981; (v) The Environment (Protection) Act, 1986; (vi) The Public Liability Insurance Act, 1991; and (vii) The Biological Diversity Act, 2002.</li> </ul>	<ul style="list-style-type: none"> <li>• EIA Notification 2006 and Amendments 2007, 2008, 2009, 2011 and 2012</li> <li>• Environment (Protection) Act, 1986 and Amendment 1991</li> <li>• The National Conservation Strategy and Policy Statement on Environment and Development, 1992;</li> <li>• National Forest Policy, 1988;</li> <li>• Policy Statement on Abatement of Pollution, 1992;</li> <li>• The National Environment Policy, 2006</li> <li>• Indian Forest Act 1927</li> <li>• The National Forest Policy 1988</li> <li>• Forest Conservation Act 1980 and Amendment 1988</li> <li>• Wildlife (Protection) Act 1972 and Amendment 1993</li> <li>• Biological Diversity Act 2002</li> <li>• Water (Prevention and Control of Pollution) Act 1974 and Amendment 1988</li> <li>• Air (Prevention and Control of Pollution) Act 1981</li> </ul>
<p><b>Ministry of Rural Development<sup>12</sup></b></p>	<ul style="list-style-type: none"> <li>• Ministry of Rural Development, since 2013, comprises of: <ul style="list-style-type: none"> <li>✓ the Department of Rural Development, and</li> <li>✓ the Department of Land Resources</li> </ul> </li> <li>• The Department of Rural Development implements schemes for generation of self-employment and wage employment, provision of housing and minor irrigation assets to the rural poor, social assistance to the destitute and rural roads.</li> <li>• The Department of Land Resources on the other hand is mandated to implement all land based development programs, viz., area development programs on watershed basis<sup>12</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013</li> <li>• The Registration Act, 1908</li> </ul>

<sup>12</sup> [http://rural.nic.in/netrural/rural/sites/downloads/annual-report/Annual\\_Report\\_2013\\_14\\_English.pdf](http://rural.nic.in/netrural/rural/sites/downloads/annual-report/Annual_Report_2013_14_English.pdf)



<b>Organisation</b>	<b>Major Roles and Responsibilities</b>	<b>Relevant Laws/ Policies</b>
<b>Ministry of Tribal Affairs</b> <sup>13</sup>	<ul style="list-style-type: none"> <li>• The Ministry of Tribal Affairs was set-up in 1999,</li> <li>• Objective of providing more focused approach on the integrated socio-economic development of the Scheduled Tribes (STs), in a coordinated and planned manner.</li> <li>• Nodal Ministry for overall policy, planning and coordination of programs for the development of ST's</li> </ul>	<ul style="list-style-type: none"> <li>• Forest Rights Act 2006</li> <li>• Protection of Civil Rights Act, 1955</li> <li>• Protection of Civil Right Rules, 1977</li> <li>• SC/ST (Prevention of Atrocities) Rules, 1995</li> <li>• SC/ST (Prevention of Atrocities) Act, 1989</li> <li>• PESA 1996</li> <li>• The Constitution (Eighty-Ninth Amendment) Act 2003</li> </ul>
<b>Ministry of Social Justice and Empowerment</b> <sup>14</sup>	<ul style="list-style-type: none"> <li>• The Ministry of Social Justice and Empowerment is bifurcated into:                             <ul style="list-style-type: none"> <li>✓ the Department of Social Justice and Empowerment, and</li> <li>✓ the Department of Empowerment of Persons with Disabilities (Divyangjan).</li> </ul> </li> <li>• Department of Social Justice and Empowerment is the Nodal Department for the overall policy, planning and coordination of programs for the development of the following groups:                             <ul style="list-style-type: none"> <li>✓ Scheduled Castes</li> <li>✓ Socially and Educationally Backward Classes</li> <li>✓ De-notified Tribes and</li> <li>✓ Economically Backward Classes</li> <li>✓ and Welfare of Senior Citizens</li> </ul> </li> <li>• Extends special schemes aimed at social, educational and economic empowerment of the groups, except senior citizens, such as scholarships, hostels, residential schools, skill training, concession loans and subsidy for self-employment, etc.</li> <li>• The Ministry also addresses issues related to and in consonance with:                             <ul style="list-style-type: none"> <li>✓ Rehabilitation of Manual Scavengers in alternative occupations</li> <li>✓ Programs of care and support to senior citizens</li> <li>✓ Prohibition</li> <li>✓ Rehabilitation of victims of alcoholism and substance abuse, and their families</li> <li>✓ Beggary</li> <li>✓ International Conventions and Agreements on matters dealt within the Department</li> <li>✓ Awareness generation, research, evaluation and training in regard to subjects allocated to the Department</li> <li>✓ Charitable and Religious Endowments and promotion and development of Voluntary Effort pertaining to subjects allocated to the Department</li> <li>✓ National Commission for the Scheduled Castes</li> <li>✓ National Commission for Safai Karmacharis</li> <li>✓ National Commission for Backward Classes</li> <li>✓ National Scheduled Castes Finance and Development Corporation</li> <li>✓ National Safai Karamcharis Finance and Development Corporation</li> <li>✓ National Backward Classes Finance and</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The Protection of Civil Rights Act, 1955 (22 of 1955)</li> <li>• The Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989 (33 of 1989), (in so far as it relates to the Scheduled Castes, excluding administration of criminal justice in regard to offences under the Act)</li> <li>• National Commission for Backward Classes Act, 1993 (27 of 1993)</li> <li>• The Maintenance and Welfare of Parents and Senior Citizens Act, 2007 (56 of 2007) ✓</li> </ul>

<sup>13</sup> <http://www.tribal.nic.in/index.aspx>

<sup>14</sup> <http://socialjustice.nic.in/>

Organisation	Major Roles and Responsibilities	Relevant Laws/ Policies
	<ul style="list-style-type: none"> <li>Development Corporation</li> <li>✓ National Institute of Social Defense</li> <li>✓ Dr. Ambedkar Foundation</li> <li>✓ Babu Jagjivan Ram National Foundation</li> <li>✓ National Commission for Denotified and Semi-Namadic Tribes</li> <li>• The Department of Empowerment of Persons with Disabilities, vide Cabinet Secretariat's Notification dated 9th December 2014, facilitates empowerment of the persons with disabilities, with respect to Seeing, Hearing, Speech, Movement, Mental Retardation, Mental Illness, Multiple Disability and any other disabilities</li> </ul>	

*Source: Compiled by JICA Survey based on relevant ministry webpages*

The Ministry of Environment, Forests and Climate Change (MoEF&CC) has established, and has been financially supportive and instrumental in the areas of environmental education, ecological research, mine environment, ornithology etc. through its established autonomous bodies/ agencies:

- The Botanical Survey of India<sup>15</sup>
- The Zoological Survey of India<sup>16</sup>
- The Forest Survey of India
- The Indian Council of Forestry Research and Education, Dehradun
  - Forest Research Institute, Dehradun
  - Tropical Forest Research Institute, Jabalpur
  - Arid Forest Research Institute, Jodhpur
  - Himalayan Forest Research Institute, Shimla
  - Institute of Forest Genetics and Tree Breeding, Coimbatore
  - Institute of Forest Productivity, Ranchi
  - Rain Forest Research Institute, Jorhat
  - Institute of Forest Biodiversity, Hyderabad
  - Institute of Wood Science and Technology, Bangalore
  - Centre for Social Forestry and Eco-Rehabilitation, Allahabad
  - Centre for Forestry Research and Human Resource Development, Chhindwara
  - Research Centre for Bamboo and Rattan (ARCBR), Aizawl
- Indian Institute of Forest Management
- Wildlife Institute of India, Dehradun
- The Gobind Ballabh Pant Institute of Himalayan Environment and Development

The research in forestry and wildlife is almost entirely coordinated by MoEF&CC.

## 2. State Level

In the context of the proposed Odisha Forestry Sector Development Project Phase-II (OFSDP-II), an indicative inventory of major departments, agencies, and institutions that are likely to be involved in the implementing and monitoring of various environmental and social aspects, along-with their major roles and responsibilities are highlighted in **Table 3**.

<sup>15</sup> Botanical Survey of India has completed a survey of the floral wealth over about 60 percent of the country

<sup>16</sup> Zoological Survey of India has identified and collected about one million specimens and have surveyed about one third of the country

**Table2: Major Institutions related to Environmental and Social Considerations in Odisha**

Organisation	Major Roles and Responsibilities	Relevant Laws/ Policies
<b>The Forest and Environment Department, Government of Odisha<sup>17</sup></b>	<p>The Forest and Environment Department in the State operates through various departmental formations and autonomous bodies:</p> <ul style="list-style-type: none"> <li>• Forest Department: <ul style="list-style-type: none"> <li>✓ Forest (Territorial) Wing</li> <li>✓ Wildlife Wing</li> <li>✓ Kendu-leaf Wing</li> <li>✓ Odisha Forest Development Corporations Ltd. (OFDC)</li> <li>✓ Autonomous bodies: <ul style="list-style-type: none"> <li>- Odisha Forestry Sector Development Project (OFSDP)</li> <li>- Odisha Biodiversity Authority (OBDA)</li> <li>- State Medicinal Plants Board (SMPB)</li> </ul> </li> </ul> </li> <li>• Directorate of Environment <ul style="list-style-type: none"> <li>✓ State Pollution Control Board (SPCB),</li> <li>✓ Chilika Development Authority, and (CDA)</li> <li>✓ Regional Plant Resource Centre (RPRC)</li> <li>✓ State Environmental Impact Assessment Authority (SEIAA)</li> <li>✓ State Environmental Appraisal Committee (SEAC)</li> <li>✓ Odisha Wetland Development Authority (OWDA)</li> </ul> </li> <li>• The Department of Forest and Environment undertakes different activities for protection, regeneration and extension of forest and tree cover in the State e as well as environmental management and conservation.</li> </ul>	<ul style="list-style-type: none"> <li>• Described at below</li> </ul>
<b>Directorate of Environment<sup>18</sup></b>	<ul style="list-style-type: none"> <li>• Control of pollution and environmental conservation <ul style="list-style-type: none"> <li>✓ Ban on use of polythene of less than 20 microns in the State from 26th January, 2004</li> <li>✓ Exemption of IT industries from taking NOC/clearance of the State Pollution Control Board - Issue of Notifications thereof</li> <li>✓ Declaration of IIDCO as the Nodal agency for developing a hazardous waste disposal site near Rourkela</li> </ul> </li> <li>• Conservation and Management of the Coastal area, through The Orissa State Coastal Zone Management Authority, to enforce Coastal Zone Management Plan and violations of Coastal Regulation Zone (C.R.Z)</li> <li>• Environment Education and Awareness Promotion</li> <li>• District Environment Society, in each district has been constituted under the Chairmanship of District Collectors, to promote awareness for environmental protection and conservation</li> <li>• Confer 19 Prakruti Mitra and 19 Prakruti Bandhu Awards (on the World Environment Day, 5th June, 2003,) to voluntary organisations/ villages/ institutions and to individuals respectively for encouraging people's participation in protection of environment.</li> </ul>	<ul style="list-style-type: none"> <li>• Environment (Protection) Rules, 1986 and Amendments</li> <li>• Environment (Protection) Act, 1986 and Amendment 1991</li> <li>• EIA Notification 2006 and Amendments 2009, 2011 2012</li> <li>• The Water (Prevention &amp; Control of Pollution) Act, 1974,</li> <li>• Orissa Water (Prevention and Control of Pollution) Rules, 1983</li> <li>• The Water (Prevention &amp; control of Pollution) Cess Act, 1977</li> <li>• The Air (Prevention &amp; Control of Pollution) Act, 1981</li> <li>• Orissa Air (Prevention and Control of Pollution) Rules 1983</li> </ul>
<b>Odisha State Pollution Control Board (OSPCB)<sup>19</sup></b>	<ul style="list-style-type: none"> <li>• The OSPCB provides advice to state governments in matters related to control and protection of environment</li> <li>• Look after the interest of the states</li> <li>• Implement the directives from CPCB and all Acts which are enacted from time to time</li> <li>• Checks quality of air, soil and water of different samples collected from industrial areas, through its own team of scientists and laboratories</li> <li>• Works in line with the rules framed by the state</li> </ul>	<ul style="list-style-type: none"> <li>• ditto</li> </ul>

<sup>17</sup> <http://www.odisha.gov.in/portal/default.asp>

<sup>18</sup> [http://www.orissa.gov.in/forest\\_environment/index.htm](http://www.orissa.gov.in/forest_environment/index.htm)

<sup>19</sup> <http://envfor.nic.in/>

Organisation	Major Roles and Responsibilities	Relevant Laws/ Policies
	<p>governments and central government from time to time</p> <ul style="list-style-type: none"> <li>• Supervision of industries and factories in the state on implementation of various provisions present in Water Act, Air Act and Environmental Protection Act</li> <li>• Monitors the implementation of various guidelines of the Act through its experts</li> <li>• The State Pollution Control Board is responsible for enforcement of the provisions of the relevant acts (refer next column)</li> </ul>	
<b>Forest Department<sup>20</sup></b>	<ul style="list-style-type: none"> <li>• Protection &amp; management of forest and wildlife in the State;</li> <li>• Forest Wing: <ul style="list-style-type: none"> <li>✓ Improving efficiency and integrating all forestry functions at the divisional level.</li> <li>✓ Facilitate forestry extension activities and promotion of participatory forest management</li> <li>✓ Engage in collection and processing of kendu leaves</li> <li>✓ Prepare working plans, resource inventory and forest research respectively, through 8 working plan divisions, 1 forest resources survey division, and 2 silviculture divisions</li> <li>✓ Operate and manage 5 training institutions, viz. 1 Forest Rangers' Training College, 1 Forester Training School at Champua, 2 Forest Guards Training Schools at Angul and G-Udayagiri and Social Forestry Training and Research Institute, Bhubaneswar.</li> </ul> </li> <li>• Wildlife Wing: <ul style="list-style-type: none"> <li>✓ Conserve and protect wildlife and its habitats throughout the State</li> <li>✓ Conserve and protect wildlife and its habitats in 20 nos. of notified Protected areas of Bhitarkanika National Park, Similipal Tiger reserve, Ghairmatha Marine Sanctuary and 17 other Wildlife Sanctuaries</li> </ul> </li> <li>• OFDC: <ul style="list-style-type: none"> <li>✓ Discharges the function of disposing of various forest products such as, kendu leaf, timber, bamboo and also supplies timber, bamboo and firewood to the public</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The Orissa Forest Act, 1972</li> <li>• The Wildlife (Protection) (Orissa) Rules 1974</li> <li>• The Wild Birds &amp; Animals Protection Act, 1912</li> <li>• The Orissa Communal Forest and Private Lands (Prohibition of Alienation) Act, 1948</li> <li>• The Orissa Kendu Leaves (Control of Trade) Act, 1961 Orissa Act of 1961 [1. O. Exty. Gazette No.- D/3.1.1962 Notification No. 19, Legis D/3.1.1962]</li> <li>• The Orissa Forest Produce (Control of Trade) Act, 1981 [ Orissa Act 22 of 1981]</li> <li>• The Orissa Village Forests Rules, 1985</li> <li>• Orissa Forest Sector Vision 2020</li> <li>• The Orissa Forest (Grazing of Cattle) Rules, 1980</li> <li>• Joint Forest Management Resolution, 2011</li> </ul>
<b>The SC &amp; ST Development and Minorities and Backward Classes Welfare Department<sup>21</sup></b>	<ul style="list-style-type: none"> <li>• In order to provide concerted efforts to the problem of Scheduled Tribe, Schedule Caste and OBC, the Backward Classes Welfare Department was formed in 1948.</li> <li>• The Constitution has imposed responsibilities on the governments for the all-round development of the Scheduled Tribes and Scheduled Castes.</li> <li>• The policies, programs and schemes of the department are designed in consonance with the overall goals and objectives as enshrined in Articles 46 (Part IV), 16, 17, 19, 164, 244, 275, 330, 332,335,338,339,341, 342 and 366 of the Constitution of India</li> <li>• Aims at: <ul style="list-style-type: none"> <li>- Improving the quality of life of ST and SC communities.</li> <li>- Raising socio-economic condition of the ST, SC, and OBC and minorities.</li> <li>- Reducing poverty.</li> <li>- Bringing to mainstream ST, SC, OBC and minorities, and enabling them to participate in the development process in an equitable manner.</li> <li>- Developing critical infrastructure in Scheduled Areas.</li> <li>- Increasing their access to education, health, housing</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006</li> </ul>

<sup>20</sup> <http://www.odishaforest.in/>

<sup>21</sup> <http://www.stscodisha.gov.in/default.asp?GL=home>

Organisation	Major Roles and Responsibilities	Relevant Laws/ Policies
	and other services. - Creating / increasing opportunities for their self – employment / wage employment. - Securing their rights over forests and lands.	
<b>Revenue &amp; Disaster Management Department<sup>22</sup></b>	<ul style="list-style-type: none"> <li>• Covering all social groups and stakeholders and is concerned with their problems</li> <li>• Solving people’s problems relating to land; these also include providing land to the landless and protecting the Government land.</li> <li>• Providing immediate relief to the people affected by various calamities such as floods, droughts, cyclones, hailstorms, earthquakes, fire accidents, etc.</li> <li>• Also taking initiatives for relief, rescue, rehabilitation and restoration work.</li> <li>• Taking key role in the matter of transfer of property, immovable property</li> <li>• Promoting computerization of Revenue Offices, updating of land records, digitization of cadastral maps, inter-connectivity among revenue offices, under taking survey operations using modern technologies, distribution of government waste land for agriculture/ homestead purposes, distribution of ceiling surplus land, prohibition of tribal land alienation, regularization of pre-1980 forest villages and encroached human habitations in forest areas, acquisition of private land for public purposes, formulation of comprehensive rehabilitation and resettlement policies for displaced persons, administration of minor minerals of the State and conduct of decennial census are some of the important activities of R&amp;DM Department.</li> </ul>	<ul style="list-style-type: none"> <li>• Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2015</li> </ul>

*Source: Compiled by JICA Survey based on relevant ministry webpages*

### 3. Other Agencies including Non-profit Organisations/ Autonomous Bodies

Other departments of the government of India that are involved in monitoring and surveillance of different aspects of environment are provided below.

- The Indian Meteorological Department, Ministry of Earth Sciences
- The Department of Science and Technology (DST)<sup>23</sup>, Ministry of Science and Technology
- The Department of Space<sup>24</sup>, Independent Department, Union Government
- The Geological Survey of India, Ministry of Mines
- The Ground Water Survey, Central Ground Water Board, Ministry of Water Resources
- The National Remote Sensing Agency, under Indian Space Research Organisation, Union Government

Further, there are various research agencies and educational institutes that have been established by the Government of India for conducting research on different aspects of environment, the prominent ones include following items<sup>25</sup>:

- The National Environmental Engineering Research Institute, Nagpur
- The Industrial Toxicology Research Centre, Lucknow
- The National Institute of Oceanography, Goa

Some specific environment related research is also done occasionally by:

<sup>22</sup> <http://www.odisha.gov.in/revenue/index.html>

<sup>23</sup> Department of Science and Technology is refining the “Climate Modeling and Weather Forecasting” and executing the “Natural Resource Data Management System” which aims at developing methodologies for creating databases for micro level planning in mountain areas, semi-arid regions, coastal and offshore regions

<sup>24</sup> Department of Space has launched the Natural Resource Management System (NRMS) which conducts research in forest cover, soils and coastal zones through remote sensing

<sup>25</sup> [http://shodhganga.inflibnet.ac.in/bitstream/10603/17832/13/13\\_chapter%205.pdf](http://shodhganga.inflibnet.ac.in/bitstream/10603/17832/13/13_chapter%205.pdf)

- The Central Leather Research Institute, Madras
- The Central Pulp and Paper Research Institute, Saharanpur and
- The National Chemical Laboratory, Pune
- Various Indian universities and technical institutes
- Non-Government Organisations (NGOs) are also conducting research on environmental related subjects

There are a number of autonomous bodies/ agencies and NGOs in the country that are involved in conducting research and/or awareness generation various related environmental and social considerations.

The Voluntary Action Cell of the Planning Commission, Government of India has issued in May 2007, the National Policy on Voluntary Sector; the objective was to enable, encourage and empower the independent, creative and effective voluntary sector, with diversity in form and function, so that it can contribute to the social, cultural and economic advancement of people of India. It is estimated that, there are approximately 1.5 million NGOs in India working for different causes, including different aspects of environment, viz., environmental protection, conservation and awareness generation. NGOs are also involved in framing environmental policies, mobilizing public support for environmental conservation, protecting endangered species of forests and animals, etc.

“The ENVIS Centre 7 at WWF-India<sup>26</sup> was established on 27 October 1984 under the Environmental Information System (ENVIS) of the MoEF&CC with the responsibility to serve as the focal point of collecting, organising and disseminating information on (i) NGOs and the Environment and (ii) Parliament and the Environment. ENVIS has prepared a Directory of Environmental NGOs (10th Edition), a database of NGOs in all the States and Union Territories, working towards environmental protection, conservation and awareness”.<sup>27</sup> The U.S. Environmental Directories has also prepared “The Directory of Environmental Organisations & Environmental Government Agencies in India”<sup>28</sup>. Besides, there are a number of others agencies that have collated a database of NGOs working towards different aspects of environment.<sup>29</sup>

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<sup>26</sup> *World Wide Fund for Nature-India (WWF-India) was set up as a Charitable Public Trust on 27 November 1969, with the objective of ensuring the conservation of the country's wildlife and natural habitats. Presently, its activities in the field of nature protection – ranging from education and capacity-building, to field projects in biodiversity, enviro-legal action, policy studies and advocacy, and even areas such as religion and conservation.*

<sup>27</sup> <http://www.wwfenvis.nic.in/>

<sup>28</sup> <http://www.earthdirectory.net/India>

<sup>29</sup> [http://www.wwfenvis.nic.in/Database/NGOsDirectory2014\\_4328.aspx](http://www.wwfenvis.nic.in/Database/NGOsDirectory2014_4328.aspx);

<http://planningcommission.nic.in/data/ngo/npvol07.pdf>;

<http://www.legalservicesindia.com/article/article/the-role-of-ngo's-in-protecting-the-environment-1384-1.htm>

### Attachment 7.1.3 Projects or Activities Requiring Prior Environmental Clearance

Under EIA related laws and regulations, all projects and activities which are listed in the table below shall require prior Environmental Clearance (EC) from the concerned government authorities. Before any construction work, or preparation of land, except for securing the land.

**Table 1: List of Projects or Activities Requiring Prior Environmental Clearance**

Activity/Project	Category with Threshold Limit			
	A	B		
<b>1</b>	<b>Mining, extraction of natural resources and power generation (for a specified production capacity)</b>			
1(a)	(i) Mining of minerals	<p>≥ 50 ha. of mining lease area in respect of non-coal mine area</p> <p>&gt; 150 ha of mining lease area in respect of coal mine lease.</p> <p>Asbestos mining irrespective of mining area</p>	<p>&lt;50 ha ≥ 5 ha .of mining lease area in respect of non-coal mine lease.</p> <p>≤150 ha ≥5 ha of mining lease area in respect of coal mine lease</p>	<p>General Conditions shall apply</p> <p>Note: Mineral prospecting is exempted</p>
1(a)	(ii) Slurry pipelines (coal lignite and other ores) passing through national parks/ sanctuaries/ coral reefs, ecologically sensitive areas.	All projects.	-	
1 (b)	Offshore and onshore oil and gas exploration, development & production	All projects	-	
1 (c)	River Valley projects	(i) ≥ 50 MW hydroelectric power generation (ii) ≥ 10,000 ha. of cultivatable land area)	(i) < 50 MW ≥ 25 MW hydroelectric power generation (ii) < 10,000 ha. of cultivatable land area)	<p>General Conditions shall apply</p> <p>Note: Irrigation projects not involving submergence or inter-state domain shall be appraised by the SEIAA as Category 'B' Projects</p>
1(d)	Thermal Power Plants	<p>≥ 500 MW (coal/lignite/naphtha &amp; gas based)</p> <p>≥ 50 MW (Pet coke, diesel and all other fuels including refinery residue oil waste except biomass)</p> <p>≥ 20 MW (based on biomass or non- hazardous municipal solid waste as fuel</p>	<p>&lt; 500 MW (coal/lignite/naphtha &amp; gas based);</p> <p>&lt;50 MW ≥ 5MW (Pet coke, diesel and all other fuels including refinery residue oil waste except biomass);</p> <p>&lt;20 MW &gt;15 MW (based on biomass or non-hazardous municipal solid waste as fuel.</p>	<p>General Conditions shall apply</p> <p>Note:</p> <p>(i) Power plants up to 15MW, based on biomass and using auxiliary fuel such as coal/ lignite/ petroleum products up to 15% are exempt.</p> <p>(ii) Power plants up to 15MW, based on non-hazardous municipal waste and using auxiliary fuel such as coal/ lignite/ petroleum products up to 15% are exempt.</p> <p>(iii) Power plants using waste heat boiler without any auxiliary fuel are exempt.</p>
1(e)	Nuclear power projects and processing of nuclear fuel	All projects	-	
<b>2</b>	<b>Primary Processing</b>			
2 (a)	Coal washeries	≥ 1 million ton/annum throughout of coal	<1million ton/annum throughout of coal	
2 (b)	Mineral beneficiation	≥ 0.1million ton/annum mineral throughput	< 0.1million ton/annum mineral throughput	

Activity/Project		Category with Threshold Limit		
		A	B	
<b>3</b>	<b>Material Production</b>			
3(a)	Metallurgical industries (ferrous and non-ferrous)	a) Primary metallurgical industry All projects b) Sponge iron manufacturing $\geq 200$ TPD (Tons Per Day) c) Secondary metallurgical processing industry All toxic and heavy metal producing units $\geq 20,000$ ton/annum	Sponge iron manufacturing <200TPD Secondary metallurgical processing industry i) All toxic and heavy metal producing units <20,000 ton/annum ii) All other non-toxic secondary metallurgical processing industries >5,000 ton/annum	General Conditions shall apply.  Note: (i) The recycling industrial units registered under the HSM Rules, are exempted. (ii) In case of secondary metallurgical processing industrial units, those projects involving operations of furnaces only such as induction and electric arc furnace, submerged arc furnace, and cupola with capacity more than 30,000 tonnes per annum (TPA) would require environmental clearance. (iii) Plants/ units other than power plants (given against entry no. 1(d) of the schedule), based on municipal solid waste (non-hazardous) are exempted
3(b)	Cement Plants	$\geq 1.0$ million ton/annum production capacity	<1.0 million ton/annum production capacity. All Stand-alone grinding units	
<b>4</b>	<b>Material Processing</b>			
4 (a)	Petroleum refining industry	All projects	-	
4(b)	Coke oven plants	$\geq 250,000$ ton/annum	<250,000 & $\geq 25,000$ ton/annum	General Conditions shall apply
4(c)	Asbestos milling and asbestos based products	All projects	-	
4(d)	Chlor-alkali industry	$\geq 300$ TPD production capacity or a unit located outside the notified industrial area/ estate	(i) All projects irrespective of the size, if it is located in a Notified Industrial Area/ Estate. (ii) <300 TPD and located outside a Notified Industrial Area/Estate	General as well as specific conditions shall apply.  No new Mercury based plant will be permitted and existing units converting to membrane cell technology are exempted from the notification.
4(e)	Soda ash Industry	All projects	-	
4(f)	Leather/skin/hide processing industry	New projects outside the industrial area or expansion of existing units outside the industrial area	All new or expansion of projects located within a notified industrial area/estate	General as well as specific conditions shall apply.
<b>5</b>	<b>Manufacturing/Fabrication</b>			
5(a)	Chemical fertilizers	All projects except Single Super Phosphate	Single Super Phosphate	
5(b)	Pesticides industry and pesticide specific intermediates	All units producing technical grade pesticides	-	
5(c)	Petro-chemical complexes	All projects	-	
5(d)	Manmade fibers manufacturing	Rayon	Others	
5(e)	Petrochemical based processing	Located outside the notified industrial area/estate	Located in a notified industrial area/estate	General as well as specific conditions shall apply
5(f)	Synthetic organic chemicals industry	Located outside the notified industrial area/estate	Located in a notified industrial/estate	General as well as specific conditions shall apply



Activity/Project		Category with Threshold Limit		
		A	B	
5(g)	Distilleries	(i) All Molasses based distilleries (ii) All Cane juice/non-molasses based distilleries $\geq 30$ KLD (Kilo Litres per Day)	All Cane juice/non-molasses based distilleries $< 30$ KLD	
5(h)	Integrated paint industry	-	All projects	
5(i)	Pulp & paper industry excluding manufacturing of paper from waste paper and manufacture of paper from ready pulp without bleaching	Pulp manufacturing and Pulp and paper manufacturing industry	Paper manufacturing industry without pulp manufacturing	
5(j)	Sugar industry	-	$\geq 5,000$ TCD (Ton of Cane per Day) cane crushing capacity	
<b>6 Service Sectors</b>				
6(a)	Oil & gas transportation pipe line	All projects	-	
6(b)	Isolated storage & - handling of hazardous chemicals	-	All projects	
<b>7 Physical Infrastructure including Environmental Services</b>				
7(a)	Air Ports	All projects including airstrips, which are for commercial use	-	Note: Air strips, which do not involve bunkering/ refueling facility and or Air Traffic Control, are exempted.
7(b)	All ship breaking yards including ship breaking units	All projects	-	
7(c)	Industrial estates/parks/complexes/areas, export processing zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes.	If at least one industry in the proposed industrial estate falls under the Category A, entire industrial area shall be treated as Category A, irrespective of the area. Industrial estates with area greater than 500 ha and housing at least one Category B industry.	Industrial estates housing at least one Category B industry and area $< 500$ ha Industrial estates of area $> 500$ ha and not housing any industry belonging to Category A or B.	General as well as specific conditions shall apply.  Note: 1. Industrial Estate of area below 500ha and not housing any industry of Category 'A' or 'B' does not require clearance. 2. If the area is less than 500 ha but contains building and construction projects $> 20,000$ sq.mt and or development area more than 50 ha it will be treated as activity listed at serial no. 8(a) or 8(b) in the Schedule, as the case may be.
7(d)	Common hazardous waste treatment, storage and disposal facilities (TSDFs)	All integrated facilities having incineration & landfill or incineration alone	All facilities having land fill only	
7(e)	Ports, Harbors, Break waters, dredging	$\geq 5$ million TPA (Tonnes Per Annum) of cargo handling capacity (excluding fishing harbors)	$< 5$ million TPA of cargo handling capacity and/or ports/ harbors $\geq 10,000$ TP A of fish handling capacity	General Conditions shall apply.  Note: 1. Capital dredging inside and outside the ports or harbours and channels are included. 2. Maintenance dredging is exempt provided it forms part of the original proposal for which Environmental Management Plan (EMP) was prepared and environmental clearance obtained.

Activity/Project		Category with Threshold Limit		
		A	B	
7(f)	Highways	i) New National Highways; and ii) Expansion of National Highways greater than 30km, involving additional right of way greater than 20m involving land acquisition and passing through more than one State	i) All State Highway Projects; and ii) State Highway expansion projects in hilly terrain (above 1000m AMSL) and or ecologically sensitive areas	General Conditions shall apply.  Note: Highways include Expressways
7(g)	Aerial ropeways	(i) All projects located at altitude of 1000mt and above (ii) All projects located in notified ecologically sensitive areas	All projects except those covered in Column 3	
7(h)	Common Effluent Treatment Plants (CETPs)	-	All projects	
7(i)	Common Municipal Solid Waste Management Facility (CMSWMF)	-	All projects	
<b>8</b>	<b>Building/Construction projects/Area Development projects and Townships</b>			
8(a)	Building and Construction projects	-	≥50,000 m <sup>2</sup> and <150,000 m <sup>2</sup> . Of built-up area	
8(b)	Townships and Area Development projects	-	Covering an area ≥ 100 ha and built up area ≥150,000 m <sup>2</sup>	

*Source: Based on EIA Notification ( No. S.O.1533 dated 14/09/2006) of MoEF, modified by the JICA Survey Team (2016)*

## **Attachment 7.1.4 Details of Stages in the Environmental Clearance as per the EIA Notification**

### **Stage 1 Screening:**

This stage enables project proponents in taking decisions about the applicability of the environment clearance process. It provides clear comprehension and assistance on whether a proposed project requires environmental clearance from MoEF&CC or from State department, or whether to approach the State Pollution Control Board to obtain Consent to Establish.

In case of Category ‘B’ projects or activities, this stage involves the scrutiny of an application made in Form 1 for determining whether or not the project or activity requires further environmental studies (preparation of EIA) for its appraisal, before environmental clearance is granted, depending up on the nature and location specificity of the project. In case projects require an EIA report, they are categorized as Category ‘B1’ while projects/ activities that do not require an EIA report are classified as Category ‘B2’. For categorization of projects into B1 or B2, except for projects/ activities related to “Townships and Area Development” [Item 8 (b) in Schedule], the MoEF&CC shall issue appropriate guidelines from time to time.

### **Stage 2 Scoping:**

This stage refers to the process by which the EAC (for Category ‘A’ projects/ activities) and SEAC (for Category ‘B1’ projects/ activities) determines the detailed and comprehensive Terms of Reference (ToR), that addresses all relevant environmental concerns for the preparation of an EIA Report, based on the information furnished in Form-1/ Form-1A including ToR proposed by the applicant. Scoping is also undertaken for projects/ activities involving ‘Expansion and/or Modernization and/or Change in product mix of existing projects/ activities’. During this Stage, a sub-group of the EAC or SEAC may undertake a site visit if considered necessary, if ToR suggested by applicant and other information is available with the EAC or SEAC concerned. All projects and activities listed as Category ‘B’ in Item 8 of the Schedule (Construction/Township/Commercial Complexes /Housing) shall not require Scoping and will be appraised on the basis of Form 1/ Form 1A and the conceptual plan.

The TOR shall be communicated within 60 days of the receipt of Form-1 by the EAC/ SEAC to the Applicant. Approved ToR is uploaded on the website of MoEF&CC and/or the concerned SEIAA. In this Stage, Applications for prior environmental clearance could be rejected by the regulatory authority on the recommendation of the EAC or SEAC; the decision together with reasons for rejection shall be communicated to the applicant in writing within sixty days of the receipt of the application.

### **Stage 3 EIA Study:**

Based on the result of the scoping, the actual EIA surveys and studies shall be conducted and respective EIA reports to be prepared by project proponents. The project developer shall hire the services of an independent EIA consultant, who is accredited by the National Accreditation Board for Education and Training (NABET)<sup>30</sup> for carrying-out EIA Studies. The EIA study will appraise the nature, size and location of the project and its operations and its importance to the country/ region. Through field based investigations, the EIA would look for alternatives, and assess the significance of

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<sup>30</sup> NABET is a constituent Board of the Quality Council of India (QCI). QCI was established in 1997, and is part of the Department of Industrial Policy & Promotion, Ministry of Commerce & Industry. NABET developed the Environment Impact Assessment (EIA) Consultant Accreditation Scheme, which was launched in August 2007. The MoEF&CC reviewed the scheme in 2009 and preferred the scheme to be updated from learning since its incorporation. NABET is the first organization in the world to offer accreditation of consulting organizations in various conformity assessment areas, and this scheme has been adapted as minimum requirement by the MoEF&CC, and made mandatory vide MOEF Office Memorandum dated December 2, 2009 & Gazette Notification dated March 3, 2016.

impacts to various aspects of the environment. The consultant will address the concerns of the local people during the Public Hearing, which will be conducted by CPCB, and update the EIA report incorporating the concerns of peoples and mitigation measures, before finalizing the report. The Consultant will prepare an Environmental Management Plan to ameliorate all potential deleterious impacts. The Study report will also include an Environmental Monitoring Program, for effective monitoring of environmental mitigation measures.

#### **Stage 4 Public Consultation:**

During this stage, all Category 'A' and Category 'B' projects/ activities shall undertake Public Consultations, the process by which the concerns of local affected persons and others who are possible stakeholders in the environmental impacts of the project/ activity are ascertained with a view to taking into account all the material concerns in the project/ activity design. However, public consultations are not required for projects/activities related to:

- Modernization of irrigation projects (item 1(c) (ii) of the Schedule).
- All projects or activities located within Industrial Estates or Parks (item 7(c) of the Schedule)
- Expansion of Roads and Highways (item 7 (f) of the Schedule) which do not involve any further acquisition of land.
- All Building/ Construction projects/ Area Development projects and Townships (item 8).
- All Category 'B2' projects and activities.
- All projects/ activities concerning National Defense and Security or involving other strategic considerations as determined by the Central Government.

The Public Consultations ordinarily includes conducting a public hearing and obtaining written responses from other concerned persons having a plausible stake in the environmental aspects of the project or activity.

- **Public Hearing:** conducted at the site or in its close proximity, by the State Pollution Control Board (SPCB) or the Union Territory Pollution Control Committee (UTPCC), within 45 days of request from applicant, as per the prescribed manner given in Appendix-IV of the Notification 2006, *for ascertaining concerns of local affected persons*. The proceedings are documented (videography) and minutes are prepared, and sent to the concerned regulatory authority.
- **Obtain Responses in Writing:** from other concerned persons having a plausible stake in the environmental aspects of the project or activity. For this purpose, the regulatory authority and the SPCB or the UTPCC, invites stakeholders to respond in writing, after it uploads on their web-site the Executive Summary of EIA report and Application of project proponent, within 7 days of the receipt of written request to conduct public hearing.

All responses received from affected persons and other stakeholders, as part of the public consultations, will be conveyed to the applicant, who will thereafter address all material environmental concerns and make appropriate changes in the Draft EIA and EMP report before submitting it to the concerned regulatory authority for appraisal.

#### **Stage 5 Environmental Clearance:**

This stage involves detailed scrutiny of the application and other documents like the Final EIA Report, outcome of the public consultations including public hearing proceedings, which were submitted by the applicant to the regulatory authority for grant of environmental clearance, by the EAC or SEAC. This appraisal made by EAC or SEAC in a transparent manner, in a proceeding where the applicant is invited

to furnish necessary clarifications in person or through an authorized representative. After this proceeding, the EAC or SEAC submits categorical recommendations to the regulatory authority for either 'grant of prior environmental clearance' on stipulated terms and conditions, or rejection of the application for prior environmental clearance, with reasons and justifications.<sup>31</sup>

**Grant or Rejection of Prior Environmental Clearance (EC):** The regulatory authority normally accepts the recommendations of the EAC/ SEAC concerned. However, in case of disagreement, the regulatory authority stating the reasons for disagreement, requests the EAC/ SEAC for reconsideration. After reconsideration, the EAC/ SEAC submit its views. Thereafter, the decision of the regulatory authority, after considering the views of the EAC/ SEAC, is final and conveyed to the applicant.

**Validity and transferability of EC:** Validity of EC commences from the date the EC has been granted to the start of production operations or completion of all construction operations (in case of construction projects (item 8 of the Schedule)) by the project. Thus, the validity of the prior EC granted varies from project to project; it is valid for 10 years in the case of River Valley projects (item 1(c) of the Schedule), a maximum of 30 years for mining projects and 5 years in the case of all other projects and activities.

The EC granted for a specific project to a specific applicant can be transferred during its validity to another legal person entitled to undertake the project. An application (by the Original or Second party) along-with a NOC from the original party will be submitted to the regulatory authority, on the same terms and conditions, and for the same validity period, EC was granted. No reference to EAC/ SEAC is necessary in such cases.

#### **Stage 6 Monitoring Clearance:**

After grant of environmental clearance, the project developer is mandated to submit ½ yearly compliance reports to the regulatory authority, on every 1<sup>st</sup> of June and December of each calendar year, on the terms and conditions that were put-up at the time of EC. These compliance reports will be public documents, and shared with any person and displayed on the website of the regulatory authority.

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<sup>31</sup> *Source: EIA Notification 2006, and*  
<http://www.slideshare.net/jadonmohit/environmental-clearance-11159740>

## **Attachment 7.1.5 Details of Requirements and Systems related to Land Acquisition and Involuntary Resettlement**

The requirements and systems related to land acquisition and involuntary resettlement is based on the processes elucidated in the - Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 and the rules /regulations/ amendments that were published subsequently.

### **1. Land Acquisition System and Requirements**

**Intention to acquire land for public purpose:** Government conducts a social impact assessment in the proposed project area, after consultations with the local populace. An expert group is constituted to review the SIA and SIMP report.

**Submission of Proposal for land acquisition:** The proposal submitted by the executing agency/ implementing agency (EA/IA) submits proposal initiating the process for land acquisition.

**Scrutiny by Government:** The Government examines the proposal and reviews the SIA report submitted by the expert group. While examining the proposal, the Government ensures that (i) there is a legitimate and bona fide public purpose involved, (ii) potential benefits and bona fide public purpose out-weighs the social impacts and social costs, (iii) only minimum land is being acquired, (iv) there is minimum displacement of people, (v) minimum adverse impacts on individuals affected, (vi) minimum disturbance to infrastructure, ecology, and (vii) no unutilized, previously acquired lands exist in the area.

**Government's recommendation to proceed:** After it is ensured that the above-mentioned criteria are fulfilled, and after reviewing the district collector's report (if any) and the report of expert group on SIA, the Government recommends the proposed area for acquisition. However, before its recommendation, the Government will also ascertain whether "prior consent" has been obtained from the affected families. Subsequently, the government's decision will be made public in local language and posted at places specified in the Act.

**Issue of Preliminary Notification:** Giving the details of land to be acquired, a Preliminary Notification is published in the Official Gazette, two daily newspapers circulating in the locality, one of which is in the regional language, and displayed in the affected areas, in the Panchayat/ Municipality/ Municipal Corporation, in the offices of the District Collector (DC), the Sub-divisional Magistrate (SDM) and the Tehsil, and uploaded on the website. After the preliminary notification is published, a meeting will be specially organized by the DC, in which the concerned Gram Sabha or Sabhas at the village level, municipalities in case of municipal areas and the Autonomous Councils in case of the areas referred to in the Sixth Schedule to the Constitution, will be informed about the contents of the notification in all cases related to land acquisition; the nature of the public purpose, reasons necessitating displacement of affected persons. The summary of the SIA Report will be shared and particulars of the Administrator to be appointed for the purposes of devising the R&R scheme will be shared. Thereafter, it will become mandatory that "no person" can make any transaction or create any encumbrances on such lands that have been specified in the preliminary notification.

**Assessment of Notified Lands:** The Government will lawfully authorize an officer and his servants and workmen, and assign the responsibility to enter and conduct surveys in the notified lands, which will include determination of the extent of land to be acquired, take levels, dig or bore into sub-soil, etc., to ascertain whether land is adapted for the required purpose, and mark levels and boundaries. It is mandated that the authorized officer and his staff will not enter any property (building, enclosed court, garden, dwelling-house, etc.) without the consent of the occupier. The authorized officer will give a written notice, giving the intention, to the occupier at least 7 days prior to conducting survey work. The authorized person may carry-out surveys in the absence of the occupier, by giving occupier a notice of at least 60 days prior to such survey. During the course of conducting the survey works, if the authorize officer and his staff cause any damage to the property, the occupier will be paid for the damages.

**Hearing of Objections:** After the publication of preliminary notification, in case any person is interested in any land that has been notified as being/ likely to be acquired for public purpose, may raise his/ her objection in writing, within 60 days from the date of publication of preliminary notification. The objections could be related to area and suitability of land proposed, justification offered for public purpose and findings of the SIA report. The objector(s) will be given the opportunity of being heard. After this process, the DC will submit his/her recommendations on the objection(s) to the Government for its decision; decision of the Government will be final on matters related to these objection(s).

**Intentions of taking possession of proposed lands:** On the orders of the Collector, land shall be marked out, measured and planned including marking of specific areas, in case it has not been done already. On the orders of the DC, a public notice will be published and issued on the web-site, and placed at convenient places on or near that said land(s), stating the Government's intension of taking possession of the notified land, and that claims to compensation, resettlement and rehabilitation of all interested parties will be made to him. A similar notice will be sent to the occupiers and person who reside elsewhere.

**Enquiry into Objections:** After the notice issued that indicates the government's decision to take possession of the proposed lands, the DC will pre-determine a day, and will enquire into objections (if any) raised by any interested person, related to the measurements made and value of the land, and into the respective interests of the persons claiming the compensation and rehabilitation and resettlement.

**Preparation of Award:** The DC will prepare the award with respect to the true area of the land, the compensation (as determined under Section 28) along with Rehabilitation and Resettlement award (as determined under Section 32), and apportionment of the compensation among all the persons known or believed to be interested in the land, irrespective of whether they have appeared before him or not.

**Calculation of Award:** The DC will make an award within a period of 12 months from the date of publication of the declaration. He will adopt the criteria provided in the Act to determine the market value of the land to be acquired. Thereafter, the total compensation will be calculated and determined which will also include all the assets attached to the land that has to be paid to the land owners. After the total compensation has been worked-out, the DC will impose a "Solatium" amount, payable to every person whose land is acquired. The solatium amount will be equivalent to 100% of the compensation amount; thus the final award will be determined. Apart from the final award, the DC will grant an amount calculated @ 12% per annum on the market value of land, for the period commencing from the date of publication of notification of Social Impact Assessment study till the date of the award.

The DC, to the extent possible, will not displace any family that has already been displaced by another project and relocated in the proposed project area. In such as case, the Government will pay an additional compensation that is equivalent to the compensation determined under this Act for the second or successive displacements. The Awards will be final and conclusive and will be filed in the DC's office, after the true area of land, market value of land, assets attached to the land, and solatium have been determined, and the apportionment of compensation has been prepared.

**Review and Corrections in Award:** The DC can order for incorporating corrections, within a period of 6 months from the date of award, in case he feel that there is a requirement for correcting clerical errors or arithmetic mistakes, either in the award or errors arising due to his own action or on the application of any person interested or local authority; such corrections will be made and immediately conveyed to the interested persons.

**Issue of Final Award:** The DC finally issues Individual Awards, detailing the particulars of compensation payable and the details of payment of the compensation as specified in the First Schedule.

**Possession of land:** Finally, the DC takes possession of the land after ensuring that the entitled persons have received (i) full payment of compensation (within a period of 3 months from the date of award) and (ii) monetary part of rehabilitation and resettlement entitlements (within a period of 6 months from the date of the award). The DC is responsible for ensuring that the rehabilitation and resettlement process is completed in all respects before displacing the affected families.

## 2. Involuntary Resettlement System and Requirements

**Intention to acquire land:** Whenever the Government intends to acquire land for a public purpose; it consults with the Panchayat, Municipality or Municipal Corporation, at the Village or Ward level, in the affected area.

**Notification to conduct SIA:** A Notification is issued by the Government, for commencement of the SIA study, which is published in the Panchayat, Municipality or Municipal Corporation, in the affected areas, and offices of DC, the Sub-Divisional Magistrate, and the Tehsil. Subsequently, the SIA study is carried-out in consultation with Panchayat, Municipality or Municipal Corporation. The SIA study will be completed within a period of 6 months from the date of commencement of SIA study, and thereafter the report will be made available to the public for review. The authority preparing the SIA report will also prepare a Social Impact Management Plan (SIMP), suggesting ameliorative measures to address specific impacts in the affected area.

**Formation of an Expert Group (EG):** An independent multi-disciplinary expert group is constituted to evaluate the SIA/ SIMP report. In case the expert group finds that the project does not serve any public purpose, that the social costs and adverse social impacts of the project outweigh the potential benefits; it will recommend abandoning the project immediately and no further steps to acquire the land will be initiated in respect of the same. Contrarily, the expert group shall make specific recommendations, within a period of two months from the date of its constitution, that the extent of land proposed to be acquired is the absolute bare-minimum requirement of land for the project and that there are no other less displacing options available. The recommendations of the expert group are recorded in writing, in local language, which gives the details and reasons for such decision, which is published in the Panchayat, Municipality or Municipal Corporation, in the offices of the DC, the Sub-Divisional Magistrate and the Tehsil, and in the affected areas, and uploaded on the website of the appropriate Government.

**Public Hearing for SIA:** Once the SIA and SIMP report has been prepared, the Government conducts a Public Hearing for the SIA study in the affected area, after giving adequate publicity about the date, time and venue. The purpose of this public hearing is to ascertain the views of the affected families, which is recorded and the views are included in the final SIA Report. Thereafter, the SIA and SIMP is made available in the local language in the Panchayat, Municipality, or Municipal Corporation, in the offices of DC, SDM, and Tehsil, in the affected area and uploaded in the official website.

**Issuance of Preliminary Notification:** Meanwhile, a Preliminary Notification is published as part of the land acquisition process. The 'preliminary notification' has to be issued within 12 months from the date of appraisal of the SIA report submitted by the expert Ggroup, other-wise the so-prepared SIA report will be regarded to have lapsed and a fresh SIA will be required to be undertaken prior to acquisition proceedings.

**Conduct Public Meeting:** After the preliminary notification is issued, the concerned Gram Sabha or Sabhas at the village level, Municipalities in case of municipal areas and the Autonomous Councils in case of the areas referred to in the Sixth Schedule to the Constitution, will be informed about the contents of the notification in all cases of land acquisition at a meeting called especially for this purpose.

**Appointment of Administrator (Rehabilitation and Resettlement: R&R):** After the publication of the 'preliminary notification' the Administrator for R&R is appointed, who undertakes a survey and carries out a census of the affected families, and prepares inventories of (i) lands and immovable



properties being acquired of each affected family, (ii) livelihoods lost in respect of land losers and landless, (iii) public utilities and Government buildings (in affected area and resettlement area), (iv) details of the amenities and infrastructural facilities (in affected area and resettlement area), (v) details of any common property resources being acquired, among other details as mentioned in the Act.

**Preparation of R&R Scheme by Administrator (R&R):** The Administrator, based on the survey and census, prepares a draft Rehabilitation and Resettlement Scheme, including rehabilitation and resettlement entitlements for each land owner and landless. The details of the public amenities and infrastructural facilities which need to be provided in the resettlement areas are also prepared by the Administrator. The R&R Scheme will be publicized in the affected area and discussed in the concerned Gram Sabhas or Municipalities. A public hearing is to be conducted thereafter in the affected area(s).

**Constitution of R&R Committee and Review of R&R Scheme:** The Collector along-with the Rehabilitation and Resettlement Committee at the Project level, reviews the draft R&R Scheme submitted by the Administrator (R&R), and thereafter his suggestions are submit to the Commissioner (R&R) for approval.

**Approval of R&R Scheme by Commissioner (R&R):** The approved R&R Scheme will be made available in the local language to the Panchayat, Municipality or Municipal Corporation, the offices of the DC, the Sub-Divisional Magistrate and the Tehsil, published in the affected areas, and uploaded on the official website.

**Identification of resettlement area:** A declaration is issued by the Secretary to such Government indicating any particular land is needed for a public purpose, and that an area has been identified as the “resettlement area” for the purposes of rehabilitation and resettlement of the affected families. At this stage, the Project Proponent will deposit an amount, in full or part, towards the cost of acquisition of land.

**Disbursement of R&R Scheme:** The DC passes the “Rehabilitation and Resettlement Awards” for each affected family in terms of the entitlements, as provided in the Second Schedule, and which include (i) rehabilitation and resettlement amount payable to the family, (ii) bank account number of the person to which the rehabilitation and resettlement award amount is to be transferred, (iii) particulars of house site and house to be allotted, in case of displaced families, (iv) particulars of land allotted to the displaced families, (v) particulars of one time subsistence allowance and transportation allowance in case of displaced families, (vi) particulars of payment for cattle shed and petty shops, (vii) particulars of one-time amount to artisans and small traders, (viii) details of mandatory employment to be provided to the members of the affected families, (ix) particulars of any fishing rights that may be involved, (x) particulars of annuity and other entitlements to be provided, and (xi) particulars of special provisions for the Scheduled Castes and the Scheduled Tribes to be provided. The Government, by a notification, may increase the rate of rehabilitation and resettlement amount payable to the affected families, taking into account the rise in the price index.

**Ensure delivery of R&R package:** The DC ensures that all infrastructural facilities and basic minimum amenities, as specified in the Third Schedule, are extended to the relocated community in every resettlement area. The Rehabilitation and Resettlement Package (Second and Third Schedules) relating to Infrastructural Entitlements will be provided within 18 months from the date of the award. In the case of Irrigation or Hydro Projects, the rehabilitation and resettlement activities are to be completed 6 months before submergence of the acquired lands.

## Attachment 7.2.1 Draft Environmental Checklist

➤ Information as of 30 November, 2016

Category	Environmental Item	Main Check Items	Yes: Y No: N Not Clear: NC	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process?	N	EIA is not required for the proposed Project according to Indian Law
		(b) Have EIA reports been approved by authorities of the host country's government?	N	ditto
		(c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied?	N	ditto
		(d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	N	Other environmental permits are also not required for the proposed Project
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders?	N	Specific stakeholder consultation meetings/workshops are not planned yet. However, series of meetings/ workshops are to be held with various stakeholders in relation to project formulation. Comments of local stakeholders will be integrated into design of subprojects and activities prior to their implementation following social assessment and consultation processes. Consultation and information disclosure procedures to be implemented before and during preparatory phase prior to subproject (component) implementation. EIA is not required for the proposed project according to Indian Law However, based on necessity, public consultation related to project shall be considered.
		(b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	N	Since majority of project activities to be implemented through communities, comments of local stakeholders will be integrated into design of subprojects and activities prior to their implementation following social assessment and consultation processes.
	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	N	The project location and components have not been fully determined yet. However social and environmental considerations to be factored into project design (through exclusion/selection

Category	Environmental Item	Main Check Items	Yes: Y No: N Not Clear: NC	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
				criteria for project activities). For the proposed project sites alternative locations have examined by factors including environmental and social considerations.
2 Pollution Control	(1) Air Quality	(a) Do air pollutants, such as dust, soot and dust, sulfur oxides (SOx), nitrogen oxides (NOx), and organic chemical substances emitted from various sources, such as logging operations, forest products manufacturing processes, and incinerators comply with the country's emission standards and ambient air quality standards? Are any mitigating measures taken?	NC	No significant serious impacts by the Project are predicted. However, if any impact may be predicted by further studies, as required, necessary measures will be carried out.
	(2) Water Quality	(a) Is there a possibility that the use of chemicals, such as fertilizers, and agrochemicals will cause water pollution?	Y/NC	There is possibility of water pollution in the surround water due to inadequate usages of fertilisers /pesticides for certain project activities. There may be some limited use of chemicals as fertilizers/ pesticides or for certain forest plantation / nursery activities. However, no significant serious impacts to water quality by the Project are predicted.
		(b) Where facilities, such as forest products manufacturing facilities are installed, do effluents from the facilities comply with the country's effluent standards and ambient water quality standards?	Y/NC	There will be no large-scale manufacturing facilities of forest products such as pulp, paper or timber operations planned under the Project. There may be some small-scale manufacturing facilities. However, associated effluent and effect on water sources/supply will be nil or negligible
	(3) Wastes	(a) Are wastes properly treated and disposed of in accordance with the country's regulations?	Y	There will not be any significant waste associated with project activities since there will be virtually no manufacturing. However, if any impact may be predicted by further studies, as required, necessary measures will be carried out according to national regulations.
	(4) Soil Contamination	(a) Are adequate measures taken to prevent contamination of soil and groundwater by use of chemicals, such as agrochemicals?	N	Use of such chemicals will be minimal under the Project. Thus, no significant serious impacts by the Project are predicted. However, if any impact may be predicted by further studies, as required, necessary measures will be carried out.
		(b) Are any agrochemicals management plans prepared? Are any usages or any implementation structures organized for proper use of the plans?	NC	Based on the necessity, existing guidelines will be adopted or guidelines will be prepared if mass use of chemicals is unavoidable by the Project.

Category	Environmental Item	Main Check Items	Yes: Y No: N Not Clear: NC	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
3 Natural Environment	(1) Protected Areas	(a) Is the project site or discharge area located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	Y	Certain parts of the Project area include protected areas such as national parks and wildlife sanctuaries. Even though national park and sanctuaries are included in the project area, all the proposed project interventions are aimed at promoting sustainable/ scientific management of selected protected areas that would contribute to environmental conservation of the area. Thus certain positive impacts are anticipated from the project interventions.
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)?	Y	Mangrove, tidal flats and other valuable habitats are to be included in the Project. If any adverse impact may be predicted by further studies, required countermeasures will be examined to avoid/mitigate the predicted impacts.
		(b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions?	NC	This Project intends to conserve the protected habitats and will not involve any activities which affect them negatively. If any adverse impact may be predicted by further studies, required countermeasures will be examined to avoid/mitigate the predicted impacts.
		(c) Is there a possibility that changes in localized micro-meteorological conditions, such as solar radiation, temperature, and humidity due to a large-scale timber harvesting will affect the surrounding vegetation?	N	There will be no large-scale timber harvesting in the Project
		(d) Is there a possibility that a large-scale timber harvesting will result in loss of breeding and feeding grounds for wildlife?	N	There will be no large-scale timber harvesting in the Project
		(e) In the case of reforestation projects, is there a possibility that mono-species plantations will adversely affect wildlife habitats? Is there a possibility that mono-species plantations will cause outbreaks of pests?	NC	There will be reforestation of degraded forest lands in the Project. There may be possibilities of mono-species plantations in a small scale but outbreaks of pests are not anticipated.
		(f) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem?	N	Significant negative ecological impacts are not anticipated. Ecological restoration is a key project goal.

Category	Environmental Item	Main Check Items	Yes: Y No: N Not Clear: NC	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
		(g) Isn't an illegal deforestation associated with the project being carried out, or is an acquisition of the forest certification by the project proponent being carried out?	N	The Project will not involve any deforestation. Small-scale removal of trees associated with small-scale infrastructure development may occur and subject to relevant legislation requiring clearance.
	(3) Hydrology	(a) Is there a possibility that alteration of rainwater runoff and runoff characteristics due to a large-scale timber harvesting and access road construction will cause impacts on the hydrology of the surrounding areas?	NC	There will be no large-scale timber harvesting. The Project should have generally positive impacts on surrounding hydrology due to improvement of degraded forests including activities such as soil and moisture conservation (SMC) measures. Basically, no significant adverse impact is predicted.
		(b) Is there a possibility that decreased water retention capacity due to deforestation will affect the existing drainage patterns of the forest?	N	The Project intends to increase the water retention capacity through improvement of degraded forests. SMC measures such as small scale check dams and drainage line treatments are designed and implemented to maintain and improve drainage patterns of the forest.
	(4) Topography and Geology	(a) Is there a possibility that loss of forest stability due to timber harvesting will cause slope failures or landslides?	N	There will be no significant timber harvesting in the Project.
	(5) Management of Abandoned Sites	(a) Are adequate restoration and re-vegetation plans considered for the harvested areas? In particular, are adequate measures taken to prevent soil runoff from the harvested areas?	N	There will be no significant or large-scale harvesting of timber in the Project
		(b) Is a sustainable management system for the harvested areas established?	N	Ditto
		(c) Are adequate financial provisions secured to manage the harvested areas?	N	ditto
4 Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?	N	Though settlements exist in the proposed project area, resettlement (either voluntary or involuntary) associated with the Project is not anticipated.
		(b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?	N	Not anticipated

Category	Environmental Item	Main Check Items	Yes: Y No: N Not Clear: NC	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
		(c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?	N	ditto
		(d) Is the compensations going to be paid prior to the resettlement?	N	ditto
		(e) Is the compensation policies prepared in document?	N	ditto
		(f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples?	N	ditto
		(g) Are agreements with the affected people obtained prior to resettlement?	N	ditto
		(h) Is the organisational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?	N	ditto
		(i) Are any plans developed to monitor the impacts of resettlement?	N	ditto
		(j) Is the grievance redress mechanism established?	N	ditto
	(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary? Is particular attention paid to the inhabitants whose livelihoods are based on primary industries, such as farming, raising livestock, or hunting and gathering in the forests?	NC	The Project intends to have a positive impact in terms of improving local people's livelihoods/ living conditions. However, it is possible that certain forest protection activities could have some negative impact on local people's customary access to natural resources. Such impacts will be addressed through participatory planning and required countermeasures will be examined to avoid/mitigate the predicted impacts.
		(b) Are adequate measures taken to prevent illegal entry into the forestry resource areas from the outside through newly constructed access roads?	NC	The Project will not construct new access roads in the majority of project areas. Road upgrade/reconstruction may be activities. If any adverse impact may be predicted by further studies, required countermeasures will be examined to avoid/mitigate the predicted impacts.

Category	Environmental Item	Main Check Items	Yes: Y No: N Not Clear: NC	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
		(c) Is there a possibility that the forest right of common is obstructed?	NC	A key project objective is to strengthen community-based forest institutions and empower local people to realise their forest management. The Project is however state implemented and there is the possibility that the Forest Department could extend its power over community forests and customary management regimes. The Project is very aware of this risk and is designed in such a way that local peoples forest rights will be respected at all times.
		(d) Are considerations given to life of residents before implementation of project?	Y	A key objective of the Project is to improve local livelihoods. Local people will be consulted prior to any project activities and thus project activities will be defined by the communities themselves. project activities will also be implemented through community institutions by and for the communities
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	NC	There may be archeological, historical, cultural, and religious heritage sites within the project area. However, the Project will have no significant impact on such sites. If any adverse impact may be predicted by further studies, required countermeasures will be examined to avoid/mitigate the predicted impacts.
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?	N	Basically, no significant impact is predicted affecting the landscape since infrastructure under the Project will be on a small scale. : Improvement of forest cover and forest resources through the project interventions may increase the natural beauty of the landscape.
	(5) Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?	Y	An Indigenous People Plan Framework (IPPF) to be prepared for the Project
		(b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	Y	The IPPF is planned to include measures to ensure that the rights of indigenous peoples are respected in terms of access to land and resources
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project?	N	The working conditions will be protected by India's laws and regulations. As required, the Project will prepare internal regulations for occupational health and safety referring to regulations imposed by international organisations and relevant national legislation and standard practices regarding working conditions.

Category	Environmental Item	Main Check Items	Yes: Y No: N Not Clear: NC	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
		(b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials?	N	As required, proper instruction and guidance on safety consideration will be given to workers and other individuals involved in the Projects.
		(c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.?	NC	Ditto (Such activities are relevant for large scale construction or commercial forestry but not for this type of Project.)
		(d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	NC	Ditto (Security guard will not be required for most of the proposed project activities)
5. Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?	NC	Construction will be of small-scale with limited and temporary environmental impacts. However, if required, following measures will be taken: (1) Noise & vibration: Low noise and vibration methods and constructional vehicles and equipment. (2) Turbid water: Sediment basins, etc. (3) Exhaust gas: Less exhaust gas constructional vehicles and equipment. (4) Construction dusts: Spraying water, etc. (5) Wastes: solid wastes, etc. will be properly disposed or reclaimed
		(b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?	Y	It is considered that the construction activities will not affect the natural environment adversely in the construction sites, but adequate measures will be considered to mitigate impacts as required.
		(c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?	Y	Adverse social impacts of construction are expected to be eliminated through the exclusion/ selection criteria (e.g. resettlement, use of private land, damage to cultural buildings etc). However, if required, adequate measures such as detours, etc. will be taken to mitigate impacts to social environment.



Category	Environmental Item	Main Check Items	Yes: Y No: N Not Clear: NC	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?	Y	Monitoring should be executed, based on a monitoring system to be developed for the Project which includes the monitoring of environmental and social safeguards measures
		(b) What are the items, methods and frequencies of the monitoring program?	Y	The items, methods, and frequencies of the monitoring system are covered in the Environmental and Social Management System Framework
		(c) Does the proponent establish an adequate monitoring framework (organisation, personnel, equipment, and adequate budget to sustain the monitoring framework)?	Y	Ditto. (Also adequate provisions are made in the project proposal to cover monitoring requirements)
		(d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	N	The monitoring requirements will be entirely for the purposes of the Project and additional reporting to regulatory agencies will not be required because the project activities will not require environmental clearance.
6 Note	Reference to Checklist of Other Sectors	(a) Where necessary, pertinent items described in the Agriculture checklist should also be checked.	NC	It is possible that the Project may include some agricultural activities but these will be of a very small scale (home gardens/plots) and no significant impacts are predicted for the Project, However, details needed to be confirmed at further study for the Project.
	Note on Using Environmental Checklist	(a) If necessary, the impacts to trans-boundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as trans-boundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	N	The Project will not have any significant global or trans-boundary impact. It will have a slight positive global impact due to forest restoration and carbon sequestration.

1) Regarding the term “Country’s Standards” mentioned in the above table, in the event that environmental standards in the country where the project is located diverge significantly from international standards, appropriate environmental considerations are required to be made. In cases where local environmental regulations are yet to be established in some areas, considerations should be made based on comparisons with appropriate standards of other countries (including Japan’s experience).

2) Environmental checklist provides general environmental items to be checked. It may be necessary to add or delete an item taking into account the characteristics of the project and the particular circumstances of the country and locality in which the project is located.

Source: JICA Survey Team (Based on JICA Environmental Checklist "17. Forestry

## Attachment 7.2.2 Draft Environmental and Social Management System (ESMS) Checklist

Information as of 30 November, 2016

	Questions	Answer	Improvement Plan
<b>1. Policy (environmental and social policy)</b>			
1	Does the financial intermediary / executing agency have any formal environmental policy or procedures? If yes, please describe them and provide appropriate documentation. If no, does the financial intermediary /executing agency have any plan to set such policy or procedures?	No: The Executing Agency (EA), OFSDS does not itself have formal environmental policies or procedures to avoid negative impact on the natural and social environment. However, all activities undertaken by EA must be implemented in accordance with the relevant environmental laws, policies and procedures of Indian Government (defined by MoEF&CC and others) and the state government of Odisha.	The existing Indian legal/policy framework is sufficient for the elimination of sub-projects with serious adverse environmental impacts. EA may however involve certain sub-projects with minor environmental impacts (e.g. small-scale community infrastructure). Although all such activities shall not require environmental clearance as per the legislations, the Environmental and Social Management System Framework (ESMSF) and the Scheduled Tribe and Forest Dependents Plan Framework (STFDPF), to be prepared will be the principal documents which define measures to avoid adverse environmental and social impact.
2	Are there any types of projects in which the financial intermediary / executing agency will not take part due to the environmental risks? (e.g., projects involving handling of hazardous wastes or endangered plants or animals).	No: No types of sub-projects with such environmental risks (e.g., handling of hazardous wastes or endangered plants or animals) are foreseen. However, the Project will involve community related sub-projects which will be selected in participatory mode and therefore there is some flexibility for appropriate interventions in accordance with the ground situations. The project objective implies that the Project shall have mainly positive environmental and social impact.	Sub-projects with serious environmental impacts beyond the mitigation capacity of the OFSDS will be eliminated or avoided. ESMSF/STSTFDPF is the principal document which defines measures to avoid environmental and social adverse impact. Sub-projects with serious environmental risks beyond the mitigation capacity of the natural environment will be avoided under ESMSF/STFDPF.
<b>2. Procedures (screening, category classification and review procedures)</b>			
3	Does the financial intermediary / executing agency have any environmental procedures such as screening, categorization and environmental review? If yes, please describe.	No: However; clear guidelines and procedures for environmental safeguard exist in Indian legislation system. The EA itself is not responsible for implementation of environmental procedures such as screening, categorization and environmental review as per indicant laws and regulations.	The ESMSF/ STFDPF being the principal document, will clarify the basis for detail procedures for screening, categorization and environmental review of the Project and sub-projects. Additional supplemental documents to be prepared during the preparatory stage of the Project.
4	Please describe how you ensure that your subproject companies and their subprojects are operated in compliance with the national laws and regulations and applicable JICA's requirements.	Except for certain service providers, basically, EA does not hire companies to implement sub-projects. Community and forest infrastructure installation will be implemented by EA itself with support and assistance from communities/NGOs. EA shall hire companies to implement specific infrastructure construction of some sub-projects as needed.	ESMF will be prepared for addressing issues arising under the Project and sub-projects. STFDPF will be also prepared to cover instances where the Project will directly impact or involve forest dependents including indigenous peoples. Mitigation measures will be built into project component design and implementation. Overall coordination and support for ESMSF will be provided through the PMU at the executing agency. Within the executing agency, the PD at PMU will hold central responsibility for ensuring ESMSF in the Project, and information related ESMSF will be centrally managed by the PD. Under the

	Questions	Answer	Improvement Plan
			supervision of PD, his/her deputies will hold position as Environmental and Social Safeguard Managers for their activities in each designated work field. Further, DMU/FMU level officers will be designated as environmental and social safeguard in-charge to provide hands-on assistance to members of Gram Sabhas/ Pali Sabhas and VSSs who will be the Environmental and Social Safeguard Focal Person from the perspective of PRI.
5	How are environmental considerations taken into account in the credit review and approval process for project loans or equity investments? How are environmental considerations taken into account in the credit review and approval process for project loans or equity investments?	There will have no loans or equity investments disbursed by EA under the Project.	In the proposed ESMSF, sub-project exclusion criteria are prepared. The sub-project review, selection and approval will be conducted in accordance with the set sub-project exclusion criteria.
6	How are environmental issues taken into account in deciding whether to offer or extend commercial credit, working capital finance, trade finance, payment services and other financial services to a company?	None of these issues will arise in project implementation. The EA will not offer or extend commercial credit, working capital finance, trade finance, payment services and other financial services to any company under the Project.	N/A
<b>3. Organisation and Staff (institutional framework and staff allocation)</b>			
7	Please provide us with the organisation chart of the financial intermediary / executing agency's Environmental and Social Management System (ESMS).	EA does not have ESMS as not required for their present role and responsibility; therefore the organisational chart is not available at the moment.	Organisation structure of EA for ESMSF/STFDPF implementation will be clarified at the initial stage of the Project. The organisational chart will be prepared accordingly. Proposed institutional arrangement for ESMSF/STFDPF is described in "Item 9" hereunder.
8	Who is responsible for environmental and social management within the financial intermediary / executing agency? (name/role and title)	N/A	Dr. Ajit Kumar Patnaik Project Director, OFSDS
9	Are there any staffs with training for environmental and social considerations in the financial intermediary / executing agency? If so, describe.	Key officers are well-trained in the application of the Forest Conservation Act relating to forest clearance procedures. However, in most of cases not trained in environmental and social impact assessment procedures and risk management.	In the PMU, deputies of the Project Director (Joint Project Director: JPD,) will serve as Environmental and Social Safeguard Directors for activities in each designated work field. Deputy Project Director (Concurrent Monitoring & Evaluation Studies) will serve as Environmental and Social Safeguard Manager to conduct overall ESMSF monitoring and management of ESMSF related information for the Project at the PMU level. Selected DMU officers will serve as Environmental and Social Safeguard Chief for the project implementation at DMU level. Selected FMU officers will serve also as Environmental and Social Safeguard in-Charge for the project implementation at FMU level.

	Questions	Answer	Improvement Plan
			Training will be provided by EA to improve understanding of environmental and social safeguards/ assessments, screening, monitoring procedures. If required, PMU will hire agency/experts in the field of environment and social consideration so as to ensure implementation of the Project.
10	Are there any technical staffs with an engineering/industry background responsible for technical analysis of credit proposals?	Officers are trained in basic engineering for small scale infrastructures relevant to the tasks (forest roads, soil and conservation measures, slope stabilization measures (small check dams, drainage line treatments etc.), small buildings etc.).	For small scale community infrastructures development technical training will be provided to EA staff and other key stakeholders accordingly.
11	What experience, if any, do the financial intermediary / executing agency have of hiring or dealing with environmental consultants?	Activities which EA has been involved had minimal environmental impact, therefore; environmental consultant(s) have not been hired so far.	Preparation and finalization of terms of reference for environmental expert(s) at the initial stage of the Project are required. In the preparatory stage, Environmental and Social Consideration Expert is planned to be directly hired by PMU, to support PMU for preparation and updating of ESMF/STFDF. In addition, Environmental and Social Consideration Specialist is planned to be deployed under the Project Management Consultant to assist PMU on environmental and social consideration issues of the Project.
12	What was the budget allocated to the ESMS and its implementation during a year? Please provide budget details including staff costs and training as well as any actual costs. What was the budget allocated to the ESMS and its implementation during a year?	N/A. EA does not have ESMS as such and therefore no budget has been specifically allocated to it.	During the Project, most of the cost associated with environmental and social safeguard will be covered by addressing relevant issues in the Project's approach or technical methodologies. As such they normally do not incur as separate budget lines. However, there will be some allocation of budget towards environmental and social considerations under the Project, mainly in the form of capacity building costs. Based on necessity, cost for hiring agency/experts in the field of environment and social consideration may be additionally required.
<b>4. Monitoring and Reporting (Reporting procedures and monitoring)</b>			
13	Do you receive environmental and social monitoring reports from subproject companies that you finance?	N/A	There will be limited usage of sub-project companies for the project implementation. However, environmental and social monitoring of subproject activities will be conducted as part of the regular project monitoring.
14	Please describe how you monitor the subproject company and their subprojects' social and environmental performance.	N/A	Environmental and social monitoring/ evaluation of sub-project activities will be conducted within the framework of project M&E system.
15	Is there an internal process to report on social and environmental issues to senior	Yes: Although there is no systematic monitoring and reporting process for environmental and social issues,	The Project will develop M&E system including MIS for monitoring and reporting on project progress, processes and

	Questions	Answer	Improvement Plan
	management?	issues arising from field-based programs are reported to senior management as and when required. Particular issues may be highlighted when necessary and dealt with accordingly.	impacts. Safeguards monitoring and reporting will be built into this system.
16	Do you prepare any social and environmental reports: - For other multilateral agencies or other stakeholders - E&S reporting in the Annual Report	No: Environmental and social reports have not been prepared systematically by EA.	EA will prepare and submit monitoring reports to JICA at regular basis. These reports shall contain designated sections on environmental and social aspects. The Project will include independent evaluations which will also assess the Project's implementation of the ESMSF/STFDPF and environmental and social issues related to the Project.
<b>5. Experience(results of the environmental and social management)</b>			
17	Has the financial intermediary / executing agency signed any national or international agreements or declarations concerning environmental issues?	No: The EA itself has not signed any international agreements or declarations on environmental issues but such have been signed by the Government of India and are thus applicable to the Project.	N/A
18	Has the financial intermediary / executing agency ever received any criticism of its environmental record? If so, what was the criticism?	No: The EA itself has not received criticism so far.	<p>The Project as a whole is intended to strengthen community-based forestry institutions and implementation by these institutions. The Project will also build the EA's capacity for more collaborative and participatory approaches to forest management. Therefore, the Project aims to build better and stronger relationships with communities.</p> <p>The Project will include social safeguards for protecting communities and especially the vulnerable segments of society including women, and poor, ensuring that they are properly consulted and are able to participate and benefit from the Project in appropriate ways.</p> <p>ESMSF/STFDPF is the principal document which defines measures to avoid adverse environmental and social impacts, therefore to avoid criticism.</p> <p>Areas of criticism leveled against EA include the following.</p> <ul style="list-style-type: none"> <li>- Eviction/resettlement of peoples, particularly ST, from Reserved Forest and other protected areas.</li> <li>- Persecution of forest dependent peoples living inside or fringe of Reserved Forests.</li> <li>- Gender equality of support in sub-project implementation.</li> <li>- Inability to control wildlife which inflicts damages on forest inside/fringe communities.</li> </ul> <p>These areas will require further efforts to avoid any criticism in future.</p>

	Questions	Answer	Improvement Plan
19	Does the financial intermediary / executing agency carry out environmental audits of its properties to analyze health and safety issues, waste disposal, etc.?	No: The EA itself is not responsible for environmental audit.	N/A
20	Please state any difficulties and/or constraints related to the implementation of the ESMS.	The EA, as an organisation, still lacks experience in managing and monitoring environmental and social risks in a systematic way will be the principal challenge.	Through implementing the Project, establishing the proposed safeguards frameworks and measures, and through specific trainings EA will build their capacity and experience for managing and monitoring environmental and social risks.
<b>6. Need of Capacity Development and Improvement Plan(Improvement and the need for capacity building measures)</b>			
ESMS requires different knowledge and skills sets at different management levels (i.e. field skills versus administrative/management skills) – these will be drawn out in the environmental and social safeguards capacity development and training programs.			
<b>Indicative Capacity Development Plan for Environmental and Social Safeguards</b>			
Module Name	Theme/Topic	Key Participant	Schedule
1. General Orientation on ESMSF and STSTFDPF for the Project			
1-1: Management/ Administrative Level	<ul style="list-style-type: none"> <li>- JICA's safeguard policy</li> <li>- Basic introductory concept of safeguard</li> <li>- Overview of environmental protection, EIA and social safeguard regulations (general)</li> <li>- Safeguard issues (vulnerable groups, SCs, STs, gender rec.)</li> <li>- ESMSF steps and procedures to be applied in the Project</li> <li>- Free and prior informed consent (FPIC)</li> <li>- Environmental and social impact assessment: Overview</li> </ul>	<ul style="list-style-type: none"> <li>- PMU officers / DMU chief</li> <li>- (FMU Chief)</li> </ul>	<ul style="list-style-type: none"> <li>- Annually* (1st to 5th year) for one day</li> <li>- At the initial stage of each year</li> </ul>
1-2: Field/ Operational Level	<ul style="list-style-type: none"> <li>- Basic introductory concept of safeguard</li> <li>- Overview of environmental protection, EIA and social safeguard regulations (specific)</li> <li>- Safeguard issues (vulnerable groups, SCs, STs, gender rec.)</li> <li>- Community consultation processes</li> <li>- Free and prior informed consent (FPIC)</li> <li>- Environmental and social impact assessment: Overview</li> </ul>	<ul style="list-style-type: none"> <li>- FMU chief / FMU Staff</li> <li>- Field level officers</li> <li>- Representatives from VSSs and EDCs</li> <li>- Other representative from Gram Sabha (if necessary)</li> </ul>	<ul style="list-style-type: none"> <li>- Annually* (1st to 5th year) for one day</li> <li>- At the initial stage of each year</li> </ul>
2. Community Facilitation and ESA for Environmental and Social Safeguard			
Community Facilitation and Environmental and Social Assessment (ESA) for Environmental and Social Safeguard	<ul style="list-style-type: none"> <li>- Sub-project planning (and micro planning)</li> <li>- Role of LSG, Gram Sabha and FD</li> <li>- Participatory ESA</li> <li>- Working with vulnerable groups</li> <li>- Gender issues</li> <li>- Conflict resolution</li> <li>- Grievance procedures</li> </ul>	<ul style="list-style-type: none"> <li>- Field level officers</li> <li>- Representatives from SHGs, VSSs/EDCs</li> <li>- Other representative from Gram (if necessary)</li> </ul>	<ul style="list-style-type: none"> <li>- Annually* (1st to 5th year) for one session as part of other community related trainings. At the initial stage of each year</li> </ul>

Questions		Answer	Improvement Plan	
3. Monitoring and Evaluation for Environmental and Social Safeguard				
3-1: Management/ Administrative Level	<ul style="list-style-type: none"> <li>- M&amp;E concept and procedures</li> <li>- Monitoring and reporting of safeguards</li> <li>- Use of M&amp;E results and feedback</li> </ul>	<ul style="list-style-type: none"> <li>- PMU / DMU staff</li> <li>- FMU Chief</li> <li>- Elected LSG members</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- Annually*</li> <li>- (3rd to 7th year)</li> <li>- for half day</li> <li>- At the initial stage of each year</li> </ul>	
3-2: Field/ Operational Level	<ul style="list-style-type: none"> <li>- Monitoring principles and procedures</li> <li>- Monitoring and reporting procedures</li> <li>- Use of reporting formats</li> </ul>	<ul style="list-style-type: none"> <li>- FMU chief / FMU Staff</li> <li>- Field level officers</li> <li>- Representatives from VSSs and EDCs</li> <li>- Other representative from Gram Sabha (if nessesary)</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- Annually*</li> <li>- (3rd to 7th year)</li> <li>- for half day</li> <li>- At the initial stage of each year</li> </ul>	
4. Specific Trainings				
Specific training for specific techniques/tasks to be required	For example: <ul style="list-style-type: none"> <li>- Chemical use</li> <li>- Environment Health &amp; Safety standard for construction</li> <li>- Mitigation planning and implementation</li> </ul>	To be defined when it becomes necessary	To be defined when necessary	

## **Attachment 7.2.3 Environmental and Social Management System Framework (ESMSF)**

### **1.1 Salient Features of the Environmental and Social Management System Framework**

The Environmental and Social Management System Framework (ESMSF) for the OFSDP-II is the primary reference document outlining how environmental and social considerations will be addressed in project design and implementation. ESMSF works together with the Scheduled Tribe and Forest Dependents Plan Framework (STFDPF) and also refers to the other safeguards tools which are intended to concentrate on or elaborate specific aspects (i.e., micro plan, social assessment plan, etc.).

#### **(1) Objective of Environmental and Social Management Framework**

ESMSF helps to establish a process for environmental and social safeguards which will permit the executing agency (EA) of the Project to identify, assess and mitigate the environmental and social impacts of the proposed interventions. In the process, the framework also determines the institutional measures to be taken during the program implementation.

The objectives of the ESMSF are summarized as follows:

- 1) To provide a broad framework for the identification, management and monitoring of potential environmental and social risks arising under the Project
- 2) To enhance the Project's positive environmental and social impacts and avoid or otherwise mitigate associated negative impacts
- 3) To ensure that the rights and needs of forest dependents and their communities affected by or involved in the Project, are respected and met in the design and implementation of project interventions
- 4) To ensure the protection of local ecosystems and environmental resources in the design and implementation of project interventions.

#### **(2) Structure of ESMSF**

The ESMSF of the Project is structured as follows:

- 1) **Summary of the Project:** It briefly describes the project framework and sub-projects.
- 2) **Environmental and Social Safeguard Policies of JICA:** It briefly describes JICA's environmental and social safeguard policies, and clarifies how the Project shall be categorized and what types of measures will be required.
- 3) **Clarifying Definition and Selection of Safeguard Frameworks:** It analyses and defines the key technical terms, and select appropriate safeguard frameworks to be applicable for the Project.
- 4) **Target Groups of ESMSF:** It defines beneficiaries.
- 5) **Existing Environmental and Social Management Systems:** Outline of the legal and policy context for environmental and social safeguard in India as well as in the Odisha State.
- 6) **Environmental and Social Risks and Mitigation Measures:** An assessment of potential positive and negative environmental and social aspects associated with the Project, as well as measures for the mitigation of adverse risks in project design and implementation.
- 7) **Framework and Procedures/ Detail Procedures of ESMSF:** It indicates the institutional framework and identifies procedures for management and mitigation of environmental and social risks of the project cycle. Social assessment to determine community needs and priorities, to obtain their views on the design and proposed implementation mechanisms of the Project is also covered here.
- 8) **Capacity Development Requirements for ESMSF Implementation:** The capacity development and training requirements for effective implementation of the ESMSF are identified.



## 1.2 Summary of the Project

### (1) Project Purpose and Scope

Project goal, objectives and outputs of the OFSDP-II are described in the following table.

#### Project Goal and Objectives

Project Goal:	The forest ecosystem in Odisha is improved
Project Objectives/ Purpose	To enhance sustainable forest and biodiversity management practices and livelihood improvement in the project areas
Outputs	<ol style="list-style-type: none"> <li>1) Improvement of the forest in the degraded forest areas</li> <li>2) To enhance livelihoods of the forest fringe dwellers</li> <li>3) To improve governance in sustainable forest management</li> <li>4) To enhance the capacity of other stakeholders</li> <li>5) To enhance biodiversity in the project areas</li> </ol>

Source: Compiled by JICA Survey Team (2016)

The OFSDP-II will be implemented over a period of 10 years, across 14 forest divisions in Odisha, and will involve the participation of 1,200 VSSs.

### (2) Project Components

The project components and their sub-components will be finalized once the project activities will be clearly defined at the preparation stage of the Project. However, those components and sub-components which are described in the table below are proposed as of December 2016.

#### Proposed Component of OFSDP-II

No.	Component	Sub component (Scope of work)	Detail/Remarks
1	Preparatory Works	<ol style="list-style-type: none"> <li>1.1 Constitution of PMU, DMU, FMU</li> <li>1.2 Deployment of Staff for PMU, DMU, FMU</li> <li>1.3 Procurement of PMC</li> <li>1.4 Orientation for PMU/ DMU/ FMU</li> <li>1.5 Identification of VSSs</li> <li>1.6 Survey and Demarcation</li> <li>1.7 Preparation of Project Manuals</li> <li>1.8 Community Support Activities</li> <li>1.9 Training/ Orientations for PMU, DMU, FMU, VSS/ EDC/ PNGOs</li> <li>1.10 Micro Planning</li> <li>1.11 Annual Planning</li> </ol>	This component includes following activities: <ol style="list-style-type: none"> <li>1. Constitution and strengthening of OFSDS</li> <li>2. Selection of project sites and identify possible areas and VSSs/EDCs</li> <li>3. Preparation of necessary manuals, guidelines and plans</li> <li>4. Constitution and strengthening of VSS</li> <li>5. Selection and deploy of PNGOs, animators</li> <li>6. Micro planning</li> </ol>
2	Sustainable Forest Management	<ol style="list-style-type: none"> <li>2.1 JFM-Mode</li> <li>2.2 Non JFM Mode</li> <li>2.3 Farm Forestry</li> </ol>	<u>2.1 includes following activities</u> <ol style="list-style-type: none"> <li>1. Treatment Area/ Drainage Line Specific Planning &amp; Monitoring</li> <li>2. Drainage Line Treatment (Ex-situ SMC Work)</li> <li>3. ANR</li> <li>4. Block Plantation</li> <li>5. Fire Protection</li> </ol> <u>2.2 includes following activities</u> <ol style="list-style-type: none"> <li>1. Consolidation and Demarcation of Forest Boundaries</li> <li>2. Construction /Improvement of Permanent Nurseries</li> <li>3. Drainage Line Treatment (Ex-situ SMC Work)</li> </ol> <u>2.3 includes following activities</u> <ol style="list-style-type: none"> <li>1. Training and Extension on Farm Forestry</li> <li>2. Promotion of pulpwood model</li> <li>3. Promotion of Timber/ TBO/ NTFP/ Agro-horticulture Model</li> <li>4. Deployment of NGOs for Community Development and SFM</li> </ol>
3	Sustainable Biodiversity Management	<ol style="list-style-type: none"> <li>3.1. SATOYAMA model sustainable biodiversity Management</li> <li>3.2 Establishment of Scientific Monitoring System at Bhitarkanika</li> </ol>	<u>3.1 includes following activities:</u> <ol style="list-style-type: none"> <li>1. Biodiversity Inventory</li> <li>2. Valuation of Ecosystem Services</li> <li>3. Supporting Sustainable Farming Practices</li> <li>4. Biodiversity Conservation</li> <li>5. Revitalization of Traditional Knowledge</li> </ol>

No.	Component	Sub component (Scope of work)	Detail/Remarks
			<u>3.2 includes following activities:</u> 1. Ecosystem Health Report Card
4	Livelihood Improvement	4.1 Convergence Fund 4.2 Promotion of IGAs 4.3 Promotion of Product Cluster at DMU Level 4.4 NTFP Based Livelihood Interventions 4.5 Livelihood Resource Centre (LRC) 4.6 Annual IGA Workshops	<u>4.1 includes allocation and distribution of convergence fund to VSS.</u> <u>4.2 includes following activities:</u> 1. Mobilization of SHGs 2. Skill Training to promote IGAs 3. Revolving Fund Assistance to SHGs 4. Infrastructure Development 5. Provision for fuel wood saving devices <u>4.3 includes following activities:</u> 1. Institution Development 2. Skill Training 3. Market Linkage 4. Common Facility Centre (CFC) 5. Coordination and Facilitation <u>4.4 includes following activities:</u> 1. Inventorying of NTFP 2. Developing NTFP Strategy 3. R&D works on NTFP 4. Business Development Services 5. Implementation of MSP scheme 6. Building Capacity of VSS for improving quality production of Kendu Leaf 7. Scientific management of Bamboo involving VSSs 8. Promotion of Lac cultivation/ rearing <u>4.5 includes following activities:</u> 1. Staff Procurement 2. Livelihood Promotion Convergence Plan Study 3. Market Survey and Value Chain Assessment 4. Business Plan Development for LRC 5. R & D and Product Development 6. Business Promotion Fund 7. Facilitation of CSR/ Private Sector Partnership 8. LRC Business Plan Review and Advisory Committee Meetings 9. Product Conclaves
5	Community Institutional Capacity Development	5.1 Institutional Capacity Development of VSS/ EDC 5.2 Institutional Capacity Development of SHGs 5.3 Gender Training	<u>5.1 includes following activities:</u> 1. Training 2. Exposure visits (within the DMU, within the State, Outside of the State) <u>5.2 includes following activities:</u> 1. Skills Training 2. Exposure visits (within the State, outside of the State) <u>5.3 includes following activities:</u> 1. Trainings for VSS/ EDC 2. Trainings for SHGs
6	REDD+		<u>This component includes following activities:</u> - Baseline – Satellite Imagery analysis will be done during 1.6 - Driver assessment – Action planning will be done during 1.10 - Specific activities under this component is as follows. 1) REL 2) MRV 3) SIS 4) Capacity Development
7	Supporting Activities	7.1 Institutional and Project Management Support 7.2 Capacity Building of Executing Agency 7.3 M&E 7.4 Communication/ Publicity	<u>7.1 includes following activities:</u> 1. Strengthening of PMU Office 2. Strengthening of DMU Office 3. Strengthening of FMU Office 4. Strengthening of Circle Office <u>7.2 includes following activities:</u> 1. Training Plan Development 2. Regular Trainings 3. Refresher Trainings 4. Exposures 5. National Workshops/ Seminars

No.	Component	Sub component (Scope of work)	Detail/Remarks
			6. Impact Assessment - Capacity Building 7.3 includes following activities: 1. Monitoring 2. Impact Assessment 3. Audits 7.4 includes following activities: 1. Knowledge Management Support 2. Internal Communication Support 3. External Communication Support
8	Phase-Out/ Phase-In	8.1 Preparation of Phase-Out/ Phase-In Manual 8.2 Creation of the Asset Inventory 8.3 Revisiting Micro Planning 8.4 Phase-Out Training for VSS/ EDC/ SHGs	This component includes following activities: 1. Institutional capacity development at the community level 2. Asset transfer

Source: Compiled by JICA Survey Team (2016)

### 1.3 Environmental and Social Safeguard Policies of JICA

#### (1) JICA Principles for Environmental and Social Considerations

JICA is committed to ensure that human rights are respected and that environmental issues are seriously considered in its investments, projects and programmes. JICA's environmental and social safeguards policies are contained within the JICA Guidelines for Environmental and Social Considerations (2010), with the principles indicated below:

- JICA projects/programmes shall assess a wide range of environmental and social impacts.
- Environmental and social issues must be considered at an early stage in design and throughout the project cycle.
- JICA is responsible for accountability and transparency.
- Stakeholder consultation/participation is required in consideration of environmental/ social issues.
- Information disclosure is required.
- Implementation of the guidelines is should enhance organisational capacity to ensure appropriate consideration, management and monitoring of environmental/ social issues.
- JICA is committed to addressing environmental and social issues in a prompt/ timely manner.

#### (2) Key Process Elements

JICA's key process elements for environmental and social considerations is summarised below:

##### 1) Project Categorisation:

Projects are categorized according to the scope/severity of the environmental and social impacts or risks, as follows:

##### Project Categorisation by JICA Guideline

Category	Description
Category A	Significant adverse impacts e.g. Large-scale development/ infrastructure
Category B	Generally site-specific impacts, few impacts are irreversible, normal mitigation measures can be designed
Category C	Minimal/little adverse impact
Category FI (Financial intermediary)	Substantial selection and appraisal of sub-projects after JICA approval of funding

Source: Compiled based on the JICA Guidelines for Environmental and Social Considerations 2010

##### 2) Impacts to be Assessed:

A wide range of environmental and social considerations are taken into account with a view towards both enhancing positive benefits and avoiding/mitigating negative impacts.

### **Types of Impacts to be Assessed.**

<b>Type of Impact</b>	<b>Description</b>
Environmental Impact	On the natural environment transmitted through air, water, soils, waste, accidents, water usage, climate change, ecosystems, fauna and flora and trans-boundary/global scale impacts.
Social Impact	On community/people's lands, resettlement, economies, livelihoods, employment, social institutions, vulnerable groups, gender, indigenous peoples, children, health, cultural heritage, utilization of land and local resources, existing social infrastructures and services, equality of benefits and losses, local conflicts, working conditions, etc.

*Source: Compiled by JICA Survey Team (2016)*

### **3) Information Disclosure and Consultation:**

JICA requests that proponents disclose information on the environmental and social impact of the Project both to JICA as well as local stakeholders well in advance of implementation. Frameworks for consultation and information disclosure need to be developed and agreed.

#### **(3) Compatibility with International Standards**

JICA confirms that projects do not deviate significantly from the World Bank's Safeguard Policies, and refers as a benchmark to the standards of international development agencies; to internationally recognized standards, or international standards, treaties, and declarations, etc. and to the good practices, etc. of developed nations as appropriate.

JICA refers to international policies, procedures and standards such as those of the World Bank in part so as to avoid further proliferation of safeguards approaches and standards. Of relevance to the Project, although JICA has special concerns related to Indigenous Peoples, it does not have a detailed policy with explicit procedures for situations where such peoples are affected by projects and refers to the World Bank Operational Policy 4.10 (OP4.10) on Indigenous Peoples. Thus the contents and format of the safeguards framework elaborated for the Project follows that indicated in the World Bank OP 4.10, as requested by JICA for the preparation of the Project.

#### **(4) Project Categorisation by the JICA Guidelines**

The Project is currently categorized as 'FI' in accordance with the JICA Guidelines (2010). The 'FI' classification remains valid for the following reasons:

- 1) JICA's funding of projects will be provided to a financial intermediary or executing agency.
- 2) The selection and appraisal of the sub-projects will be substantially undertaken by the executing agency only after JICA's approval of the funding, so that the sub-projects cannot be specified prior to JICA's approval of funding.
- 3) Sub-projects will be selected in participatory mode by communities and as such cannot be specifically defined at this stage.
- 4) Sub-projects with significant adverse environmental or social impacts requiring environmental clearance will be eliminated through screening procedures. However, certain potential environmental and social impacts are perceived, and there is the potential that the Project may involve forest dependents (SC, ST, other backward classes, forest dwellers and other forest dependents).

The Project is overall expected to have a mainly positive impact on the environment given that its primary objective is to enhance sustainable forest and biodiversity management practices and livelihood improvement in the project areas. Although it is not possible to precisely state exactly what sub-projects will be implemented in which specific location and scale, the Project will exclude "Category A" sub-projects with a significant environmental impacts or risks.

At the time of selection, finalisation and approval of sub-projects, respective sub-projects to be categorised as either “Category B” or “Category C” according to the scope/severity of the environmental and social impacts or risks.

#### **(5) Requirements by the JICA Guidelines**

As per the JICA guidelines, JICA will examine the following conditions in relations to the project implementation. The financial intermediary or the executing agency (OFSDS) will be required to comply with the requirements of JICA as stated below.

- 1) Whether the related financial intermediary or executing agency will ensure appropriate environmental and social considerations as stated in the guidelines.
- 2) Whether institutional capacity in order to confirm environmental and social considerations of the financial intermediary or executing agency is sufficient, or if requires adequate measures be taken to strengthen the capacity.
- 3) Whether the financial intermediary or executing agency will examine the potential positive and negative environmental impacts of sub-projects and takes the necessary measures to avoid, minimize, mitigate, or compensate for potential negative impacts, as well as measures to promote positive impacts if any such measures are available.
- 4) JICA will disclose the results of environmental reviews on its website after concluding agreement documents.
- 5) Over a certain period of time, JICA will confirm with the project proponents etc. the results of monitoring the items that have significant environmental impacts. This will be done in order to confirm that the project proponents etc. are undertaking environmental and social considerations for projects that fall under Categories A, B, and FI.

### **1.4 Clarifying Definitions and Selection of Safeguards Frameworks**

#### **(1) Defining Environmental and Social Vulnerabilities**

##### **1) Social Vulnerability:**

Social vulnerability is the status of a group of people who are typically socially excluded, frequently disadvantaged by discriminatory practices and are limited in their capacity to access benefit of development or opportunities offered in development programs. This often happens because of their social characteristics such as culture, identity, economic systems and social institutions. They are often victims of environmental vulnerability too since their land-based subsistence and livelihood may be at risk due to change in land use practices, degradation of the environment, etc.

##### **2) Environmental vulnerability:**

Environmental vulnerability is a condition when ecosystem integrity is threatened by anthropogenic and/or natural hazards. This could happen over spatial or temporal scales of ecosystems. Factors that impact the environment negatively and thereby reduce the resilience of the environment to sustain varies spatially. Vulnerability may increase with the intensity and frequency of human interventions and/or natural hazards.

#### **(2) Defining Terms**

##### **1) Scheduled Tribes (ST):**

The Constitution of India, Article 366 (25) refers to scheduled tribes (ST) as those communities who are scheduled in accordance with Article 342 of the Constitution. According to this Article, STs are the tribes or tribal communities or part of or groups within these tribes and tribal communities which have been declared as such by the President through a public notification. As per 2011 Census, tribes

constitute around 22.85% of the total population of the state. Of the 62 notified tribal communities in Odisha, the major tribes and their habitat is provided in the following table. Kondha/ Kandha are the dominant group, comprising a population of about 1 million, and inhabiting Keonjhar, Kondhamal, Sambalpur, Bolangir, Koraput, Ganjam and Sundergarh. The Santals, comprising a population of about 0.5 million, inhabit the districts of Mayurbhanj, Keonjhar and Balasore. The Saura with a population of 0.3 million are spread over the districts of Koraput, Ganjam and Bolangir. The Bondas, also known as the 'naked people', with a population of about 5000 live in the districts of Koraput and Malkangiri. The highest proportions of ST populations are in districts Gajapati (54.29%), Kandhamal (53.58%), Keonjhar (45.45%), Koraput (50.56%), Mayurbhanj (58.99%), and Sundergarh (50.75%). Overall the ST population in the priority districts accounts for 24% of the State's population.

### Major Tribes and their habitats in Odisha

Major Tribes	Habitats
Kondha/ Kandha	Keonjhar, Kondhamal, Sambalpur, Bolangir, Koraput, Ganjam and Sundergarh
Saura	Koraput, Ganjam and Bolangir
Gond	Sambalpur, Bolangir, Koraput, Kalahandi and Sundergarh
Santal	Mayurbhanj, Balasore, and Keonjhar
Paraja	Koraput, Kalahandi and Sundergarh
Gadaba	Koraput, Nowrangpur, and Malkangiri
Koya	Koraput and Malkangiri
Oraon	Sambalpur, Sundergarh, Gunupur, and Bonai
Bhuiji	Mayurbhanj, Sundergarh, Keonjhar, Balasore and Pallahara
Bonda	Koraput and Malkangiri
Juang	Keonjhar and Dhenkanal

Source: <http://www.orissa.gov.in/people/tribe/tribehome.htm> [http://orissadiary.com/orissa\\_profile/orissademography.asp](http://orissadiary.com/orissa_profile/orissademography.asp)

## 2) Scheduled Castes (SC):

The varna or Jati system segregated the Indian society into 4 main categories or castes; however, one category of the society falls outside the caste system, and occupy the lowest rank in the ritual hierarchy of Indian society, due to the age-old practice of un-touchability resulting due to engagements in offensive vocations, thus leading to social, educational, and economical backwardness. In Odisha there are 93 communities belonging to the Scheduled Caste group. Unlike ST who live in isolation, a large majority of the Schedule Caste population lives in scattered households with other caste groups and only a small proportion live in concentrated colonies, in which very limited number are isolated. The highest distribution of Scheduled Castes is in the districts of Balasore (20.62%), Bargarh (20.17%), Bhadrak (22.23%), Boudh (23.79%), Jagatsinghpur (21.83%), and Kendrapada (21.51%), which are also part of the priority districts under the OFSDP-II. The overall SC population in the priority districts accounts for about 17% of the total population of the State.

## 3) Other Backward Classes (OBC):

OBC is a collective term used by Government of India to categorize caste groups which are socially and economically backward and disadvantaged, which includes the SCs and STs. The Indian Constitution describes the OBCs as 'socially and educationally backward classes'. The Central List of OBCs for Odisha reckons 194 communities<sup>1</sup>, while the State list of Socially and Educationally Backward Classes of Orissa puts in place 209 communities<sup>2</sup>. Whereas, another Central List of OBCs for the State of Orissa reckons 197 communities within this class. As per that National Commission on Backward Classes, the Central List of OBCs lists 200 communities in Odisha<sup>3</sup>. As for population figures, there is no systematic data that has been collated on the demographics of 'Other Backward Classes'.

<sup>1</sup> [http://www.orissa.gov.in/stsc/OBC-List\\_Central.htm](http://www.orissa.gov.in/stsc/OBC-List_Central.htm)

<sup>2</sup> [http://www.orissa.gov.in/stsc/SEBC\\_List\\_Orissa.htm](http://www.orissa.gov.in/stsc/SEBC_List_Orissa.htm)

<sup>3</sup> [http://www.ncbc.nic.in/User\\_Panel/GazetteResolution.aspx?Value=mPICjsL1aLs9KFQF7Vtb%2fnFssWGD%2fStdwlkOM5kpWfdKSuE3CJbpty8RMjy3%2f%2fnxJ](http://www.ncbc.nic.in/User_Panel/GazetteResolution.aspx?Value=mPICjsL1aLs9KFQF7Vtb%2fnFssWGD%2fStdwlkOM5kpWfdKSuE3CJbpty8RMjy3%2f%2fnxJ)

**4) “Forest Dwellers” in Recognition of Forest Right Act:**

The Forest (Recognition of Rights) Act 2006 defines “the Forest Dwelling Scheduled Tribes and the Other Traditional Forest Dwellers” as members or communities who primarily reside in and who depend on the forests or forest lands for bona fide livelihood needs (Section 2 Part c of the Act). It is noteworthy to mention that the term “Forest Dweller” has a specific meaning in the context of the Indian forest legislation.

**5) “Indigenous People” in the Context of “Scheduled Tribes and Forest Dependents Plan Framework (STFDPF)” for the Project:**

STFDPF is to be prepared referring to the format provided in the World Bank’s OP 4.10 Annex C on Indigenous Peoples Plan Framework (IPPF). In consideration of the Word Bank’s OP 4.10, the Forest (Recognition of Rights) Act 2006, and the Indian/ Odisha contexts, following categories of the people who will be affected, particularly adversely affected, by project activities to be regarded as the target of IPPF for the Project.

- **Scheduled Tribes (ST)**
- **Scheduled Castes (SC)**
- **Other Backward Classes (OBC) minorities**
- **Forest Dwellers and Other Forest Dependants**

Basically, so called “Indigenous Peoples” as per the Word Bank’s definition (i.e. STs), “Forest Dwellers” as per the Forest (Recognition of Rights) Act 2006, and other forest dependents are included since the proposed Project will be mainly implemented in the forest areas through community institutions which by nature are the forest dependent communities/institutions.

The proposed Project regards both tribal and non-tribal communities who reside within and on the fringes of the forest areas and adversely affected by project activities to be the target of the IPPF. Since the targets of IPPF for the Project are not only “Indigenous Peoples” but also “Forest Dwellers/ Dependents”, therefore, the term “Scheduled Tribes and Forest Dependents Planning Framework (STFDPF)” will be adopted instead of the “Indigenous Peoples Plan Framework (IPPF)”. In case there are scheduled tribes and forest dependents to be the target of STFDPF, “Scheduled Tribes and Forest Dependents Plan (STFDP)” to be prepared for such stakeholders.

**(3) Selection of an Appropriate Frameworks for Environmental and Social Considerations**

The Project will not involve any sub-projects with significant adverse environmental impacts, nor will involve any loss of land, resettlement or livelihoods, it is proposed to ensure maximum positive and no negative environmental impact, and to guarantee social safeguard measures. Considering these points, for the purposes of developing a safeguards framework suitable to the Project and the local context, ESMSF and STFDPF are found to be appropriate. These frameworks are applicable to a broad range of socially marginalized, vulnerable and forest-dependent community groups. The ESMSF explains for a broad environmental and social framework, while the FDPF is specifically applicable to the ST, SC, OBC, forest dwellers, and other forest dependents found within and surrounding the project area.

**Required Framework for the Project**

Name of Framework	Brief Explanation
1. Environmental and Social Management System Framework (ESMSF)	To meet the requirements of the JICA Guidelines, a broad ESMSF is prepared to ensure that environmental/ social issues are considered and that various socially disadvantaged and forest dependent groups are recognized and consulted; their needs met and their rights recognized.
2. Scheduled Tribes and Forest Dependents Plan Framework (STFDPF)	To meet the requirements of the JICA Guidelines and in reference to OP 4.10 of the World Bank on Indigenous Peoples, STFDPF needs to be additionally prepared to be applied where the Project affects or interacts with such groups identified as “Scheduled Tribes and Forest Dependents” for the Project.

*Source: JICA Survey Team (2016)*

## 1.5 Target Group of ESMSF

The ESMSF will be applicable to all forest dependents within the project area and to all the project components identified within the project area. The following are the key groups that the ESMSF aims as its targets.

- Poor People/ Households
- Women Headed Households
- Landless
- Other Vulnerable People/ Households
- Forest Dependents (ST, SC, OBC, forest dwellers, other forest dependents)

The table below indicates indicative beneficiary selection criteria of target groups of the ESMSF to address environmental and social considerations.

**Indicative Beneficiary Selection Criteria of ESMSF Target Groups**

Activity	Proposed Beneficiary Selection Criteria	Implementing Body	PRI
Forest Management Activities	<p>1. Fundamental Criteria Needed to be Satisfied:</p> <ul style="list-style-type: none"> <li>- To have a keen interest in addressing the issues/problems or developing the potentials to utilize the forest resources.</li> <li>- To have a willingness to work as a group and participate fully in the Project activities</li> </ul> <p>2. Additional Selection Criteria Needed to be Matched (at least one):</p> <ul style="list-style-type: none"> <li>- To be located adjacent the sites where issues and problems are taking place or there are the potentials to develop and improve the utilization of forest resources.</li> <li>- The distance between the community and the sites should be in principle within the distance reachable by walking in reasonable time.</li> <li>- To be affected by the issues and problems thus suffering from substantial damages on the properties/resources in the community.</li> </ul>	<p>Vana Samrakshana Sena (VSS)</p> <p>Eco Development Committee (EDC)</p>	Gram Sabha
Livelihood /Community Development Activities	<p>1. Fundamental Criteria Needed to be Satisfied:</p> <ul style="list-style-type: none"> <li>-Have a keen interest in a business activity</li> <li>-Have a willingness to work as a group</li> </ul> <p>2. Additional Selection Criteria Needed to be Matched (at least one):</p> <ul style="list-style-type: none"> <li>- An adult man or woman who cannot take part in full day manual labour but can do light work</li> <li>- Woman head of household, widow, unwed Mother</li> <li>- An adult man and woman whose unemployed period more than 3 months in the preceding 12 months</li> </ul> <p>3. Additional Selection Criteria Needed to be Matched (based on specific project components/activities):</p> <ul style="list-style-type: none"> <li>- Those who can dedicate stipulated number of hours per day for project related activities: viz, SMC, forest management, bio-diversity conservation, livelihood, etc.</li> <li>- Those who live in an area within or in the fringe areas of forest areas (including protected areas such as wildlife sanctuaries)</li> </ul>	<p>VSS, SHG/ Cluster</p> <p>EDC, SHG</p>	Gram Sabha

Source: JICA Survey Team (2016)

## 1.6 Existing Environmental and Social Management Systems

### (1) Legal and Policy Framework for Environmental and Social Considerations in India

Overall, environmental and social safeguards policies and related implementing legislation in India do not deviate from the requirements of JICA Guidelines. The following tables outline key legislation and policy in India and Odisha and relevant to the Project.



**Table Legal and Policy Framework in India**

Law/ Policy	Description/ Outline	Responsible Ministry/ Agency
<b>A. Environment Protection and EIA</b>		
Environment (Protection) Act, 1986 and Amendment 1991	<ul style="list-style-type: none"> <li>• This is an umbrella regulation that concerns all aspects of environmental safeguards. This provides a framework for coordination among various central and state government authorities for protection and improvement of environment and prevention of hazards to human beings, other living creatures and property.</li> <li>• In all it is mandated to prevent environmental pollution in all its forms and to tackle specific environmental problems peculiar to different parts of the country.</li> </ul>	MoEF&CC Central and/or State Pollution Control Boards
Environment (Protection) Rules 1986 and Amendments	<ul style="list-style-type: none"> <li>• The Rules provide standards for emissions or discharge of environmental pollutants, prohibitions/ restrictions on the location of industries and on carrying-out processes and operations in different areas, procedure for taking samples and submission of samples for analysis and the form of laboratory report, providing information to authorities and agencies in certain cases, prohibition and restriction on handling hazardous substances in different areas and submission of environmental statement.</li> </ul>	MoEF&CC, Central and/or State Pollution Control Boards
EIA Notification 2006 and Amendments 2007, 2008, 2009, 2011 and 2012	<ul style="list-style-type: none"> <li>• This Notification provides procedures for conditions required for environmental clearance (EC), categorization of projects for EC, activities for EC and stages for EC, for construction of new projects or activities or the expansion or modernization of existing projects or activities listed in the Schedule</li> </ul>	MoEF&CC,
The National Green Tribunal Act 2010	<ul style="list-style-type: none"> <li>• This Act provides for the establishment of a National Green Tribunal to provide specialized medium for effective and prompt clearance of case related to environment protection, conservation of forests and other natural resources. This Act also includes enforcement of any legal right relating to environment and providing relief and compensation for damages caused to people or property due to violation of environmental laws or conditions specified while granting permission.</li> </ul>	National Green Tribunal (NGT: under MoEF&CC)
<b>B. Forest &amp; Wildlife</b>		
Indian Forest Act 1927	<ul style="list-style-type: none"> <li>• This Act was enacted to preserve forest cover and significant wildlife. It defines procedure for declaring Reserved Forest, Protected Forest and Village Forest.</li> <li>• Further, describes power to impose duty on timber and other forest-produce and to make rules to regulate transit of forest-produce, and collection of drift and stranded timber. The Act also has provision to impose penalties and procedures thereof.</li> </ul>	MoEF&CC State level Environment and Forest departments Implementing Agency
The National Forest Policy 1988	<ul style="list-style-type: none"> <li>• The policy was prepared with a national goal to have a minimum of 1/3 of the total land area of the country under forest or tree cover. Whilst in the hills and mountainous regions, to maintain 2/3 of the area under such cover to prevent erosion and land degradation and to ensure stability of the fragile eco-system.</li> <li>• The Policy provides for maintenance of environmental stability through preservation, restoration of ecological balance impacted by serious depletion of forests, preserving natural forests with vast variety of flora and fauna, check erosions/ degradations, and to minimize pressure to existing forests.</li> </ul>	MoEF&CC, State level Environment and Forest departments
Forest Conservation Act 1980 and Amendment 1988	<ul style="list-style-type: none"> <li>• The Act provides for conservation of forests and lays emphasis on restriction on de-reservation of forests or use of forest lands for non-forest purposes.</li> <li>• It also provides that any reserved forest can be reserved, any forest land may be used for non-forest purposes, any forest land could be assigned by way of lease or otherwise to any private person or to any authority, corporation, agency or any other organisation, any forest land may be cleared of trees, which have grown naturally, for the purpose of reforestation.</li> </ul>	MoEF&CC, State level Environment and Forest departments
The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006	<ul style="list-style-type: none"> <li>• The Act, commonly known as 'Forests Right Act'.</li> <li>• The Act seeks to recognize and bestow the forest rights and occupation in forest land among the forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations.</li> <li>• Two enabling Rules namely, Scheduled Tribes and other Traditional forest dwellers (Recognition of Forest Rights.) Rules, 2008 &amp; Scheduled Tribes and other Traditional forest dwellers (Recognition of Forest Rights), (Amended) Rules, 2012 have been formed to facilitate implementation of the provisions of the Act.</li> </ul>	Ministry of Tribal Affairs State Government
Wildlife (Protection) Act 1972 and Amendment 1993	<ul style="list-style-type: none"> <li>• This Act provides for protection of wild animals, birds and plants, prohibition on hunting any wild animal specified in Schedule I, II, III and IV, prohibition on picking, uprooting, of specified plants, constitution of Sanctuaries, National Parks and Closed Areas, prohibition on trade or commerce of wild animals, in Trophies, Animal Articles derived from Certain Animals.</li> <li>• The Act also empowers certain officials to investigate and impose penalties.</li> </ul>	MoEF&CC, State Wildlife department
Biological Diversity Act 2002	<ul style="list-style-type: none"> <li>• This is umbrella legislation aimed at conservation of biological resources and associated knowledge as well as facilitating access to them in a sustainable manner and through a just process.</li> </ul>	National Biodiversity Authority, Chennai State bio-diversity board

Law/ Policy	Description/ Outline	Responsible Ministry/ Agency
<b>C. Water, Air and Pollution</b>		
Water (Prevention and Control of Pollution) Act 1974 and Amendment 1988	<ul style="list-style-type: none"> <li>This Act provides for prevention and control of water pollution and the maintaining or restoring of wholesomeness of water. For this purpose, it provides for establishment of Boards, and confers them with powers and functions for the prevention and control of water pollution.</li> </ul>	Central and/or State Pollution Control Boards
Air (Prevention and Control of Pollution) Act 1981	<ul style="list-style-type: none"> <li>This Act provides for prevention, control and reduction of air pollution. The Act further provides for establishment of Boards, and assigning them with powers and functions towards prevention, control and reduction of air pollution.</li> </ul>	Central and/or State Pollution Control Boards
Rules and Notifications framed under the Environment (Protection) Act 1986	<ul style="list-style-type: none"> <li>The Hazardous Waste (Management &amp; Handling) Rules, 1989 amended in 2000</li> <li>The Manufacture, Use, Import, Export, Storage of Hazardous Microorganism, Genetically Engineered Organisms or Cells Rules, 1989.</li> <li>The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989, amended in 2000.</li> <li>The Environment Audit Notification, 1993</li> <li>The Coastal Regulation Zone Notification, 1991</li> <li>The Chemical Accidents (Emergency Planning, Preparedness &amp; Response) Rules, 1996</li> <li>The Biomedical Waste (Management &amp; Handling) Rules, 1998</li> <li>The Municipal Solid Wastes (Management &amp; Handling) Rules, 2000</li> <li>Recycled Plastics Manufactures and Usage Rules, 1998 amended in 1999</li> <li>Notification on Flyash (14th September 1999)</li> <li>The Noise Pollution (Regulation and Control Rules, 2000</li> <li>Ozone Depleting Substance (Regulation) Rules, 2000</li> <li>Batteries (Management &amp; Handling) Rules, 2001</li> </ul>	Central and/or State Pollution Control Boards
<b>D. Land, Resettlement and Tribes</b>		
The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013	<ul style="list-style-type: none"> <li>This Act provides for a humane, participative, informed and transparent process for land acquisition for the purpose of industrialization, development of essential infrastructural facilities and urbanization with the least disturbance to the owners of the land and other affected families.</li> <li>This Act ensures with consultation with institutions of local self-government and Gram Sabhas.</li> <li>This Act regulates land acquisition and lays down the procedure and rules for granting compensation, rehabilitation and resettlement to the affected families.</li> <li>It ensures a just and fair compensation to the affected families whose land has been acquired or proposed to be acquired or are affected by such acquisition and makes adequate provisions for their rehabilitation and resettlement. It ensures cumulative outcome of compulsory acquisition, and that affected persons become partners in development, thereby leading to improvement in their post-acquisition social and economic status.</li> </ul>	Department of Land Resources, Ministry of Rural Development Ministry of Tribal Affairs
Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act 2006	<ul style="list-style-type: none"> <li>This is an Act to recognize and bestow forest rights and occupation in the forest land to the forest dwelling scheduled tribes and other forest dwellers, who have been living in such forests for generations, but their rights could not be recorded.</li> <li>Thus, the recognized rights include responsibilities and authority for sustainable use and conservation of bio-diversity and maintenance of ecological balance, thus strengthening the conservation regimes of the forests while ensuring livelihood and food security to the forest dwelling communities.</li> </ul>	Forest Department Ministry of Tribal Affairs
Scheduled Caste and Scheduled Tribes (Prevention of Atrocities) Act 1989	<ul style="list-style-type: none"> <li>This Act aims to prevent the offences of atrocities against the members of the Scheduled Castes and the Scheduled Tribes. The Act also provides for Special Courts for the trial of such offences and for the relief and rehabilitation of the victims of such offences.</li> </ul>	Ministry of Social Justice and Empowerment Ministry of Tribal Affairs
National Policy on Safety, Health and Environment at Work Place	<ul style="list-style-type: none"> <li>The Government of India is committed to regulate all economic activities for management of safety and health risks at workplaces and to provide measures to ensure safe and healthy working conditions for every working man and woman in the nation. This Policy gives leverage to every Ministry or Department to work-out their own detailed policy relevant to their working environment as per the guidelines on the National Policy.</li> <li>This Policy is devised based on the Directive Principles and international instruments. The Directive Principles described in the Constitution are as follows: <ul style="list-style-type: none"> <li>Securing the health &amp; strength of employees, men and women</li> <li>Tender age of children are not abused</li> <li>Citizens are not forced by economic necessity to enter any vocation unsuited to their age or strength</li> <li>Just &amp; humane conditions of work and maternity relief are provided</li> <li>Govt. shall take steps to secure participation of employee in the management</li> </ul> </li> </ul>	- The Ministry of Labour and Employment
Land Acquisition Act 1894 and amendment 1985	<ul style="list-style-type: none"> <li>The Land Acquisition Act, 1894 was put-together by the colonial rule during the British Rule, which governed the process of land acquisition in India. The Government acquired lands for some public purposes after paying the owners of land government-determined compensation to cover losses</li> </ul>	Revenue Department, State Government

Law/ Policy	Description/ Outline	Responsible Ministry/ Agency
	<ul style="list-style-type: none"> <li>incurred by landowners from surrendering their land to the agency.</li> <li>This Act has been replaced by the new Act, "The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013". However, the stipulations of this law is still effective in some contexts.</li> </ul>	
National Resettlement and Rehabilitation Policy (NRRP) 2007	<ul style="list-style-type: none"> <li>The government, through this Policy, specified processes through people can be compensated as well as minimum levels of compensation that should be paid to the affected families. This Policy provided for benefits and compensation viz., land, house, monetary compensation, skills training and preference for jobs, and the specified criteria for eligibility, to people displaced by land acquisition, or any other involuntary displacement, and created project-specific, state and national authorities to formulate, implement, and monitor the rehabilitation and resettlement process.</li> <li>This Policy has been replaced by the new Act, "The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013"</li> </ul>	Revenue Department, State Government
A People Centred Service Delivery Policy	<ul style="list-style-type: none"> <li>There is no one single policy or legal regulation at the Centre or States level that can claim to be 'people centred delivery policy'. On the contrary, there are a number of Ministries, such as Ministry of Rural Development, Ministry of Labour and Employment, Ministry of Social Justice and Empowerment, Ministry of Tribal Affairs, Ministry of Health and Family Welfare, Ministry of Human Resource Development, and their concerned departments at the Centre and State levels, among others, that extend people centred services through their various programs related to health care, socio-economic development, vocations and employment, education, social justices, etc., especially to the poor and under-privileged citizens of India.</li> </ul>	Various Ministries
Social Audit Policy	<ul style="list-style-type: none"> <li>Social audits were made statutory in a 2005 Rural Employment Act and government also issued the Social Audit Rules in 2011 under the MGNREGA Act. The Social audits are normally supervised by autonomous bodies consisting of government and non-government representatives. Gram Sabhas were empowered to conduct Social Audits, after the 73rd Amendment of the Constitution, in addition to their other functions. No central policy or regulation exists that makes accounting audit and social audit mandatory.</li> </ul>	Ministry of Rural Development

Source: Compiled by JICA Survey Team (2016)

### Legal and Policy Framework in Odisha

Law/ Policy	Description/ Outline	Responsible Ministry/ Agency
<b>A. Environment Protection and EIA</b>		
	<ul style="list-style-type: none"> <li>The State Government will adhere to the National Laws, Rules, and Notifications pertaining to environment protection and EIA.</li> </ul>	Department of Forests and Environment
<b>B. Forest &amp; Wildlife</b>		
The Orissa Forest Act, 1972	<ul style="list-style-type: none"> <li>The Orissa Forest Act defines procedure for declaring Reserved Forest, Protected Forest and Village Forest.</li> <li>It also describes powers to impose duty on timber and other forest-produce and to make rules to regulate transit of forest-produce, and collection of drift and stranded timber. The Act also has provision to impose penalties and procedures thereof.</li> <li>Two forest acts were applied in the State of Orissa i.e. the Madras Forest Act, 1882 covering the Districts of Koraput, Ganjam and part of Phulbani districts (Baliguda and G.Udayagiri Taluks) and the Indian Forest Act, 1927 for the remaining area of the State.</li> <li>Generally, the sequence followed in this Act is of the Indian Forest Act though this Act has freely drawn from the Madras Forest Act 1882 and other existing State Forest Acts for convenience.</li> </ul>	Department of Forests and Environment
The Wildlife (Protection) (Orissa) Rules 1974	<ul style="list-style-type: none"> <li>The purpose of these Rules is to carry out the provisions of the Wildlife (Protection) Act, 1972.</li> <li>The Act provides for hunting for wild animals, protection of specified plants, sanctuaries, national parks, and closed areas. It defines powers to protect and detect offences against wild animals and plants</li> </ul>	Department of Forests and Environment
The Wild Birds & Animals Protection Act, 1912	<ul style="list-style-type: none"> <li>This Act applies to the birds and animals specified in the schedule of the Act, when in their wild state.</li> <li>It is un-lawful to (a) capture or to kill such bird or animal, (b) to sell or buy, or offer to sell or buy, or to possess, any such bird or animal which has not been captured or killed if any plumage has been taken from any such bird captured or killed during such close time, to sell or buy or offer to sell or buy or to possess such plumage.</li> <li>The Act imposes punishment with fine.</li> </ul>	Department of Forests and Environment

Law/ Policy	Description/ Outline	Responsible Ministry/ Agency
The Orissa Communal Forest and Private Lands (Prohibition of Alienation) Act, 1948	<ul style="list-style-type: none"> <li>The Act prevents and bans landlord to sell, mortgage, lease or otherwise assign or alienate or convert into raiyati land any communal forest or private land or create occupancy rights therein, without the previous sanction of the Collector.</li> </ul>	District Collector(s)
The Orissa Kendu Leaves (Control of Trade) Act, 1961 Orissa Act of 1961 [1. O. Exty. Gazette No.- D/3.1.1962 Notification No. 19, Legis D/3.1.1962]	<ul style="list-style-type: none"> <li>This Act provides restrictions on the purchase of Kendu leaves. It specifies that No Person other than the Government; or its authorized officer; or an agent can purchase or transport Kendu leaves.</li> <li>Growers of Kendu leaves are permitted to transport their leaves from any place within the unit, to any other place in that unit; for the purpose of sale to the Government or authorized agent to purchase the same from him, otherwise will be considered violation of the provisions of this Act.</li> </ul>	Department of Forests and Environment
The Orissa Forest Produce (Control of Trade) Act, 1981 [ Orissa Act 22 of 1981]	<ul style="list-style-type: none"> <li>The main objective of this Act is to prevent smuggling of "forest produce" and to provide for State monopoly in specified forest produce.</li> <li>Forest produce includes: timber of any of the species, Bamboos of all species, Khair, Catechu (katha) Catechin (Cutch), Ganduli Gum, Dharua Gum, Khair Gum, Babul Gum, Sal Resin, Salai Resin, Roshia Grass, Rosia Grass Oil, lac in all forms, Shelac, Mohua Flowes, Mohua seeds, Chironi Myrobalans, Tassar, Cocoons, Sandal wood, Tamarind, Siali Leaves, Kusu, Seeds, Karanja Seeds, Siali Fibres, Sal Seeds, Hill Brooms and such other produce as may be notified by the State Government from time to time.</li> </ul>	Department of Forests and Environment
The Orissa Village Forests Rules, 1985	<ul style="list-style-type: none"> <li>These rules were put together for management of village forests.</li> <li>For this purpose, the rules provide for establishment of Village Forest Committees comprising of Sarpanch(s) of the concerned Gram Panchayat(s) and Ward Member(s) belonging to the village for which the Village Forest is notified, the Forester(s) Revenue Inspector(s) concerned and such other selected persons; not less than 3 and not more than 5 in the said village.</li> <li>The Village Forest Committees shall suitably demarcate the boundaries of the village forest with the help of forester and revenue inspector.</li> <li>No person is permitted to cut, lop, injure appropriate or remove any tree.</li> </ul>	Department of Forests and Environment
Orissa Forest Sector Vision 2020	<ul style="list-style-type: none"> <li>The Orissa Forest Sector Vision lays emphasis on forest planning and operations that are sustainable and balance the environmental services, for local use, and commercial extraction; recognition and protection of environmental services from forests; local subsistence and forest based livelihoods have the first charge on forests, especially in the scheduled areas based on strong incentives for local participation; protection of customary rights and usage; operations and procedures are made simple, transparent and effective, and regulatory and transaction costs are low.</li> </ul>	Department of Forests and Environment
The Orissa Forest (Grazing of Cattle) Rules, 1980	<ul style="list-style-type: none"> <li>The Forest Department may declare any forests area to be "closed" to grazing from time to time, which will be notified in Oriya language at prominent places in the surrounding villages and also by proclamation by beat of drums in these villages, which will also notify the period of closure and the kind of animals to which the area is closed.</li> <li>Grazing of cattle in Protected Forests shall be free without permit in protected forests except if forest area is closed to grazing.</li> <li>Grazing of cattle in a Reserve forest is not permitted, except in the open areas and in accordance with a permit. Goat or sheep are not permitted to browse in reserve forest, forests notified as per this Act, and closed forest areas.</li> </ul>	Department of Forests and Environment
<b>C. Water and Air</b>		
Orissa Water (Prevention and Control of Pollution) Rules, 1983	<ul style="list-style-type: none"> <li>This Rule was created to provide for prevention and control of water pollution and the maintaining or restoring of wholesomeness of water. The State Pollution Control Boards have been conferred with powers and functions for the prevention and control of water pollution.</li> </ul>	Odisha State Pollution Control Board
Orissa Air (Prevention and Control of Pollution) Rules 1983	<ul style="list-style-type: none"> <li>This Rule was created to provide for prevention, control and reduction of air pollution. The State Pollution Control Board is conferred with powers and functions towards prevention, control and reduction of air pollution.</li> </ul>	Odisha State Pollution Control Board
<b>D. Land, Resettlement and Tribes</b>		
Odisha Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules 2015	<ul style="list-style-type: none"> <li>The State Government has prepared this Rule in line with the powers conferred in sub-section (1) of Section 109 and published as required by Section 112 of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (30 of 2013), and extends all provisions mentioned in the Act-2013 to the affected families.</li> </ul>	The State Government District Collector(s)

Law/ Policy	Description/ Outline	Responsible Ministry/ Agency
“The Orissa Government Land Settlement Act, 1962 [The Orissa Act 33 of 1962]”	<ul style="list-style-type: none"> <li>• This Act provides for settlement of Government Land in the State of Orissa.</li> <li>• The Act provides power to reserve land for communal and other public purpose, levy of Salami<sup>4</sup>, charging of rent, application fees and other fees and the authority to dispose of such applications are different according to the laws and Rules in force in different parts of the State.</li> <li>• The present Bill is therefore proposed to be enacted as a general legislation formulating a set of uniform principles regarding lease of Government waste lands overriding provisions of various Acts, Rules, Orders, customary practices and usage in force in various parts of the State instead of tinkering with the individual laws with the primary objective of governing the settlement of waste lands in a planned manner uniformly throughout the State.</li> </ul>	Revenue and Disaster Management Department

Source: Compiled by JICA Survey Team (2016)

## (2) Environmental Clearance and Forest Clearance Procedures in India

The proposed Project does not require any environmental / forest clearances. However, the general processes of the environmental clearance and the forest clearance are described below

### Environmental Clearance

Under EIA related laws and regulations of India, all projects and activities requiring “Environmental Clearance” (EC) are broadly categorized into two categories - Category A and Category B, based on the spatial extent of potential impacts and potential impacts on human health and natural and man-made resources.

**Category ‘A’** projects/ development activities necessarily have to carry-out EIA studies along with conducting the “Public Hearing” as per the procedure stipulated in the notification, and the environmental clearance is needed from the Central Government or MoEF&CC.

**Category ‘B’** projects goes to the state authority as mentioned in EIA notification 2006 and decentralized procedure is done. The Government of India has constituted the State Expert Appraisal Committee (SEAC) and State Environmental Impact Assessment Authority (SEIAA) committee for decentralized procedure of environmental clearance. The category ‘B’ projects are further divided into category ‘B1’ (projects that require submitting an EIA report) and ‘B2’ project activities which don’t require EIA report.<sup>5</sup>

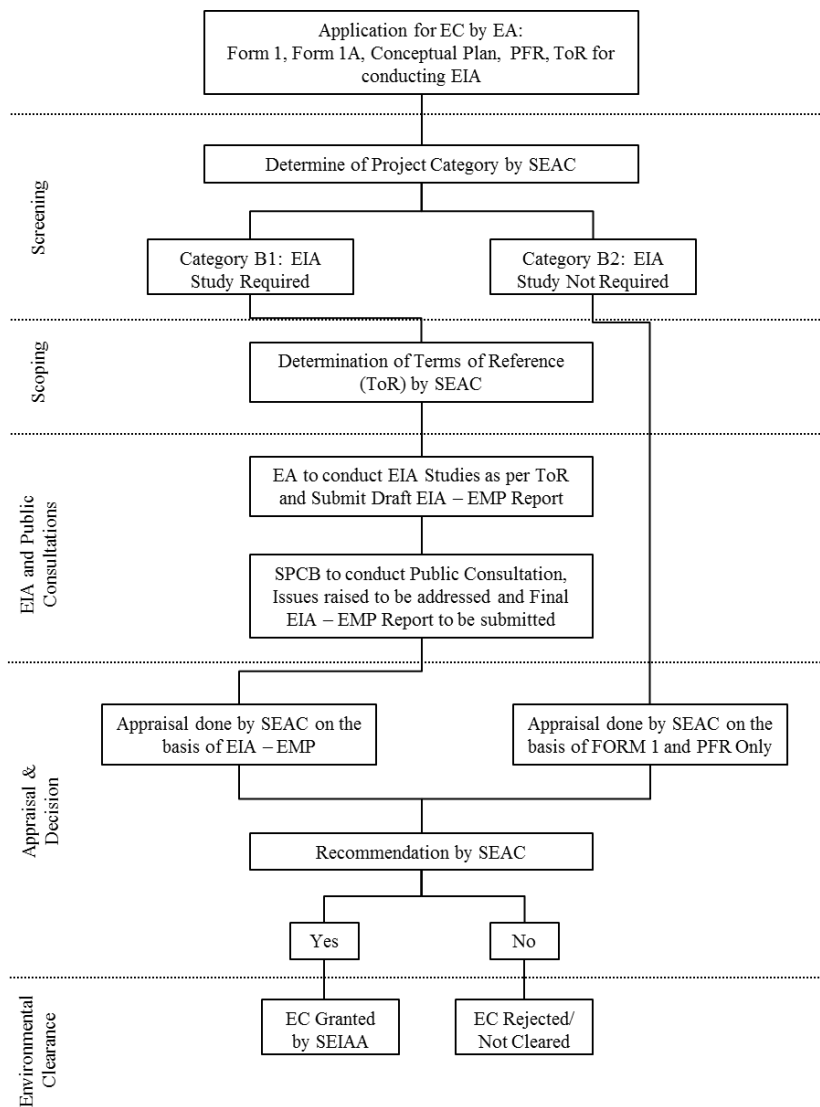
The detailed stages prior to environmental clearance are highlighted below.

The stages in the environmental clearance procedure as per EIA notification 2006 is described in the following figure. For convenience, stages of EIA have been divided into following 6 stages in this report.

- |              |                            |
|--------------|----------------------------|
| 1. Screening | 4. Public Consultation     |
| 2. Scoping   | 5. Environmental Clearance |
| 3. EIA Study | 6. Monitoring Clearance    |

<sup>4</sup> Salami, a Persian term, is a form of tax paid to the Government by the allottee

<sup>5</sup> Sources: EIA Notification 2006 and <http://www.sciencebeing.com/2012/10/eia-notification-and-its-implementation-in-india/>



### Prior Environmental Clearance Process for Category B Project

Source: EIA Guidance Manual for Building, Construction, Townships and Area Development Projects 2010, MoEF

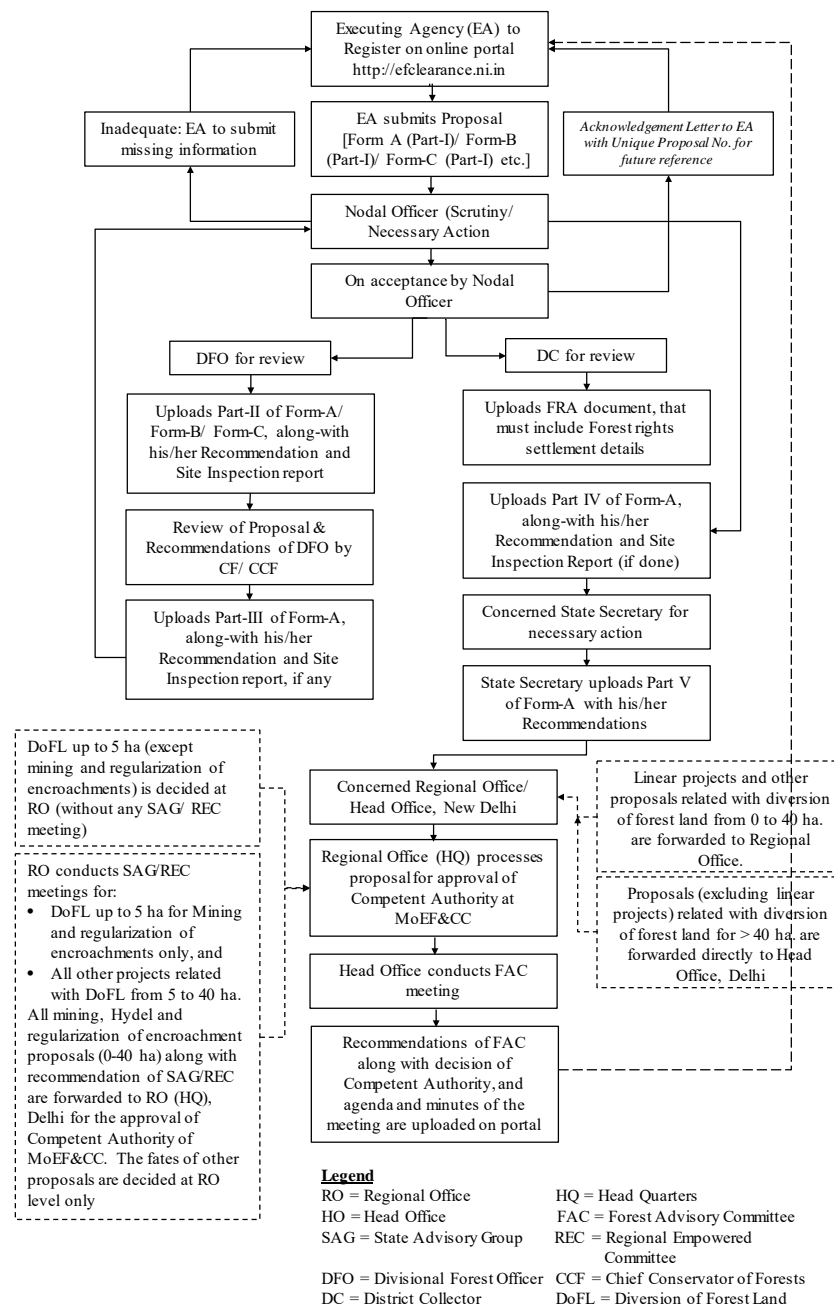
#### Forest Clearance

Forest Clearance from the statutory authority will be required if forest area is to be diverted for the project (including, notified roadside plantations). For this purpose, application is submitted to the State Government, which in turn recommends the case to MoEF&CC.

The process of Forest Clearance consists of 2 stages: First Stage Clearance and Second Stage Clearance. In the First Stage Clearance, the application could be granted “In Principle Approval”, or it could be subject to fulfilment of conditions, if applicable, which could include: deposition of Net Present Value of Forest (@ INR. 4.38 to 10.43 lakhs/ha), money for Compensatory Afforestation, plantation of at least double the no. of trees felled, submission of Plan for afforestation, certificate of compliance under FRA, etc. During this phase, no activity will be allowed until final clearance accorded and the State can stipulate additional conditions. <sup>6</sup> In the Second Stage Clearance process, it will be ensured if the conditions prescribed have been fulfilled.

The following figure depicts the process of forest clearance

<sup>6</sup> Source: [http://www.teriuniversity.ac.in/mct/pdf/new/environment/Infrastructure\\_development\\_and\\_environment.pdf](http://www.teriuniversity.ac.in/mct/pdf/new/environment/Infrastructure_development_and_environment.pdf)



Source: Compiled by JICA Survey Team (2016) based on information from MoEF&CC web-site <http://www.moef.gov.in/citizen/specinfo/forflow.html>

### Forest Clearance Process

#### (3) Environmental and Social Management System of the Executing Agency

OFSDS, as the executing agency (EA), is responsible for entire project implementation, while the VSS and their respective Gram Sabha are PRIs to control and support project activities in their lands from community perspective.

##### 1) OFSDS:

While certain safeguard elements/ procedures are included in on-going government programs in accordance with Indian legislations, OSFDS does not have a comprehensive ESMS in place for the screening, management and monitoring of environmental and social risks of its standard operations and programmes. There is participation of communities in implementation of various activities, and there is some evaluation of programmes including covering the involvement of communities. However,

information disclosure and consultation with public are considered to be somewhat limited in the aspect of environmental and social safeguards.

## 2) Community Level:

The VSS within village is primarily responsible for the implementation and support of various project activities. All of the sub-projects aim at positive social and environmental impacts such as livelihood development or forest improvement as such it does not necessarily have a ESMS in place. At this level, awareness to avoid adverse social and environmental impacts and motivation to provide timely and appropriate support to project activities are imperative. However, such capacity seems to be limited.

Key gaps and shortfalls identified in each institution in comparison to international standards as indicated in the JICA Guidelines are summarised below.

### **Key Gaps and Shortfalls in Comparison to the Standards in the JICA Guidelines**

	<b>Executing Agency/ Body</b>	<b>Key Gaps and Shortfalls</b>	<b>Possible Gap Filling Measures</b>
1	Executing agency	<ul style="list-style-type: none"> <li>- Limited prior consultation with project-affected communities</li> <li>- Inadequate assessment in relation to environmental and social consideration is carried out prior to implementation (weak baseline for impact evaluation)</li> <li>- Limited procedures for environmental screening and subsequent management of environmental risks associated with small-scale construction and other activities with potential adverse impacts</li> <li>- Weak monitoring of safeguard processes and procedures</li> </ul>	<ul style="list-style-type: none"> <li>- Usage of ESMSF and STFDPF</li> <li>- Implementation of Capacity Development Plan for Environmental and Social Safeguards (1.10)</li> <li>- Hiring of Environmental and Social Consideration Expert(s)/ Specialist</li> </ul>
3	PRI: VSS/ Gram Sabha	<ul style="list-style-type: none"> <li>- Limitation in taking ownership of project activities within their areas.</li> <li>- Lack of regular participation of the communities to VSS/ EDC, Gram Sabha meetings, therefore there is not much of prior consultation with project-affected communities.</li> <li>- Limitation in addressing the concerns of ST, SC and OBCs.</li> <li>- Limitation in awareness of potential adverse environmental impacts.</li> <li>- Limitation in understanding of safeguard processes and procedures.</li> </ul>	<ul style="list-style-type: none"> <li>- Usage of ESMSF and STFDPF</li> <li>- Implementation of Capacity Development Plan for Environmental and Social Safeguards (1.10)</li> </ul>

*Source: JICA Survey Team (2016)*

## 1.7 Environmental and Social Risks and Mitigation Measures

The Project will have mainly positive environmental and social impacts. The outline below lists broad project benefits and positive environmental and social impacts.

- a. Forest / Natural and Physical Capital Benefits
  - Improved forest quality and quantity
  - Improved environmental services derived from forests such as improved watershed protection, reduced soil erosion
  - Construction/Improvement of community infrastructure and facilities
- b. Social Capital Benefits
  - Strengthened community institutions
  - Improved connections and networks for SHGs
  - Empowerment and reduced drudgery of women
- c. Financial Capital Benefits
  - Increased incomes
  - Direct and indirect employment opportunities arising from project activities
  - Diversification of income sources and reduced financial risk
  - Improved access to credit
- d. Human Capital Benefits
  - Increased technical capacity for sustainable management of forests
  - Increased entrepreneurial and business management capacity of SHGs
- e. Improved Structures and Processes
  - Increased participation in community development planning and activities
  - Increased participation of local people in forest management
  - Improved capacity of government departments and extension service delivery



However, the Project potentially could also bring a number of adverse environmental impacts. The following table presents environmental and social risks and mitigation measures by component.

### Summary of Adverse Environmental / Social Risks and Mitigation Measures

Activities	Potential Environmental and Social Impact	Possible Mitigation Measures
Preparatory Works	<p><u>Social Impact:</u></p> <ul style="list-style-type: none"> <li>- Conflicts at community level</li> <li>- Micro planning could lead to increased conflict over the sustainable usages of natural resources (vis-a-vis open usage by communities)</li> </ul>	<ul style="list-style-type: none"> <li>- Participatory procedures for micro planning, screening of sub-projects and avoidance of major impacts</li> <li>- Procedural steps for ensuring adequate consultation and participation of vulnerable groups in micro planning</li> <li>- Promotion of best-practice participatory approaches in the micro planning</li> </ul>
Sustainable Forest Management	<p><u>Environmental Impact:</u></p> <ul style="list-style-type: none"> <li>- Impacts from construction/ earthwork activities including air (dust), water (siltation of water bodies), soil (soil contamination, erosion, and loss), local fauna and flora, noise pollution, waste disposal etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Participatory procedures for micro planning, screening of sub-projects and avoidance of major impacts</li> <li>- Proper design and planning of infrastructure/ earthworks to minimize environmental risks</li> <li>- Community-based/Participatory land/resource use planning</li> </ul>
	<ul style="list-style-type: none"> <li>- Use of exotic and invasive species may lead to a loss of biodiversity and other adverse impacts on forest ecology</li> </ul>	<ul style="list-style-type: none"> <li>- The project will exclusively promote the planting of native species for eco-restoration</li> </ul>
	<p><u>Social Impact:</u></p> <ul style="list-style-type: none"> <li>- Possible loss of customary/traditional knowledge/ resource usage management/practices as communities are trained in formal management approaches and standard technical silvicultural practices</li> <li>- Loss of customary land/resource access and use</li> <li>- Increased developmental dependency</li> </ul>	<ul style="list-style-type: none"> <li>- Documentation and integration of traditional forest management practices, knowledge in the micro plan.</li> <li>- Participatory selection of planting species</li> <li>- Community-based/participatory land/resource use planning</li> <li>- Local regulations</li> </ul>
Infrastructure Development	<p><u>Environmental Impact:</u></p> <ul style="list-style-type: none"> <li>- Impacts from construction activities including air (dust), water (siltation of water bodies), soil (soil contamination, erosion, and loss), local fauna and flora, noise pollution, waste disposal etc.</li> <li>- Litter/waste, soil/water pollution from building facilities</li> </ul>	<ul style="list-style-type: none"> <li>- Participatory procedures for micro planning screening of subprojects and avoidance of major impacts</li> <li>- Proper design and planning of infrastructure activities to minimize environmental risks</li> <li>- Specific measures and disposal for dealing with litter and other waste produced</li> <li>- Community-based/Participatory land/resource use planning</li> </ul>
	<p><u>Social Impact:</u></p> <ul style="list-style-type: none"> <li>- Potential loss of customary/traditional knowledge as communities are trained in formal management approaches</li> <li>- Loss of customary land/resource access and use</li> <li>- Resource use conflicts e.g. over wells and other water supply/sanitation facilities</li> <li>- Increased developmental dependency</li> </ul>	<ul style="list-style-type: none"> <li>- Participatory procedures for planning, social assessment, screening of sub-projects and avoidance of major impacts</li> <li>- No use of private land or resettlement for Community infrastructures</li> <li>- Community involvement and employment in all aspects of construction, operation and maintenance</li> <li>- Prioritization of vulnerable groups as beneficiaries</li> </ul>
Livelihoods/ Community Development	<p><u>Environmental Impact:</u></p> <ul style="list-style-type: none"> <li>- Unsustainable exploitation of NTFPs</li> </ul>	<ul style="list-style-type: none"> <li>- Participatory development of sustainable harvesting quotas and regulations</li> </ul>
	<p><u>Social Impact:</u></p> <ul style="list-style-type: none"> <li>- Social exclusion/elite capture</li> <li>- Inequitable benefit sharing</li> <li>- Resource use conflicts e.g. over wells and other water supply/sanitation facilities</li> <li>- Increased developmental dependency</li> <li>- Gender issues</li> <li>- Loss of traditional knowledge</li> </ul>	<ul style="list-style-type: none"> <li>- Community involvement and employment in all aspects of construction, operation and maintenance</li> <li>- Corpus fund to ensure sustainability of investment</li> <li>- Clear and equitable beneficiary selection and prioritizing forest dependent poor and vulnerable households</li> <li>- Selection of female beneficiaries with deliberate attempts to empower women</li> </ul>

Source: JICA Survey Team (2016)

**Attachment 1** shows preliminary results of scoping for pollution, national environment, social environment, health and safety, and emergency risks, in pre-construction, during construction, and operation phases for the overall Project.

## 1.8 Framework and Procedures of ESMSF

### (1) Overview of the ESMSF Procedures

The proposed procedure for environmental and social considerations in the Project is summarised in the table below.

**Overview of ESMSF Procedures**

	Project Stage	Safeguard Activity	Suggested Guidance to be Developed	Developer of Guidance
1	VSS selection and preliminary consultation	<ul style="list-style-type: none"> <li>- Beneficiary Selection</li> <li>- Ensuring no deserving communities are left out</li> <li>- Information Disclosure and Free Prior Informed Consultation</li> <li>- Establishment of broad community support</li> </ul>	<ul style="list-style-type: none"> <li>- Guidance Note to ensure social and environmental safeguard.</li> <li>- Selection criteria reflecting the social-environmental safe guard perspective</li> <li>- Selection to be done in a public meeting of people's institution placed by the Project (e.g., VSS/ EDC/ Gram Sabha)</li> <li>- Consultation and participation plan</li> </ul>	- PMU will develop required guidance documents with assistances of the environmental and social expert directly hired by PMU and the environmental and social consideration expert of the Project Management Consultant (PMC)
2	Baseline Surveys	- Social Assessment	- Social Assessment Plan	
3	Micro Planning and Subproject Development	<ul style="list-style-type: none"> <li>- Process of micro plans to be participatory to reflect on the voices of the community members</li> <li>- Screening and selection of the activities with reference to the subproject exclusion criteria</li> <li>- Subproject categorisation as per the JICA Guidelines.</li> <li>- Participatory environmental and social assessment for confirmation of the screening results and finalization of the activities to be undertaken by VSSs/SHGs</li> </ul>	<ul style="list-style-type: none"> <li>- Micro Planning Guidance Note</li> <li>- Participatory Environmental and Social Assessment (ESA) Plan with ESA format</li> </ul>	
4	Subproject Implementation	<ul style="list-style-type: none"> <li>- Community participation in project activities</li> <li>- Screening and selection of the activities with reference to the safeguard checklist</li> <li>- Participatory environmental and social assessment for confirmation of the screening results and finalization of the activities to be undertaken by VSSs/SHGs</li> </ul>	<ul style="list-style-type: none"> <li>- Guidance Note to ensure social and environmental safeguard.</li> <li>- Participatory Environmental and Social Assessment Plan with ESA format</li> <li>-</li> </ul>	
5	Monitoring and Reporting	- Through participatory M&E mechanism the impact of the project activities will be monitored by the executing agency	<ul style="list-style-type: none"> <li>- Participatory M&amp;E Guidance Note</li> <li>- Monitoring Sheet</li> </ul>	
6	Grievance Procedures	- Through the project's institutional structure	- Institutional responsibilities for addressing grievances	

Source: JICA Survey Team (2016)

## (2) Institutional Framework for ESMSF

**ESMSF will be implemented through existing institutional structure of the Project** The table below highlights institutional structure for ESMSF with key environmental and social management roles and responsibilities.

### Institutional Structure for ESMSF

Institution	Role in the Project	(additional) Role and/or Responsibility in ESMSF
Executing Agency (OSFDS) to continue to function and manage OFSDP-II		
High Power Committee (HPC)	- Highest decision making body	- Facilitation and coordination with various line departments and other agencies - Provide directions and advice to PMU to ensure smooth and efficient project implementation of environment and social assessment
Governing Body (GB) of OSFDS	- Decision making body	- Review functioning of PMU, with regards to implementation of environment and social assessments, management plans and monitoring programs - Guidance to PMU in preparation of proposals, and various components of environment and social assessment activities
PMU	- Project implementation, supervision and monitoring of all activities. - Documentation and reporting.	- Owner and implementation of the ESMSF/ STFDPF - Report to concerned departments in the State Government as well as to JICA in relation to environmental and social consideration - Information disclosure including elaboration of project information brochures and project homepage. - Consultation and guidance to DMU/FMUs, and field level officers on information disclosure and consultation. - Ensure free, prior and informed consultation. - Development of Management Information System (MIS). - Development of approach and guidance for micro planning. - Training on micro planning to field level officers. - Technical guidelines for beneficiary selection, design of component technical approaches, safeguard checks/guidelines for particular activities (if required) - Development of monitoring forms, review of monitoring data, reporting, assistance with evaluations - Review of participatory Environmental and Social Assessments - Performance of due diligence follow-up - Guide, instruct, prepare guidelines, establish and operate M&E, GIS/ MIS, dissemination of project information, hand-holding support in the field for all project activities
DMUs	- Assist PMU in implementation of project activities - Coordinate with subject matter experts	- Supervise project activities of FMUs - Supervise works carried-out by partner NGOs and Resource organisations - Facilitate convergence at divisional level
FMUs	- Assist DMUs and PMU in implementation of project activities - Coordinate with Gram Sabha and animators with organisation of project activities, ensure appropriate beneficiary selection, promotion of convergence, etc.	- Undertake project monitoring and reporting, provide logistical support for independent evaluations. - Coordinate with Gram Sabha to select sub-projects with screening procedures and to conduct participatory Environmental and Social Assessments (ESA). - Support and encourage EDC/VSS for micro planning at village levels, finalization of micro plans. - Conduct free, prior and informed consultation, and due diligence checks
Field Level Officers	- Assist Gram Sabha and implementing bodies for implementation of project activities. - Assist Gram Sabha with organisation of project activities, ensuring appropriate beneficiary selection, promotion of convergence, etc.	- Support Gram Sabha with project monitoring and reporting, logistical support for independent evaluations. - Assist Gram Sabha to select sub-projects with screening procedures. - Support Gram Sabha to conduct participatory Environmental and Social Assessments (ESA). - Support EDC/VSS for micro planning at village levels, finalization of micro plans. - Support OSFDS for free, prior and informed consultation, and due diligence checks.
PRI (Local Self-Government)		
Gram Sabha	- Assist the Project in selecting target beneficiaries - Clarify local needs and expectations on the Project	- Conceive and raise local awareness on environmental and social considerations. - Provision of support in micro planning activities at village level. - Participating in Environmental and Social Assessments (ESA). - Supporting OSFDS for free, prior and informed consultation, and due diligence checks.

Source: JICA Survey Team (2016)

Overall coordination and support for ESMSF will be provided through the PMU at OFSDS and information related ESMSF will be centrally managed by the PMU. PMU will be responsible to report to concerned departments in the State Government as well as to JICA in relation to environmental and social consideration. Within OFSDS, the Project Director (PD) at PMU will hold central responsibility for ensuring ESMSF in the Project,

Under the supervision of PD, his/her deputies (Joint Project Directors: JPDs) will serve as Environmental and Social Safeguard Directors for activities in each designated work field. The Deputy Project Director (DPD Concurrent Monitoring & Evaluation Studies) will serve as Environmental and Social Safeguard Manager to conduct overall management of ESMSF monitoring and ESMSF related information for the Project at the PMU level.

Further, selected DMU officers will serve as Environmental and Social Safeguard Chief for the project implementation at DMU level. Selected FMU officers will serve also as Environmental and Social Safeguard in-Charge for the project implementation at FMU level to provide hands-on assistance to members of Gram Sabhas and VSSs who will be the Environmental and Social Safeguard Focal Person from the perspective of PRI.

An Environmental and Social Consideration Expert is planned to be directly hired by PMU during the preparatory stage, to support PMU for preparation and updating of ESMSF/STFDPF. In addition, an Environmental and Social Consideration Specialist is planned to be deployed under the Project Management Consultant to assist PMU on environmental and social consideration issues of the Project. The Environmental and Social Consideration Expert is expected to handover /transfer his tasks and outputs to the Environmental and Social Consideration Specialist through PMU.

#### **Individual Role and Responsibility for ESMSF**

<b>Institution/ Title</b>		<b>Role and Responsibility</b>
PMU		<ul style="list-style-type: none"> <li>- Overall coordination and promotion of ESMSF/FDPF compliance</li> <li>- Overall responsible for ensuring ESMSF in the Project.</li> <li>- Responsible to centrally manage information related to ESMSF.</li> <li>- Responsible to report to concerned departments in the State Government as well as to JICA in relation to environmental and social consideration</li> </ul>
<b>Position</b>	<b>For ESMSF</b>	<ul style="list-style-type: none"> <li>- Responsible for implementation of ESMSF for their activities in each designated work field.</li> <li>- Responsible for monitoring all the field level activities relating ESMSF.</li> <li>- Responsible for examination of safeguards compliance.</li> </ul>
JPDs	Environmental and Social Safeguard Directors	
DPD Concurrent Monitoring & Evaluation Studies	Environmental and Social Safeguard Manager	<ul style="list-style-type: none"> <li>- Responsible for conducting overall management of ESMSF monitoring and ESMSF related information for the Project</li> </ul>
DMU Officers	Environmental and Social Safeguard Chief	<ul style="list-style-type: none"> <li>- Responsible for conducting overall management of ESMSF monitoring and ESMSF related information within DMU.</li> <li>- Responsible for regular collection of ESMSF information as a part of MIS format.</li> </ul>
FMU Officers	Environmental and Social Safeguard In-charge	<ul style="list-style-type: none"> <li>- Responsible for regular collection of ESMSF information as a part of MIS format at FMU level</li> <li>- Providing hands-on assistance to SHGs, VSSs/EDCs and Working Groups regarding ESMSF.</li> <li>- Closely communicating with the Environmental and Social Safeguard Focal Person for timely action if necessary.</li> </ul>
Members of Gram Sabhas, VSS/ EDC/ SHG	Environmental and Social Safeguard Focal Person	<ul style="list-style-type: none"> <li>- Support the Project for compliance of ESMSF from the perspective of PRI.</li> <li>- Encourage beneficiaries to participate in activities relating ESMSF.</li> </ul>

*Source: JICA Survey Team (2016)*

The Project's Management Information System (MIS) will include collection of safeguards-related data and the Project will also be subject to periodical evaluation and review, which will include examination of safeguards compliance. Through the Environmental and Social Safeguard Chiefs at DUM level, information will be regularly collected as a part of MIS format by the Environmental and

Social Safeguard Manager who will be responsible for management of ESMSF monitoring and ESMSF related information of the Project.

## 1.9 Detail Procedures of ESMSF

### (1) Free, Prior and Informed Consultation

Beneficiary groups will be preliminarily selected based on the defined criteria, thereafter their participation in the Project must be confirmed through a process of free, prior and informed consultation with the Gram Sabha. If broad community support does not exist and/or the village actively does not wish to participate in the Project, then another village may be selected.

#### Consultation for Broad Community Support

<b>Purpose/Objective:</b>	Establishing broad community support for the project implementation
<b>Consultation Topic:</b>	<ul style="list-style-type: none"> <li>- Basic information about the Project including area, location, purpose/objectives, key activities, stakeholders involved, target beneficiaries.</li> <li>- Expected role and involvement of communities.</li> <li>- An overview of possible environmental and social risks.</li> <li>- Scheduled Tribe and Forest Dependent Plan</li> </ul>
<b>Participants:</b>	<ul style="list-style-type: none"> <li>- Members of SHGs, VSSs/EDCs and Working Groups</li> <li>- Gram Sabha members</li> <li>- Other important individuals (i.e, Gram Panchayat President)</li> </ul>
<b>Process:</b>	<ul style="list-style-type: none"> <li>- At an early stage in sub-project/batch implementation, immediately following beneficiary group formation, community meeting will be held using simple language.</li> <li>- Opportunities for open discussion of the Project should be provided.</li> <li>- Opportunities and facilities to facilitate participation of women, elders and other vulnerable.</li> <li>- Adequate time should be provided following the meeting for the participants to digest the information.</li> <li>- Field level officers will visit individuals who have expressed their criticism on any aspect of project implementation.</li> <li>- Decide if they do not wish to participate.</li> <li>- Presentation and discussion with Gram Sabha</li> <li>- Field level officers will participate in general community meeting to discuss concerns.</li> </ul>
<b>Material Required:</b>	<ul style="list-style-type: none"> <li>- Provision of simple/easy to read project brochures in Odia language.</li> <li>- Consultation and Participation Monitoring Sheets</li> </ul>
<b>Individual Responsibility:</b>	- To call a meeting.
PD Environmental and Social Safeguard Directors/ Manager/ Chiefs	<ul style="list-style-type: none"> <li>- To propose and organize meetings.</li> <li>- To present the Project</li> </ul>
Environmental and Social Safeguard in-charge	- To record participants and meeting minutes.
Environmental and Social Safeguard Focal Person	- To encourage participation of local communities.

Source: JICA Survey Team (2016)

### (2) Social Assessment

#### 1) Purpose of Social Assessment

Social Assessment is a tool to help understanding key social issues and risks, and to determine social impacts on the target population of the proposed sub-project. There are many social variables that potentially affect the impacts and success of projects and policies—such as gender, age, language, displacement, and socioeconomic status. Through data collection and analysis, The social assessment enables the Project in consultation with other stakeholders to prioritize critical issues and determine how to address them. The social assessment will serve a number of purposes:

- a. Establish the baseline socio-economic situation of “the Scheduled Tribes and Forest Dependents “ in the project area to act as a reference for measuring project impact;
- b. Assess access and opportunities to avail of basic social and economic services,

- c. Provide a basis for identifying appropriate community development and livelihoods interventions under the project
- d. Determine the short and long-term, direct and indirect, and positive and negative impacts of the project on the socio-cultural and economic status of particular vulnerable groups, including women, poor households, female-headed households, landless, SCs/STs and others as may be considered relevant
- e. Highlight key social issues present, particularly those that are underscored in the JICA guidelines (e.g. relating to human rights, involuntary resettlement, loss of livelihoods, indigenous peoples, gender etc)
- f. Provide a basis for developing recommendations for addressing the various concerns and issues of projects that affect them

During the micro planning process, gathering of socio-economic related information will be conducted using similar methodologies as the social assessment described in this document. However, the social assessment itself will be implemented, basically when, targets (the Scheduled Tribes and Forest Dependents) which require preparation of STFDP are identified. In case there is no such targets, but certain adverse social impacts are anticipated, the implementation of the social assessment shall not be prevented.

## 2) Social Assessment Approach and Task

The social assessment involves the participation of the members of the community to determine their needs and priorities, to obtain their views on the design and proposed implementation mechanisms of a particular project, and also to build capacity and involvement. It assists the executing agency in reaching the vulnerable and the poor and ensures that the project objectives are acceptable to the intended beneficiaries. The social assessment can be included in the micro planning process with the results from the Participatory Rural Appraisal (PRA), livelihoods assessments and community consultations.

The social assessment plan will be prepared by EA to provide a reasonably detailed outline of the objectives, contents, methods and implementation schedule. ST, SC, OB, forest dwellers and other forest dependents shall be identified as target group and consulted independently in the social assessment and micro planning process. The table below specify key tasks for the social assessment.

**Tasks for Social Assessment**

	<b>Tasks</b>	<b>Descriptions</b>
1	Description of the socio-cultural, institutional, historical, and political context	It explains the extent of socio-cultural fragmentation or homogeneity. It will also address the macro-policy context of the Project. Broader questions such as the traditional and cultural norms regarding the use of the resources and how these relate to relations between and among stakeholder groups can be determined.
2	Consideration of the legal and regulatory environment	It look at the legal and regulatory environment of the Project, especially in relation to standing ownership and access arrangements and what their implications are for different stakeholder groups, especially the poor and vulnerable.
3	Relevance of core aspects of social development to the Project	It describes the potential outcomes of the proposed Project in terms of social opportunities, constraints, impacts, and risks, such as socio-cultural diversity, gender, institutions, rules, stakeholder's interests, social risk and vulnerability.
4	Development of a strategy to achieve social development outcomes	It analyses the opportunities for community involvement in project preparation and implementation, the existing and proposed framework for property rights/access to resources, and sustainable management alternatives to achieve the desired social development outcomes.
5	Recommendations for project design and implementation arrangements	It reviews proposals for project design and provide guidance to the implementing agency on participatory alternatives and institutional strengthening measures appropriate to the socio-cultural characteristics of the project area(s). This will provide a basis for integrating the social analysis of the core elements into a proposal for implementation arrangements.
6	Development of a monitoring plan	The monitoring system needs to have local participation in the generation and refinement of indicators over the project cycle in order for the affected communities to be involved in balancing their own interests in the management of resources for conservation and productive purposes.

*Source: Social Analysis Guidelines in Natural Resource Management (2005), World Bank*

### 3) Reporting of Social Assessment Results

A social assessment report shall include at least following contents.

#### **Indicative Contents of Social Assessment Report**

<b>Chapter</b>	<b>Descriptions</b>
Introduction	To define the basic purpose of the Social Assessment, its scope and a brief outline of how the report is organised.
Sub-Project Description	To provide brief details of the sub-project – rationale, objectives, area, key activities, the proposed implementation schedule etc.
Approach and Methodology	to describe the methods used in conducting the assessment, both quantitative and qualitative.
Socio-economic Baselines	To provide brief profiles of the target area.
Description of Sub-Project Impacts	Based on consideration of the sub-project’s objectives and activities as well as the socio-economic/livelihoods assessment, to describe potential positive and negative impacts of the sub-project.
Vulnerable Groups:	To identify and describe particularly vulnerable groups within the community and how they may be affected by the Project.
Public Consultation and Information Disclosure	To document and present results of public consultation events with the communities.
Conclusion and Recommendations	To provide overall conclusions and recommendations.
Mitigation Measures	To identify specific measures to avoid, minimize and/or compensate for sub-project activities with adverse impacts on communities and particularly vulnerable groups.
Monitoring	To provide the developed monitoring plan including monitoring mechanism and monitoring implementation arrangements

*Source: JICA Survey Team (2016)*

### (3) Micro Planning

Many Gram Panchayats already have existing micro plans in place. In this case, micro plans will be subject to a participatory review. Where Gram Panchayats do not have existing micro plans, participatory development of micro plans will take place. Micro plans shall concentrate on proposals concerning Gram Panchayat and other forest lands within and surrounding the village. However, the micro plans shall also stipulate community development and livelihood needs/priorities expressed by villagers. The micro planning process shall involve specific procedures ensuring that the needs and priorities of vulnerable groups are reflected in the plans.

### (4) Selection and Screening

Sub-projects are then selected and the priority needs identified in the micro plans. In general, the sub-project selection guidelines reinforce the projects key objectives. Specific subprojects will be selected on the basis of community preferences and therefore guidelines should not be too prescriptive in terms of defining what a given community can and cannot do. However, certain exclusion criteria are required to ensure that the Project does not include sub-projects with potentially significant adverse environmental impacts such that EIA would be required (i.e., No Category ‘A’ or ‘B’ projects as per Indian EPA (1986) and the EIA Notification (2006)).

The sub-project categorisation<sup>7</sup> as per the JICA Guideline and finalisation of the exclusion criteria will be conducted by PMU prior to the commencement of the Project or at the early stage (before the VSS selection and consultation) of the preparatory work. In accordance with the JICA guidelines, various other exclusion criteria have also been developed and are shown in the table below.

<sup>7</sup> The result of subproject categorisation is required to be reported to JICA at regular basis, using the monitoring form described in Attachment 4.

### Sub-project Exclusion Criteria

Component	Exclusion Criteria
1. Overall	<ul style="list-style-type: none"> <li>- Sub-projects which involve diversion of forest land</li> <li>- Sub-projects that involve acquisition of private land</li> <li>- Sub-projects that cannot demonstrate the broad community support</li> <li>- Sub-projects likely to have major adverse impacts on the environment</li> <li>- Sub-projects which will fall into “Category A” as per the JICA Guideline.</li> </ul>
2. Forest and Natural Environment	<ul style="list-style-type: none"> <li>- Sub-projects to be conducted inside protected areas and will not contribute to environmental protection/ conservation of the selected protected areas.</li> <li>- Sub-projects likely to cause damage to wildlife and their habitats</li> <li>- Planting of non-native or invasive species of forest trees, shrubs or plants</li> <li>- Sub-projects which involve felling of trees on Reserved Forest or PA unless ancillary to conservation and management of forests and wildlife defined in the working plan (e.g. fire breaks, thinning etc)</li> <li>- Sub-projects involving the collection, processing and sale of NTFP species listed under CITES, India’s Red List of threatened species of fauna and flora or scheduled under the Wildlife Act (1972)</li> <li>- Sub-projects involving the use of fertilizers and pesticides banned by WHO (Classes IA, IB and II)</li> </ul>
3. Social Environment	<ul style="list-style-type: none"> <li>- Sub-projects that involve child labour</li> <li>- Sub-projects or activities which could lead to the exploitation of women</li> <li>- Sub-projects which involve acquisition of private land and/or resettlement</li> <li>- Activities that could cause damage to places of religious importance, historical monuments or cultural properties</li> </ul>

*Source: JICA Survey Team (2016)*

Though sub-projects which fall into the “Category A” as per the JICA Guideline are not anticipated in Project, the following scale of sub-projects are regarded as the “Category A”.

- Conversion or felling of more than 100 ha of forest
- Construction of embankments/dams with water reservoir area of more than 100 ha
- Development of more than 100 ha agricultural area

#### (5) Environmental Management Plan and Monitoring Plan

Sub-projects which require the Environmental Management Plan (EMP) and the Environmental Monitoring Plan (EMoP) are not determined at the time of preparation of this document. In case sub-projects which fall into the “Category B” as per the JICA Guideline are identified during the above “(4) Selection and Screening” process and adverse environmental/ social impacts are anticipated from such sub-projects, preparation of the EMP and EMoP will be required and the process indicated below should be followed.

- 1) Screening of sub-projects
- 2) Scoping of sub-projects
- 3) Environmental and social survey/ assessments
- 4) Preparation of EMP and EMoP
- 5) Implementation and monitoring of sub-projects based on EMP and EMoP

The sub-project owner (PMU) and contractors/implementers are the key entities for the implementation of environmental clearance.

The EMP and EMoP shall consist and cover following aspects:

- 1) EMP: Environmental mitigation and consideration measures which shall be taken in the course of the Project implementation in construction and operation phases. The measures shall be examined based on the sub-project description and assessment results of environmental, social, health and safety impacts.
- 2) EMoP: Environmental monitoring plan to supervise/examine the implementation of proposed environmental mitigation and consideration measures and to measure the quality of surrounding environments under the influence of the project activities during construction, and operation phases.



In case of community related sub-project activities, contents of the EMP and EMoP shall be included in the Micro Plan to be prepared by the concerned community.

Though quantifications of impacts as well as concerned mitigation measures of sub-projects are yet to be determined, indicative EMP and EMoP are described in **Attachment 2** for “Sustainable Forest Management” and “Community Infrastructure Development, as a reference.

### (6) Monitoring and Reporting

The safeguards frameworks require certain outputs relevant to ensuring that environmental and social safeguards have been observed are produced. Therefore, indicators are required to measure the utilization and quality of the safeguard processes. The table below presents draft monitoring items, their indicators, means of verification, frequency and responsible parties for demonstrating and measuring that safeguards measures have been implemented. Also these aspects need to be finalised in relation to EMoP, in case, EMoPs are prepared for some specific sub-projects.

Proposed “Monitoring System for Environment and Social Consideration” and ”Performance Monitoring Form for ESMSF” are described in Attachment 3. The monitoring format to be used for submission to JICA from PMU is described in Attachment 4.

#### Draft Monitoring Items, Indicators, Means of Verification, Frequency and Responsible Parties

	Item	Indicator	Means of Verification	Frequency	Responsible Party
1.	Information disclosure and establishment of broad community support	- No. of men, women, BPL, SCs/STs attended at the community meeting - % of interviewees satisfied with information disclosure process	- Community resolution - Voting records	At least once a year. Additional measurement should be carried out whenever need arises during the Project implementation.	PMU/ OSFDS
2.	Social Assessment (SA)	- No. of men, women, BPL, SCs/STs consulted in PRA	- Social Assessment Reports - Gender Assessment Report	For every assessment	Field Level officers in consultation with and participation of Gram Sabha
3.	Micro planning	- No. of men, women, BPL, SCs/STs consulted in micro planning - % of interviewees satisfied with micro plans - Linkage/ convergence with other schemes	- Micro plans -	For every micro planning	FMUs with the support from Gram Sabha
4.	Sub-project selection and screening	- No. of excluded sub-projects	- Lists of sub-projects - Reports on the selection and screening	At the time of sub-project selection	PMU/ OFSDS
5.	Sub-project implementation	- No. of women, BPL, SC/ST beneficiaries - % of interviewees satisfied with beneficiaries selected	- VSS/EDC, SHGs, established - Sub-project Plans	At the time of beneficiary selection At the time of sub-project planning	FMUs with the support from Gram Sabha
6.	Monitoring and Evaluation	- No. of men, women, BPL, SC and ST attended community meeting	- Monthly, quarterly, annual monitoring forms - Social audit reports	At least once a year. Additional measurement should be carried out whenever need arises during the project implementation.	FMUs with the support from Gram Sabha
7.	Grievance procedures	- No of grievances submitted - No of grievances resolved - % of interviewees aware of and satisfied with grievance mechanism	- Grievance forms	At least once a year. Additional measurement should be carried out whenever need arises during the project implementation.	PMU/ OFSDS, FMUs with the support from Gram Sabha

Source: JICA Survey Team (2016)

## **(7) Information Disclosure and Grievance Procedures**

The executing agency will disclose all information relating environmental and social safeguard of the Project. This will include all the ESMS related documents including social assessment documents, monitoring report and their plans. All information will be made available in a timely manner, in an accessible place, and in a form and language(s) understandable to all stakeholders, including the general public, and affected people, if any, so that they can provide meaningful inputs for further development of the ESMS.

Formal grievance mechanism will be in line with existing policies, strategies, and regulations on grievances as defined by GoI (i.e., Guidelines for Redress of Public Grievances (2010)). However, it is expected that project related grievances can be dealt with through the proposed institutional structure of the Project. Thus, the grievance mechanism will be institutionalized in each level of project implementation, from the community to the executing agency.

Key principles for grievance redress in OFSDP-II are described below:

1. The rights of all project participants are respected and their interests protected
2. Concerns of project participants arising from the project implementation process are adequately addressed and in a prompt and timely manner
3. Entitlements or livelihood support for project participants are provided on time and in accordance with the relevant GoI and JICA safeguard policies and applicable legal framework
4. Project participants are aware of their rights to access and to realize access to grievance procedures free of charge
5. The grievance mechanism will be institutionalized in each village by the Gram Panchayat

### **1.10 Capacity Development Requirements for ESMSF Implementation**

The Project will not include any sub-projects requiring environmental clearance nor any activities with major social impacts, however as described in the previous sections, there are certain potential impacts and risks. Management and monitoring of environmental and social risks require a certain level of awareness and technical capacity.

Particularly for ESMS, certain specialized knowledge and skills will be required at different management levels for operationalising the procedures for assessing and screening environmental and social impacts as well as implementing and monitoring safeguards measures.

The table below describes indicative key capacity development requirements for implementing the ESMSF measures, steps and procedures. Detailed capacity development plan for environmental and social safeguard will be developed by the executing agency in line with the capacity development component of the Project during at the preparation stage.

### Indicative Capacity Development Plan for Environmental and Social Safeguards

Module Name	Theme/Topic	Key Participant	Schedule
<b>1. General Orientation on ESMSF and STFDPF for the Project</b>			
1-1: Management/ Administrative Level	<ul style="list-style-type: none"> <li>- JICA's safeguard policy</li> <li>- Basic introductory concept of safeguard</li> <li>- Overview of environmental protection, EIA and social safeguard regulations (general)</li> <li>- Safeguard issues (vulnerable groups, SCs, STs, gender rec.)</li> <li>- ESMSF steps and procedures to be applied in the Project</li> <li>- Free and prior informed consent (FPIC)</li> <li>- Environmental and social impact assessment: Overview</li> </ul>	<ul style="list-style-type: none"> <li>- PMU officers / DMU chief</li> <li>- (FMU Chief)</li> </ul>	<ul style="list-style-type: none"> <li>- Annually* (1st to 5th year) for one day</li> <li>- At the initial stage of each year</li> </ul>
1-2: Field/ Operational Level	<ul style="list-style-type: none"> <li>- Basic introductory concept of safeguard</li> <li>- Overview of environmental protection, EIA and social safeguard regulations (specific)</li> <li>- Safeguard issues (vulnerable groups, SCs, STs, gender rec.)</li> <li>- Community consultation processes</li> <li>- Free and prior informed consent (FPIC)</li> <li>- Environmental and social impact assessment: Overview</li> </ul>	<ul style="list-style-type: none"> <li>- FMU chief / FMU Staff</li> <li>- Field level officers</li> <li>- Representatives from VSSs and EDCs</li> <li>- Other representative from Gram Sabha (if necessary)</li> </ul>	<ul style="list-style-type: none"> <li>- Annually* (1st to 5th year) for one day</li> <li>- At the initial stage of each year</li> </ul>
<b>2. Community Facilitation and ESA for Environmental and Social Safeguard</b>			
Community Facilitation and Environmental and Social Assessment (ESA) for Environmental and Social Safeguard	<ul style="list-style-type: none"> <li>- Sub-project planning (and micro planning)</li> <li>- Role of LSG, Gram Sabha and FD</li> <li>- Participatory ESA</li> <li>- Working with vulnerable groups</li> <li>- Gender issues</li> <li>- Conflict resolution</li> <li>- Grievance procedures</li> </ul>	<ul style="list-style-type: none"> <li>- Field level officers</li> <li>- Representatives from SHGs, VSSs/EDCs</li> <li>- Other representative from Gram Sabha (if necessary)</li> </ul>	<ul style="list-style-type: none"> <li>- Annually* (1st to 5th year) for one session as part of other community related trainings. At the initial stage of each year</li> </ul>
<b>3. Monitoring and Evaluation for Environmental and Social Safeguard</b>			
3-1: Management/ Administrative Level	<ul style="list-style-type: none"> <li>- M&amp;E concept and procedures</li> <li>- Monitoring and reporting of safeguards</li> <li>- Use of M&amp;E results and feedback</li> </ul>	<ul style="list-style-type: none"> <li>- PMU / DMU staff</li> <li>- (FMU Chief)</li> </ul>	<ul style="list-style-type: none"> <li>- Annually** (3rd to 7th year) for half day</li> <li>- At the initial stage of each year</li> </ul>
3-2: Field/ Operational Level	<ul style="list-style-type: none"> <li>- Monitoring principles and procedures</li> <li>- Monitoring and reporting procedures</li> <li>- Use of reporting formats</li> </ul>	<ul style="list-style-type: none"> <li>- FMU chief / FMU Staff</li> <li>- Field level officers</li> <li>- Representatives from VSSs and EDCs</li> <li>- Other representative from Gram Sabha (if necessary)</li> </ul>	<ul style="list-style-type: none"> <li>- Annually** (3rd to 7th year) for half day</li> <li>- At the initial stage of each year</li> </ul>
<b>4. Specific Trainings</b>			
Specific training for specific techniques/tasks to be required	For example: <ul style="list-style-type: none"> <li>- Chemical use</li> <li>- Environment Health &amp; Safety standard for construction</li> <li>- Mitigation planning and implementation</li> </ul>	To be defined when it becomes necessary	To be defined when necessary

Source: JICA Survey Team (2016)

Note: \*1<sup>st</sup> year: comprehensive training, 2<sup>nd</sup> to 5<sup>th</sup> year: comprehensive training for new project participants, and refresher training for those who are required. \*\*3<sup>rd</sup> year: comprehensive training, 4<sup>th</sup> to 7<sup>th</sup> year: comprehensive training for new project participants, and refresher training for those who are required.

### Attachment 1 Preliminary Results of Scoping for Environmental and Social Impact Assessment for OFSDP-II

Category	Impact Item	Evaluation			Reasons for Evaluation
		Pre-Construction Phase (Pre-CP)	Construction Phase (CP)	Operation Phase(OP)	
Pollution	Air Pollution	D	C	C	<b>Pre-CP:</b> During this phase, there is no significant impact to be considered because there is no activity to cause air pollution. <b>CP:</b> Not significant but emission of exhaust gas from operation of construction equipment, machinery, and vehicles and dust generation from construction/demolition activities such as vehicles movement in/out of the site, loading and unloading of construction materials and excavated soils, and demolition of old structures are anticipated to rise. <b>OP:</b> There is a possibility of air pollution due to increase in vehicular movement during execution of the Project.
	Water Pollution	D	B-	B-	<b>Pre-CP:</b> During this phase, there is no significant impact to be considered because there is no activity to cause water pollution <b>CP:</b> Soil erosion, construction runoff and drainage, oil spills, sewage effluent and domestic wastewater are possible water pollution sources. <b>OP:</b> There is possibility of water pollution in the surround water due to inadequate usages of fertilisers /pesticides for certain project activities. However, no significant serious impacts to water quality by the Project are predicted.. There may be some small-scale manufacturing facilities introduced by the Project. However, associated effluent and effect on water sources/supply will be nil or negligible
	Solid Waste	D	B-	D	<b>Pre-CP/OP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Both non-hazardous and hazardous solid waste from land excavation, and constructions of building structures is anticipated to rise.
	Soil Contamination	D	C	C	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP &amp; OP:</b> No impacts are foreseen, but there is possibility of soil contamination due to inadequate usages of fertilisers /pesticides for certain project activities. Also there is possibility on soil contamination in case of .accidental spillage and oil leakage from machineries or oil storage facility.
	Noise and Vibration	D	B-	D	<b>Pre-CP &amp; OP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Noise and vibration from operation of construction machinery and on-site vehicles are anticipated.
	Ground Subsidence	D	D	D	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/ OP:</b> Excavation work and intake of underground water that cause subsidence are not anticipated.
	Offensive Odor	D	D	D	No significant impact is anticipated.
	Natural Environment	Protected Area	D	B+	B+
Flora and Fauna Ecosystem		D	B+/B-	B+/B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/OS:</b> Interventions are aimed at conservation and sustainable/ scientific management which contribute to improve flora and fauna. Therefore, positive impacts are anticipated. However, there are possibilities of negative impacts in case of inadequate construction activities and operation activities such as over usage of natural resources and damages caused by fires, planting of non-native species, etc.
Hydrology		D	B+/B-	C	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> The Project has generally positive impacts on surrounding hydrology due to improvement of degraded forests including activities such as soil and moisture conservation (SMC) measures. Significant impacts to damage the hydrological cycle or regimes are not anticipated expect for negative impacts which may arise from inadequate construction activities. <b>OP:</b> No significant impact is anticipated. However, surface water and ground water wherever available will be used for watering purpose at nurseries and plantation sites. Therefore there are possibilities of adverse impacts when inadequate water usages are done

Category	Impact Item	Evaluation			Reasons for Evaluation
		Pre-Construction Phase (Pre-CP)	Construction Phase (CP)	Operation Phase (OP)	
	Topography and Geography	D	D	D	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Some soil erosion is anticipated during the construction of infrastructure facilities and other installations, preparing for soil conservation measures, plantation works. However, it is anticipated that this would be minimal and would not pose any major concerns. <b>OP:</b> There may be possibilities of erosions at forest treatment areas due to changes of drainage patterns, but anticipated impacts will be minimal.
	Management of Abandoned Sites	D	B+	B+	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/OP:</b> The Project contribute to improve forest/ tree covers. Therefore positive impacts are anticipated at degraded forest areas.
Social Environment	Involuntary Resettlement and Land Acquisition	D	D	D	The Project area is basically notified forest areas. Though settlements exist inside the proposed project area, resettlement associated with the Project is not anticipated.
	Local Economy (e.g., employment and livelihood)	D	B+	B+/B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Job opportunity for local people will be provided in some extent during construction phase. <b>OP:</b> Positive impacts are anticipated through increase the supply of wood fuel for domestic use, small timber for rural housing, fodder for livestock, and NTFP for local industries. The Project is expected to provide jobs for the unskilled workers and raise the standards of living and improve the quality of life of the rural communities. On the other hand, there may be possibilities for loss of customary/ traditional knowledge as communities are trained in formal forest management approaches, loss of customary land/ resources access and use, increased development induced dependence.
	Poor People	D	B+	B+/B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated, <b>CP:</b> Job opportunities may be enhanced at construction phase that lead the poor to increase their earnings. <b>OP:</b> Similar positive/ negative impacts indicated in the above "local economy" are anticipated.
	Indigenous and Ethnic People	D	B+	B+/B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Job opportunities may be enhanced at construction phase that lead the indigenous and ethnic people to increase their earnings. <b>OP:</b> Similar positive/ negative impacts indicated in the above "local economy" are anticipated.
	Land Use and Local Resources	D	D	B+	<b>Pre-CP/ CP:</b> During this phase, no significant impact is anticipated. <b>OP:</b> Land-use in the project area is not likely to change; however, the degraded forest areas and their resource are anticipated to be improved. The population that is living in and around these forest areas depend on the forests for various resources, such as fuel-wood, fodder, NTFP, and other forest produce. The proposed is anticipated to provide for these resources through its various interventions.
	Water Usage	D	C	C	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/OP:</b> It is necessary to confirm water usage conditions especially for forest plantation and nursery activities
	Existing Social Infrastructures and Services	D	C	C	<b>Pre-CP:</b> During this phase, social infrastructure is not likely to be disturbed or relocated <b>CP:</b> There may be increases in traffic congestions and pollutions (air, noise, vibration) due to construction and traffic. <b>OP:</b> There may be positive impacts by the provision of proper services and infrastructure (e.g., road development). Also there may be possibilities of disturbance/ relocation of existing social infrastructure due to the Project.
	Uneven Distribution of Benefit and Damage	D	C	C	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/ OP:</b> Though no significant impact is anticipated, it is necessary to confirm uneven distribution of harm and benefit, especially at operation stage, as some would receive benefits from the project, while others may not benefit to that extent or may even get affected negatively.
	Conflict of Interests within the Region	D	D	C	This Project will not induce any significant impact of conflict of interests within the region. However, there may be possibilities of a particular group's rights over its Common/ Community Property Resources (CPRs) may be curtailed and used by another groups from within/outside the community under this Project.
	Cultural	C	D	D	No significant impact to be anticipated, though there may be

Category	Impact Item	Evaluation			Reasons for Evaluation
		Pre-Construction Phase (Pre-CP)	Construction Phase (CP)	Operation Phase (OP)	
	Heritage				archeological, historical, cultural, and religious heritage sites within the Project area. In case sacred groves and other tribal cultural important sites are within the Project area, such sites shall be either avoided from the Project or introducing interventions related to conservation of such sites.
	Landscape	D	D	B+	<b>Pre-CP/CP:</b> During this phase, no significant impact is anticipated. <b>OP:</b> Improvement of forest cover and forest resources through the Project may increase the natural beauty of the landscape.
	Gender Discrimination	D	D	B+	The Project will not induce any significant adverse impact of gender discrimination.
	Children's Right	D	D	D	The Project will not induce any significant adverse impact to children's right. Child labourers to be excluded in the Project.
Health and Safety	Occupational Health and Safety	D	B-	B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP/ OP:</b> Impacts on occupational health and safety during construction and plantation establishment/ maintenance works may occur if appropriate measures to ensure occupational health and safety will not be taken.
	Community Health and Safety	D	B-	B+/B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Impact on community health and safety (e.g. traffic safety, pedestrians' accidents by construction activities) may occur if appropriate measures to ensure community health and safety will not be taken. <b>OP:</b> There may be increases in negative impacts (e.g. traffic hazard, ambient air pollution by vehicles, water pollution, hazardous wastes, health risk, etc.) if efficient mitigation measures and considerations are not applied. Also there may be positive impacts (e.g. easier access to urban areas, health related facilities by the Project), if improved facilities and services by the Project will be available for general public so that it can contribute to community health care.
	Risks for infectious disease such as AIDS/HIV	D	C	D	<b>Pre-CP/OP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> There may be risks of infectious diseases by influx of workers.
	Accident	C	B-	B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated, but it is necessary to confirm accident risks during this stage. <b>DC:</b> There may be risks in increase of traffic accidents and construction site accidents. <b>OP:</b> There may be risks in increase of traffic accidents due to increase of river/ road traffic.
Emergency Risk	Flood Risk and Other Natural Disaster	D	B-	B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Risks such as heavy rain, cyclone, and tsunami which affect construction and forest treatment areas are anticipated with a fixed probability. <b>OP:</b> Risks such as heavy rain, cyclone, and tsunami which affect established infrastructure or disrupt implementation of activities are anticipated with a fixed probability.
	Risk for Fire	D	B-	B-	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>CP:</b> Risk for fire is expected with a fixed probability. <b>OP:</b> Risk for fire is expected with a fixed probability.
Others	Climate Change	D	D	B+	<b>Pre-CP:</b> During this phase, no significant impact is anticipated. <b>DC:</b> Gas emission will be temporary and limited to the Project area thus significant impact to global climate change in not anticipated. <b>OS:</b> Certain positive impact due to forest restoration and carbon sequestration is anticipated

**Evaluation:** A-: Significant Negative Impact                      A+: Significant Positive Impact  
 B-: Some Negative Impact                                              B+: Some Positive Impact  
 C: Impacts are not clear, need more investigation  
 D: No Impacts or Impacts are negligible, no further study required

Source: Compiled by JICA Survey Team (2016)

## Attachment 2 Indicative Environmental Management Plan and Environmental Monitoring Plan for Representative Sub-projects

The following content outlines indicative EMP / EMoP that can be used as references for finalising EMP/EMoP for small scale infrastructure development and forest management sub-projects which fall into the “Category B” as per the JICA Guideline are identified during the above “(4) Selection and Screening” process and adverse environmental/ social impacts are anticipated.

### 1. Indicative Environmental Management Plan (EMP)

#### 1.1 Construction Phase

Indicative environmental mitigation and consideration measures in construction phase are summarized in the following table. Most of environmental mitigations and consideration measures shall be implemented by the contractor or other implementers of construction work under management of the executing agency.

**Table 1.1.1 Environmental Mitigation and Consideration Measures in Construction Phase**

Category	Item	Environmental Mitigation and Consideration Measures	Implementing Agency	Cost
Pollution	Air pollution	<ul style="list-style-type: none"> <li>• Sprinkling water at earthwork areas to minimise dust.</li> <li>• Prohibition of idling will be implemented.</li> <li>• Intensive operating of the construction machinery will be avoided.</li> <li>• Construction equipment, machines and vehicle will be inspected and maintained regularly.</li> <li>• Protection of dust emission sources (e.g., covering the piles of construction materials such as sands, aggregate, etc., controlling speed limit of vehicles in the site, wheel-washing at the gate for vehicles in and out of project sites)</li> </ul>	Contractor/ Implementer	TBD (To be determined and to be included in construction cost)
	Water pollution	<ul style="list-style-type: none"> <li>• Construction/demolition will be mainly done in dry season.</li> <li>• Settling ponds or simple turbid water treatment will be installed as necessary.</li> <li>• Septic tank will be set up at construction site.</li> <li>• Monitoring of water quality for discharge water</li> </ul>	Contractor/ Implementer	TBD
	Solid Waste	<ul style="list-style-type: none"> <li>• Construction/demolition waste will be re-used or recycled as much as possible.</li> <li>• Non-utilized waste will be stored in trash bins and disposed to a designated dumping sites.</li> </ul>	Contractor/ Implementer	TBD
	Soil Contamination	<ul style="list-style-type: none"> <li>• Implementation of water pollution measures, solid waste and hazardous material measures to prevent soil contamination.</li> <li>• Regular cleaning of sanitary facilities (e.g. toilets) and inspection of discharge of untreated sewage (e.g., portable chemical toilets meeting with manufacture’s requirement or temporary septic systems with periodical de-sludging)</li> </ul>	Contractor/ Implementer	TBD
	Noise and Vibration	<ul style="list-style-type: none"> <li>• Restriction operation hours of construction machines including vehicle operation</li> <li>• Ensuring that noise reduction devices such as mufflers are fitted, if necessary and operating effectively;</li> <li>• Installing noise insulation walls around the construction/ demolition site as necessary</li> <li>• Speed limit will be obeyed by drivers.</li> <li>• Advanced notice of construction/demolition work time will be informed to residences as necessary.</li> </ul>	Contractor/ Implementer	TBD
Natural Environment	Flora and Fauna Ecosystem	<ul style="list-style-type: none"> <li>• Areas to be cleared should be minimized as much as possible.</li> <li>• The application of chemicals for vegetation clearing shall not be permitted.</li> <li>• Cutting of any tree shall be prohibited unless such an act is explicitly authorized</li> <li>• When needed, temporary protective fence to be set up to efficiently protect the preserved trees before commencement of any works within the site.</li> <li>• No hunting and harvesting of animals and plants.</li> </ul>	Contractor/ Implementer	TBD

Category	Item	Environmental Mitigation and Consideration Measures	Implementing Agency	Cost
	Hydrology	<ul style="list-style-type: none"> <li>Implementation of water pollution measures, solid waste and hazardous material measures to prevent impacts to surrounding water regimes</li> <li>The excavation in the open cutting area shall be avoided during heavy rainy season.</li> <li>The tentative prevention measures against soil erosion shall be prepared before rain</li> </ul>	Contractor/ Implementer	TBD
Social Environment	Water Usage	<ul style="list-style-type: none"> <li>Regular monitoring of water usage volume and water sources</li> <li>Securing alternative water sources if necessary</li> <li>The proper water usage plan for construction will be prepared.</li> </ul>	Contractor/ Implementer	TBD
	Existing Social Infrastructure and Services	<ul style="list-style-type: none"> <li>Construction traffic will avoid the peak traffic hours</li> <li>Prohibition the use of land outside the project area for construction works (e.g. batching trucks on nearby road, material piling, etc.)</li> </ul>	Contractor/ Implementer	TBD
	Uneven Distribution of Benefit and Damage	<ul style="list-style-type: none"> <li>Set public relation section or assign public relation officer in relation to the project construction work.</li> <li>If necessary, plan and introduce measures for excessive uneven distribution of damages.</li> </ul>	Contractor/ Implementer	TBD
Health and Safety	Occupational Health and Safety	<ul style="list-style-type: none"> <li>Working condition during construction will be managed by contractor complying with national labor laws, relevant ILO core labor standards, or international guidelines such as EHS Guidelines by IFC as follows; <ul style="list-style-type: none"> <li>✓ Provision of adequate healthcare facilities (first aid) in construction sites;</li> <li>✓ Training of all construction workers in basic sanitation and healthcare issues, general health and safety matters, and on the specific hazards of their work;</li> <li>✓ Personal protection equipment for workers, such as safety boots, helmets, gloves, protective clothing, spectacles and ear protection;</li> <li>✓ Clean drinking water facilities for all workers;</li> <li>✓ Adequate protection to the general public, including safety barriers and marking of hazardous areas;</li> <li>✓ Adequate drainage throughout the camp to ensure that disease vectors such as stagnant water bodies and puddles do not form;</li> </ul> </li> <li>Septic tank and garbage bins will be set up in construction site, which will be regularly cleared by the contractors to prevent outbreak of diseases</li> </ul>	Contractor/ Implementer	TBD
	Community Health and Safety	<ul style="list-style-type: none"> <li>Community health and safety will be managed by the contractor based on international guidelines such as EHS Guidelines by IFC as follows; <ul style="list-style-type: none"> <li>✓ Protection of the community from physical, chemical, or other hazards associated with sites under construction and decommissioning.</li> <li>✓ Avoid contact with hazardous materials, contaminated soils and other environmental media, buildings that are vacant or under construction, or excavations and structures which may pose falling and entrapment hazards</li> <li>✓ Availability of water for personal hygiene, agriculture, and other community needs shall not be compromised.</li> </ul> </li> <li>Traffic safety to community on transportation of fuel and other materials will be ensured.</li> </ul>	Contractor/ Implementer	TBD
	Risks for infectious disease such as AIDS/HIV	<ul style="list-style-type: none"> <li>The following measures of infectious disease will be implemented as necessary <ul style="list-style-type: none"> <li>✓ Regularly conducting sanitation measures at construction site to prevent larval &amp; adult propagation for vector-borne diseases</li> </ul> </li> <li>Awareness-raising and training to workers</li> </ul>	Contractor/ Implementer	TBD
	Accident	<ul style="list-style-type: none"> <li>Measures for Occupational Health and Safety to be applied for accident prevention.</li> <li>The incidence of road accidents involving project vehicles should be minimized through education and awareness-raising.</li> </ul>	Contractor/ Implementer	TBD
Emergency Risk	Flood risk	<ul style="list-style-type: none"> <li>Conduction of construction works at sufficient embankment level for flood risk.</li> <li>Preparation of flood countermeasures including proper</li> </ul>	Contractor/ Implementer	TBD



Category	Item	Environmental Mitigation and Consideration Measures	Implementing Agency	Cost
		communication systems such as alarm bells for emergency warning, preparation of flood response plan such as pumping system, and arrangement of training and education program.		
	Risk for fire	<ul style="list-style-type: none"> <li>• Installation of fire prevention system (temporary water tank and portable fire extinguishers) with regular inspection on the system.</li> <li>• Regular safety education and training for workers in accordance with OHS training stipulated in EHS guideline of IFC to avoid unnecessary fire accidents by workers' behaviors.</li> </ul>	Contractor/Implementer	TBD

Source: JICA Survey Team (2016)

## 1.2 Operation Phase

The indicative environmental mitigation and consideration measures in the operation phase are summarized in the following table. Most of environmental mitigations and consideration measures shall be implemented by the executing agency and in some cases, by respective community level organisations.

**Table 1.2.1 Environmental Mitigation and Consideration Measures in Operation Phase**

Category	Item	Environmental mitigation and consideration measures	Implementing Agency	Cost
Pollution	Air pollution	<ul style="list-style-type: none"> <li>• Careful operation and regular maintenance of infrastructures and vehicles.</li> </ul>	PMU/DMU/FMU/VSSs	TBD
	Water pollution	<ul style="list-style-type: none"> <li>• Appropriate installation, operation and regular maintenance of facilities.</li> <li>• Preparation of guideline for appropriate usage and control of fertilisers/ pesticides</li> </ul>	PMU/DMU/FMU/VSSs	TBD
	Soil Contamination	<ul style="list-style-type: none"> <li>• Proper storage, treatment, and disposal of solid waste (both non-hazardous and hazardous)</li> <li>• Proper storage, handling of hazardous materials/chemicals and proper disposal of used chemical container in accordance with guidelines</li> <li>• Need to describe detail mitigation measures after confirming detail information of solid waste management system from the project proponent.</li> </ul>	PMU/DMU/FMU/VSSs	TBD
Natural Environment	Flora and Fauna Ecosystem	<ul style="list-style-type: none"> <li>• Appropriate usage and control of fertilisers/ pesticides for plantations and ANR activities. Implementation of water pollution measures, solid waste and hazardous material measures to prevent impacts to surrounding ecosystem</li> <li>• No unauthorised hunting and harvesting of animals and plants.</li> </ul>	PMU/DMU/FMU/VSSs	TBD
	Hydrology	<ul style="list-style-type: none"> <li>• Implementation of water pollution measures, solid waste and hazardous material measures to prevent impacts to surrounding ecosystem and communities</li> </ul>	PMU/DMU/FMU/VSSs	TBD
Social Environment	Water Usage	<ul style="list-style-type: none"> <li>• Implementation of water pollution measures, solid waste and hazardous material measures to prevent impacts to surrounding water resources</li> <li>• Regular monitoring of water usage volume and water sources</li> <li>• Securing alternative water sources if necessary</li> </ul>	PMU/DMU/FMU/VSSs	TBD
	Existing Social Infrastructure and Services	<ul style="list-style-type: none"> <li>• Implementation of water pollution measures, solid waste and hazardous material measures to prevent impacts to surroundings</li> <li>• Implementation of traffic accident prevention measures.</li> </ul>	PMU/DMU/FMU/VSSs	TBD
	Uneven Distribution of Benefit and Damage	<ul style="list-style-type: none"> <li>• Set public relation section or assign public relation officer in relation to the project operation.</li> <li>• If necessary, plan and introduce measures for excessive uneven distribution of damages.</li> </ul>	PMU/DMU/FMU/VSSs	TBD
	Local Economy (e.g., employment and livelihood)	<ul style="list-style-type: none"> <li>• Set public relation section or assign public relation officer in relation to the project operation.</li> <li>• Loss of customary land/ resources access and use will be addressed through participatory planning of the Project activities.</li> </ul>	PMU/DMU/FMU/VSSs	TBD

Category	Item	Environmental mitigation and consideration measures	Implementing Agency	Cost
	Conflict of Interests within the Region	<ul style="list-style-type: none"> <li>Set public relation section or assign public relation officer in relation to the project operation.</li> <li>If necessary, monitor and intervene in conflicts over rights of Common/ Community Property Resources (CPRs) among particular groups</li> </ul>	PMU/DMU/ FMU/VSSs	TBD
Health and Safety	Occupational health and safety	<ul style="list-style-type: none"> <li>Consideration of working conditions will be implemented based on requirement of Occupational Health and Safety (OHS) standards and guidelines to be followed by the Project</li> </ul>	PMU/DMU/ FMU	TBD
	Community Health and Safety	<ul style="list-style-type: none"> <li>Consideration of community health and safety will be implemented based on requirement of international guidelines such as EHS Guidelines by IFC or relevant national guidelines.</li> </ul>		
	Accident	<ul style="list-style-type: none"> <li>Measures for Occupational Health and Safety to be applied for accident prevention.</li> <li>The incidence of road accidents should be minimized through education and awareness-raising.</li> </ul>	PMU/DMU/ FMU	TBD
Emergency Risk	Flood risk	<ul style="list-style-type: none"> <li>If necessary, preparation of flood countermeasures including proper communication systems, preparation of flood response plan such as training and education program</li> </ul>	PMU/DMU/ FMU	TBD
	Risk for fire	<ul style="list-style-type: none"> <li>Installation of fire detection and prevention system (fire extinguishers, etc.) with regular inspection</li> <li>Providing training, exercises and firefighting drills regularly.</li> </ul>	PMU/DMU/ FMU/ VSS	TBD

Source: JICA Survey Team (2016)

## 2. Indicative Environmental Monitoring Plan (EMoP)

Basically, the monitoring to be conducted by site visit and visual checks. However, specific measurements and analysis may be required. Tentatively, draft EMoPs for “infrastructure development” and “forest management” were presented in this section.

### 2.1 Construction Phase

Environmental monitoring plan including monitoring items, location in construction phase are shown in the following tables.

**Table 2.1.1 Environmental Monitoring Plan (Infrastructure Development) in Construction Phase**

Category	Monitoring Item	Location	Frequency	Responsible Agency	Cost
Common	- Monitoring of mitigation measures	Sub-project areas	Monthly	Contractor(s)	TBD (To be determined)
Air Pollution	- Ambient air quality situation at construction site - Mitigation measure implemented	Sub-project areas	Bi-annually	PMU/DMU/ FMU	TBD
Water Pollution	- Water quality change, - Mitigation measures implemented	Sub-project areas	Bi-annually	PMU/DMU/ FMU	TBD
Solid Waste/ Hazardous Material	- Amount of solid waste generated, reused, and disposed - Management/ treatment status of solid waste and hazardous material from construction	Sub-project areas	Bi-annually	PMU/DMU/ FMU	TBD
Soil Contamination	- Inspections to hazardous material storage area, area designated for refueling - Mitigation measure implemented	Sub-project areas	Bi-annually	PMU/DMU/ FMU	TBD
Noise and Vibration	- Noise and vibration check by field Inspection - complain from local resident - mitigation measure implemented	Sub-project areas	Bi-annually	PMU/DMU/ FMU	TBD
Flora and Fauna Ecosystem (Disturbance of ecosystem)	- Inspection of status of the existence of species of plants, trees, birds, insects, etc. - Illegal tree clearing, wild animal hunting, - Mitigation measure implemented	Sub-project areas	Bi-annually	PMU/DMU/ FMU	TBD

Category	Monitoring Item	Location	Frequency	Responsible Agency	Cost
Occupational Health and Safety	- Status of safety conditions and measures for occupational safety and health: Records of safety conditions, working accident and complaints - Mitigation measure implemented	Sub-project areas	Bi-annually	PMU/DMU/FMU	TBD
Community Health and Safety	- Status of community health and safety Records of diseases, road accident - Complaint from local resident - Mitigation measure implemented	Sub-project areas	Bi-annually	PMU/DMU/FMU	TBD
Risks for infectious disease such as AIDS/HIV	- Status of measures of infectious disease	Sub-project areas	Bi-annually	PMU/DMU/FMU	TBD
Accident	- Record and status of accident	Sub-project areas	Bi-annually	PMU/DMU/FMU	TBD
Flood risk	- Record of flood and its response	Sub-project areas	Bi-annually	PMU/DMU/FMU	TBD
Risk for fire	- Record of fire and its response	Sub-project areas	Bi-annually	PMU/DMU/FMU	TBD

Source: JICA Survey Team (2016)

**Table 2.1.2 Environmental Monitoring Plan (Forest Management) in Construction Phase**

Category	Monitoring Item	Location	Frequency	Responsible Agency	Cost
Disturbance to Ecosystem	- Plantation/ ANR design, species planted - Mitigation measure implemented	Sub-project areas	Annually	PMU/DMU/FMU	TBD (To be determined)
Loss of Biodiversity	- Man-animal conflicts, existence of damaged habitats - Mitigation measure implemented	Sub-project areas	Annually	PMU/DMU/FMU	TBD
Affects on Livelihoods	- Negative impact on household economy (Interviews) - Any direct or indirect impact on livelihoods (Interviews) - Complaint from local resident - Mitigation measure implemented	Sub-project areas	Annually	PMU/DMU/FMU	TBD

Source: JICA Survey Team (2016)

## 2.2 Operation Phase

Environmental monitoring plan including monitoring items, location in operation phase is shown in the following tables.

**Table 2.2.1 Environmental Monitoring Plan (Infrastructure Development) in Operation Phase**

Category	Monitoring Item / Objectives	Location	Frequency	Responsible Agency	Cost
Common	- Monitoring of mitigation measures	Sub-project areas	Annually	PMU/DMU/FMU	TBD (To be determined)
Pollution (air, water, soil)	- Mitigation measure implemented - Maintenance work implemented	Sub-project areas	Annually	PMU/DMU/FMU	TBD
Occupational Health and Safety	- Status of safety conditions and measures for occupational safety and health: Records of safety conditions, working accident and complaints - Mitigation measure implemented	Sub-project areas	Annually	PMU/DMU/FMU	TBD
Community Health and Safety	- Status of community health and safety Records of diseases, road accident - Complaint from local resident - Mitigation measure implemented	Sub-project areas	Annually	PMU/DMU/FMU	TBD
Accident	- Record and status of accident - Mitigation measure implemented	Sub-project areas	Annually	PMU/DMU/FMU	TBD
Flood risk	- Record of flood and its response	Sub-project	Annually	PMU/DMU/FMU	TBD

Category	Monitoring Item / Objectives	Location	Frequency	Responsible Agency	Cost
	- Mitigation measure implemented	areas		FMU	
Risk for fire	- Record of fire and its response - Mitigation measure implemented	Sub-project areas	Annually	PMU/DMU/ FMU	TBD

Source: JICA Survey Team (2016)

**Table 2.2.2 Environmental Monitoring Plan (Forest Management) in Operation Phase**

Category	Monitoring Item	Location	Frequency	Responsible Agency	Cost
Common	Monitoring of mitigation measures	Sub-project areas	Annually	PMU/DMU/ FMU	TBD (To be determined)
Disturbance to ecosystem	- Plantation/ ANR design, species planted, - Fire and other disturbances - Mitigation measure implemented	Sub-project areas	Annually	PMU/DMU/ FMU	TBD (To be determined)
Loss of Biodiversity	- Man-animal conflicts, - Existence of damaged habitats - Fire and other disturbances - Mitigation measure implemented	Sub-project areas	Annually	PMU/DMU/ FMU	TBD
Affects on livelihoods (loss of income or loss of access)	- Negative impact on household economy (Interviews) - Any direct or indirect impact on livelihoods (Interviews) - Complaint from local resident - Mitigation measure implemented	Sub-project areas	Annually	PMU/DMU/ FMU	TBD

Source: JICA Survey Team (2016)

## Sample Monitoring Forms for EMoP

### 1. Monitoring Form for Construction Works for Small Scale Infrastructure

#### 1.1 General Information

Items	Descriptions
Project	Supplemental Survey for Odisha Forestry Sector Development Project (Phase II)
Name of sub-projects	
Location	
Contractor/ Implementer	

#### 1.2 Information of Monitoring

Items	Descriptions
Name of Monitor	
Signature of Monitor	
Date of Monitoring	
Location of Monitoring	

#### 1.3 Application of Mitigation Measures

Items	Yes/No
Have the contractors/ implementer applied the mitigation measures?	

#### 1.4 Monitoring Environmental Impact and Possible Mitigation Measures

Items	Environmental Impact Observed	Mitigation measures applied	Effectiveness of mitigation measures (1-5 Scaling)	Action to be Taken for Improvement
Air pollution				
Water Quality				
Drainage and sedimentation				
Solid Waste/ Hazardous Material				
Soil Contamination/				

<b>Items</b>	<b>Environmental Impact Observed</b>	<b>Mitigation measures applied</b>	<b>Effectiveness of mitigation measures (1-5 Scaling)</b>	<b>Action to be Taken for Improvement</b>
Disturbance				
Noise and Vibration				
Flora and Fauna Ecosystem (Disturbance of ecosystem, disruption of vegetative cover and ecological resources)				
Occupational Health and Safety				
Community Health and Safety				
Risks for infectious disease such as AIDS/HIV				
Accident				
Flood risk				
Risk for fire				

## 2. Monitoring Form for Forest Management Activities

### 2.1 General Information

Items	Descriptions
Project	Supplemental Survey for Odisha Forestry Sector Development Project (Phase II)
Name of sub-projects	
Location	
Contractor/ Implementer	

### 2.2 Information of Monitoring

Items	Descriptions
Name of Monitor	
Signature of Monitor	
Date of Monitoring	
Location of Monitoring	
Weather condition	

### 2.3 Application of Mitigation Measures

Items	Yes/No
Have the contractors/ implementer applied the mitigation measures?	

### 2.4 Monitoring Environmental Impact and Possible Mitigation Measures

Items	Environmental Impact Observed	Mitigation measures applied	Effectiveness of mitigation measures (1-5 Scaling)	Action to be Taken for Improvement
Disturbance to Ecosystem				
Loss of Biodiversity				
Affects on Livelihoods				

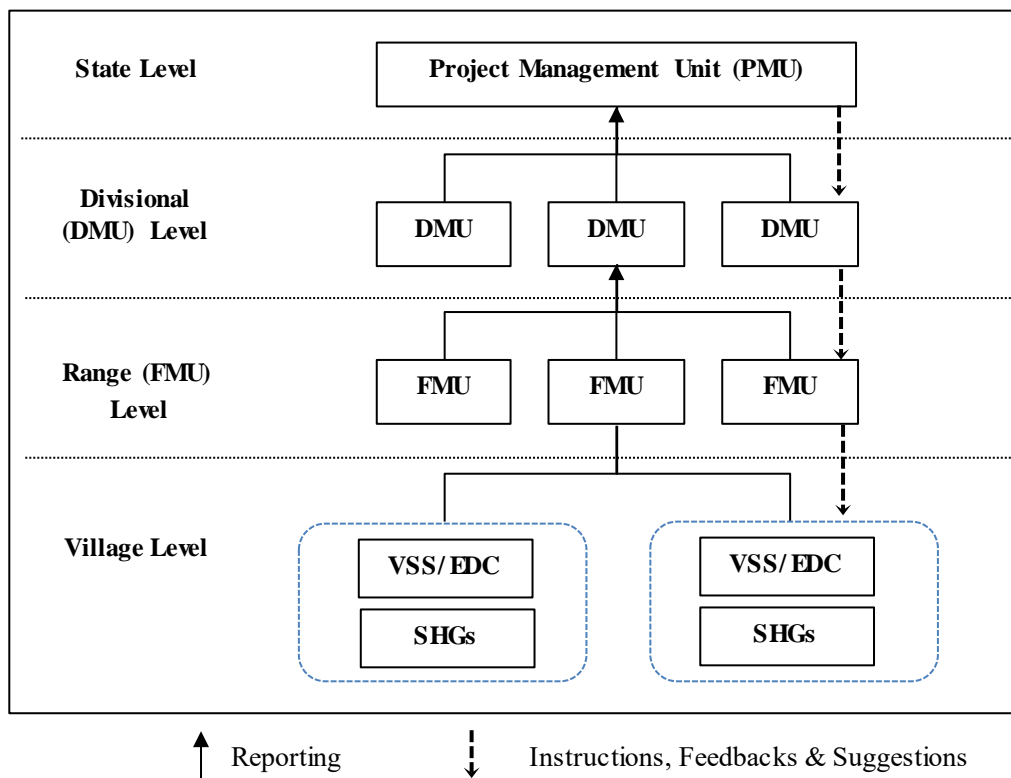
### Attachment 3 Monitoring System for Environment and Social Consideration

Environment and Social Management System Framework (ESMSF) and the Scheduled Tribe and Forest Dwellers Plan Framework (STFDPF) shall be monitored in the Project. ESMSF/ STFDPF will be monitored through regular project monitoring and evaluation structure proposed for the Project

The structure of monitoring system is basically same as the project component monitoring system. At the village level, weekly monitoring and reviews will be conducted by respective VSSs/DCs. FMU shall compile monitoring and reviews fortnightly, and thereafter, DMU shall coordinate the data and report it monthly to PMU, which analyse the result and report it to concerned departments in the State Government as well as to JICA.

PMU shall hire expert(s)/ specialist(s) in the field of environment and social consideration so as to ensure implementation of the Project according to the JICA guideline. The experts/specialists shall support PMU preparation of monitoring sheet based on ESMSF and STFDPF and further detail such as monitoring schedule.

The monitoring structure is shown below.



**Proposed Monitoring Structure of ESMSF of the Project**



## Attachment 4 Performance Monitoring Form for ESMSF

### 1. Basic Information

Name of Organisation:	From:
Completed by (name):	
Position in Organisation:	To:
Reporting Period:	
Completed in (MM/YY):	

### 2. Sub-projects using JICA Funds during the Reporting Period

Name of Sub-Projects Approved During The Reporting Period	Industry /Sector	Project Scope	Project Cost (JPY)	Approval Date	Environmental Category*	Reason of Categorization	Documents Made (e.g.,EIA, RAP, IPP)	Any Outstanding Environmental IR Or IRR** Issues

\* Please refer Environmental and Social Categorization: Definition or II.2.2. of JICA Guidelines for Environmental and Social Considerations (April 2010)

\*\*IR=Involuntary Resettlement, IP= Indigenous People

### 3. Sub-projects using JICA funds to be Approved in the Next FY

Name of Sub-Projects Approved During The Reporting Period	Industry /Sector	Project Scope	Project Cost (JPY)	Approval Date	Environmental Category*	Reason of Categorization	Documents Made (e.g.,EIA, RAP, IPP)	Any Outstanding Environmental IR Or IRR** Issues

### 4. Environmental and Social Management System (ESMS)

Please describe if ESMS of your organisation has changed in any way (e.g. establishment of a new division for environmental and social management) since JICA's appraisal.

### Attachment 7.3.1 Scheduled Tribes in Odisha

List of Scheduled Tribes notified (after addition/deletion) as per the Scheduled Castes and Scheduled Tribes Order, 1950 as amended by Modification Order, 1956, Amendment Act, 1976 and The Scheduled Castes and Scheduled Tribes Order (Amendment) Act 2002 No. 10 dated 8.1.2003 of Ministry of Law and Justice republished by the Notification No. 7799/ L dated 7.6.2003 of Law Department, Government of Odisha. Following Table lists the Scheduled Tribes in Odisha.

**Table 1: List of Scheduled Tribes in Odisha**

No.	Scheduled Tribes
1.	Bagata, Bhakta
2.	Baiga
3.	Banjara, Banjari
4.	Bathudi, Bathuri
5.	Bhottada, Dhotada, Bhotra, Bhatra, Bhattara, Bhotora, Bhatara
6.	Bhuiya, Bhuyan
7.	Bhumia
8.	Bhumij, Teli Bhumij, Haladipokhria Bhumij, Haladi Pokharia Bhumija, Desi Bhumij, Desia Bhumij, Tamaria Bhumij
9.	Bhunja
10.	Binjhal, Binjhar
11.	Binjhia, Binjhoa
12.	Birhor
13.	Bondo Poraja, Bonda Paroja, Banda Paroja
14.	Chenchu
15.	Dal
16.	Desua Bhumij
17.	Dharua, Dhuruba, Dhurva
18.	Didayi, Didai Paroja, Didai
19.	Gadaba, Bodo Gadaba, Gutob Gadaba, Kapu Gadaba, Ollara Gadaba, Parenga Gadaba, Sano Gadaba
20.	Gandia
21.	Ghara
22.	Gond, Gondo, Rajgond, Maria Gond, Dhur Gond
23.	Ho
24.	Holva
25.	Jatapu
26.	Juang
27.	Kandha Gauda
28.	Kawar, Kanwar
29.	Kharia, Kharian, Berga Kharia, Dhelki Kharia, Dudh Kharia, Erenga Kharia, Munda Kharia, Oraon Kharia, Khadia, Pahari Kharia
30.	Kharwar
31.	Khond, Kond, Kandha, Nanguli Kandha, Sitha Kandha, Kondh, Kui, Buda Kondh, Bura Kandha, Desia Kandha, Dungaria Kondh, Kutia Kandha, Kandha Gauda, Muli Kondh, Malua Kondh, Pengo Kandha, Raja Kondh, Raj Khond
32.	Kissan, Nagesar, Nagesia
33.	Kol
34.	Kolah, Loharas, Kol Loharas
35.	Kolha
36.	Koli, Malhar
37.	Kondadora
38.	Kora, Khaira, Khayara
39.	Korua
40.	Kotia
41.	Koya, Gumba Koya, Koitur Koya, Kamar Koya, Musara Koya
42.	Kulis
43.	Lodha, Nodh, Nodha, Lodh
44.	Madia
45.	Mahali
46.	Mankidi
47.	Mankirdia, Mankria, Mankidi
48.	Matya, Matia
49.	Mirdhas, Kuda, Koda

No.	Scheduled Tribes
50.	Munda, Munda Lohara, Munda Mahalis, Nagabanshi Munda, Oriya Munda
51.	Mundari
52.	Omanatya, Omanatyo, Amanatya
53.	Oraon, Dhangar, Uran
54.	Parenga
55.	Paroja, Parja, Bodo paroja, Barong Jhodia Paroja, Chhelia Paroja, Jhodia Paroja, Konda Paroja, Paraja, Ponga Paroja, Sodia Paroja, Sano Paroja, Solia Paroja
56.	Pentia
57.	Rajuar
58.	Santal
59.	Saora, Savar, Saura, Sahara, Arsi Saora, Based Saora, Bhima Saora, Bhimma Saora, Chumura Saora, Jara Savar, Jadu Saora, Jati Saora, Juari Saora, Kampu Saora, Kampa Soura, Kapo Saora, Kindal Saora, Kumbi Kancher Saora, Kalapithia Saora, Kirat Saora, Lanjia Saora, Lamba Lanjia Saora, Luara Saora, Luar Saora, Laria Savar, Malia Saora, Malla Saora, Uriya Saora, Raika Saora, Sudda Saora, Sarda Saora, Tankala Saora, Patro Saora, Vesu Saora
60.	Shabar, Lodha
61.	Sounti
62.	Tharua, Tharua Bindhani

Source: <http://www.stscodisha.gov.in/ScheduledTribes.asp?GL=abt&PL=3>

### Attachment 7.3.2 Scheduled Tribe and Scheduled Caste Population in the Prioritized Project Area

**Table 1: ST/SC Population in the Prioritized Districts (CD Block Level)**

District	Area (sq. km)	Total Population		Scheduled Tribe (ST) Population			Scheduled Caste (SC) Population		
		Total	Population Density (no/sq.km)	Total	%	Population Density (no/sq.km)	Total	%	Population Density (no/sq.km)
Angul	6,375	1,273,821	199.82	179,603	14.1	0.14	239,552	18.81	0.19
Balasore	3,806	2,320,529	609.7	275,678	11.88	0.12	478,586	20.62	0.21
Bargarh	5,837	1,481,255	253.77	281,135	18.98	0.19	298,780	20.17	0.2
Bhadrak	2,505	1,506,337	601.33	30,428	2.02	0.02	334,896	22.23	0.22
Bolangir	6,575	1,648,997	250.8	347,164	21.05	0.21	294,777	17.88	0.18
Boudh	3,098	441,162	142.4	55,364	12.55	0.13	104,934	23.79	0.24
Cuttack	3,932	2,624,470	667.46	93,745	3.57	0.04	498,633	19	0.19
Deogarh	2,940	312,520	106.3	110,400	35.33	0.35	52,112	16.67	0.17
Dhenkanal	4,452	1,192,811	267.93	162,056	13.59	0.14	234,079	19.62	0.2
Gajapati	4,325	577,817	133.6	313,714	54.29	0.54	39,175	6.78	0.07
Ganjam	8,206	3,529,031	430.05	118,928	3.37	0.03	688,235	19.5	0.2
Jagatsinghpur	1,668	1,136,971	681.64	7,862	0.69	0.01	248,152	21.83	0.22
Jajpur	2,899	1,827,192	630.28	151,432	8.29	0.08	433,387	23.72	0.24
Jharsuguda	2,114	579,505	274.13	176,758	30.5	0.31	104,620	18.05	0.18
Kalahandi	7,920	1,576,869	199.1	449,456	28.5	0.29	286,580	18.17	0.18
Kandhamal	8,021	733,110	91.4	392,820	53.58	0.54	115,544	15.76	0.16
Kendrapara	2,644	1,440,361	544.77	9,484	0.66	0.01	309,780	21.51	0.22
Keonjhar	8,303	1,801,733	217	818,878	45.45	0.45	209,357	11.62	0.12
Khurda	2,813	2,251,673	800.45	115,051	5.11	0.05	297,472	13.21	0.13
Koraput	8,807	1,379,647	156.65	697,583	50.56	0.51	196,540	14.25	0.14
Malkangiri	5,791	613,192	105.89	354,614	57.83	0.58	138,295	22.55	0.23
Mayurbhanja	10,418	2,519,738	241.86	1,479,576	58.72	0.59	184,682	7.33	0.07
Nawapara/ Nuapara	3,852	610,382	158.46	206,327	33.8	0.34	82,159	13.46	0.13
Nawarangpur	5,291	1,220,946	230.76	681,173	55.79	0.56	177,384	14.53	0.15
Nayagarh	3,890	962,789	247.5	58,691	6.1	0.06	136,399	14.17	0.14
Puri	3,479	1,698,730	488.28	6,129	0.36	0	325,133	19.14	0.19
Rayagada	7,073	967,911	136.85	541,905	55.99	0.56	139,514	14.41	0.14
Sambalpur	6,624	1,041,099	157.17	355,261	34.12	0.34	191,827	18.43	0.18
Sonepur/ Subarnpur	2,337	610,183	261.1	57,192	9.37	0.09	156,219	25.6	0.26
Sundargarh	9,712	2,093,437	215.55	1,062,349	50.75	0.51	191,660	9.16	0.09
<b>Priority Area Districts</b>	<b>131,585</b>	<b>33,752,106</b>	<b>256.5</b>	<b>8,076,036</b>	<b>23.93</b>	<b>0.24</b>	<b>5,734,642</b>	<b>16.99</b>	<b>0.17</b>
<b>Total State</b>	<b>155,707</b>	<b>41,974,218</b>	<b>269.57</b>	<b>9,590,756</b>	<b>22.85</b>	<b>0.23</b>	<b>7,188,463</b>	<b>17.13</b>	<b>0.17</b>

Source: Compiled by JICA Survey Team (2016) based on information from Census of India 2011

**Table 2: ST/SC Population in the Prioritized Forest Divisions (CD Block Level)**

No	Forest Divisions	District	CD Blocks	Total Population	ST Population		SC Population			
					No	%	No	%		
1	Baripada Division	Mayurbhanj	Kaptipada	148,717	99,053	66.61	5,853	3.94		
			Udala	76,147	56,642	74.39	4,236	5.56		
			Gopabandhunagar	75,345	41,712	55.36	10,183	13.52		
			Khunta	74,155	58,608	79.03	3,329	4.49		
			Shamakhunta	79,883	53,306	66.73	3,830	4.79		
			Bangiriposi	103,880	72,362	69.66	5,576	5.37		
			Saraskana	100,816	58,337	57.86	6,524	6.47		
			Kuliana (Koliana)	101,151	67,045	66.28	6,556	6.48		
			Suliapada	102,263	41,429	40.51	6,538	6.39		
			Baripada	69,782	51,716	74.11	1,850	2.65		
			Badasahi (Barsahi)	146,232	74,120	50.69	14,026	9.59		
			Betanati	150,434	61,880	41.13	16,672	11.08		
			Rasagobindapur	96,526	52,715	54.61	11,377	11.79		
			Muruda	103,775	45,695	44.03	12,263	11.82		
<b>Baripada Division Total</b>				<b>1,429,106</b>	<b>834,620</b>	<b>58.4</b>	<b>108,813</b>	<b>7.61</b>		
2	Karanjia Division	Mayurbhanj	Raruan	66,504	35,670	53.64	5,035	7.57		
			Sukruli	60,577	38,146	62.97	4,250	7.02		
			Karanjia	91,518	62,110	67.87	6,350	6.94		
			Thakurmunda	104,694	78,442	74.93	4,710	4.5		
			<b>Karanjia Division Total</b>				<b>323,293</b>	<b>214,368</b>	<b>66.31</b>	<b>20,345</b>
3	Rairangpur Division	Mayurbhanj	Tiring	57,076	42,559	74.57	3,124	5.47		
			Bahalda	86,081	49,974	58.05	5,363	6.23		
			Jamda	59,402	43,641	73.47	2,934	4.94		
			Rairangpur	60,565	32,402	53.5	4,873	8.05		
			Bijatola	64,193	48,627	75.75	2,670	4.16		
			Kusumi	93,116	59,758	64.18	6,550	7.03		
			Bisoi	74,572	51,723	69.36	3,566	4.78		
			Jashipur	101,058	70,521	69.78	7,255	7.18		
			<b>Rairangpur Division Total</b>				<b>596,063</b>	<b>399,205</b>	<b>66.97</b>	<b>36,335</b>
4	Sambalpur	Sambalpur	Rengali	91,110	37,220	40.85	17,541	19.25		
			Dhankauda (Sambalpur)	99,269	34,107	34.36	24,726	24.91		
			Maneswar	98,140	29,244	29.8	30,768	31.35		
			Jujomura	84,006	42,052	50.06	12,457	14.83		
							<b>372,525</b>	<b>142,623</b>	<b>38.29</b>	<b>85,492</b>
		Subarnapur	Ulunda	89,848	8,288	9.22	26,027	28.97		
							<b>89,848</b>	<b>8,288</b>	<b>9.22</b>	<b>26,027</b>
<b>Sambalpur Division Total</b>				<b>462,373</b>	<b>150,911</b>	<b>32.64</b>	<b>111,519</b>	<b>24.12</b>		
5	Dhenkanal Division	Dhenkanal	Kankadahad	110,126	46,927	42.61	13,686	12.43		
			Bhuban	102,087	10,386	10.17	22,067	21.62		
			Kamakshyanagar	113,985	18,400	16.14	25,159	22.07		
			Parajang	133,450	12,084	9.06	25,424	19.05		
			Odapada	143,482	11,672	8.13	32,379	22.57		
			Hindol	178,145	12,515	7.03	41,654	23.38		
			Dhenkanal Sadar (Sadar)	152,932	20,143	13.17	29,902	19.55		
			Gandia	152,180	25,275	16.61	26,248	17.25		
<b>Dhenkanal Division Total</b>				<b>1,086,387</b>	<b>157,402</b>	<b>14.49</b>	<b>216,519</b>	<b>19.93</b>		
6	Sundargarh Division	Sundargarh	Hemgir	84,559	38,312	45.31	12,258	14.5		
			Lephripa	78,808	46,418	58.9	10,342	13.12		
			Tangrapali	64,374	34,369	53.39	9,701	15.07		

No	Forest Divisions	District	CD Blocks	Total Population	ST Population		SC Population	
					No	%	No	%
			Balisankara	85,690	57,427	67.02	7,536	8.79
			Subdega	64,254	45,332	70.55	5,322	8.28
			Sundargarh	70,911	37,392	52.73	10,198	14.38
			Baragaon	71,242	46,292	64.98	5,879	8.25
			Kutra	80,470	62,040	77.1	5,731	7.12
			<b>Sundargarh Division Total</b>		<b>600,308</b>	<b>367,582</b>	<b>61.23</b>	<b>66,967</b>
7	Subarnapur	Subarnapur	Dunguripali	123,823	15,833	12.79	28,403	22.94
			Binika	91,118	12,164	13.35	23,846	26.17
			Sonapur	80,775	6,995	8.66	19,846	24.57
			Tarbha	84,374	7,107	8.42	23,401	27.73
				<b>380,090</b>	<b>42,099</b>	<b>11.08</b>	<b>95,496</b>	<b>25.12</b>
	Balangir	Agalpur	96,342	12,268	12.73	17,547	18.21	
		Loisinga	95,933	17,595	18.34	16,984	17.7	
		Patnagarh	130,783	41,113	31.44	20,254	15.49	
		Deogaon	97,645	19,938	20.42	18,569	19.02	
		Balangir	102,952	21,749	21.13	20,294	19.71	
		Puintala	111,635	7,579	6.79	28,744	25.75	
		Gudvella (Tentulikhunti)	62,229	17,805	28.61	12,300	19.77	
			<b>697,519</b>	<b>138,047</b>	<b>19.79</b>	<b>134,692</b>	<b>19.31</b>	
<b>Subarnapur Division Total</b>		<b>1,077,609</b>	<b>180,146</b>	<b>16.72</b>	<b>230,188</b>	<b>21.36</b>		
8	Boudh Division	Boudh	Kantamal	148,385	22,250	14.99	28,979	19.53
			Baudh	145,519	16,670	11.46	34,627	23.8
			Harbhanga	126,834	15,947	12.57	35,832	28.25
			<b>Boudh Division Total</b>		<b>420,738</b>	<b>54,867</b>	<b>13.04</b>	<b>99,438</b>
9	Ghumusar North Division	Ganjam	Bhanjanagar	138,774	12,328	8.88	31,896	22.98
			Jagannathprasad	131,326	7,148	5.44	31,691	24.13
			<b>Ghumusar North Division Total</b>		<b>270,100</b>	<b>19,476</b>	<b>7.21</b>	<b>63,587</b>
10	Jharsuguda	Jharsuguda	Jharsuguda	79,440	25,595	32.22	18,898	23.79
			Kirimira	42,897	22,604	52.69	7,914	18.45
			Laikera	49,992	25,886	51.78	8,987	17.98
			Kolabira	48,003	21,767	45.35	7,914	16.49
			<b>Jharsuguda Total</b>		<b>220,332</b>	<b>95,852</b>	<b>43.5</b>	<b>43,713</b>
11	Baragarh Division	Bargarh	Jharbandha	78,318	23,306	29.76	11,579	14.78
			Paikamal	117,274	41,789	35.63	17,999	15.35
			Padampur (Rajbarasambar)	116,988	27,505	23.51	20,159	17.23
			Gaisilet	92,899	18,013	19.39	15,314	16.48
			Bijepur	107,374	14,064	13.1	21,999	20.49
			Sohela	139,254	26,906	19.32	28,118	20.19
			Bhatli	90,321	20,915	23.16	17,018	18.84
			Ambabhona	65,715	17,168	26.12	12,952	19.71
			Attabira	157,296	33,691	21.42	37,682	23.96
			Bargarh	161,895	19,388	11.98	38,477	23.77
			Barapali	107,421	14,906	13.88	22,154	20.62
			Bheden	127,400	16,251	12.76	33,191	26.05
<b>Baragarh Division Total</b>		<b>1,362,155</b>	<b>273,902</b>	<b>20.11</b>	<b>276,642</b>	<b>20.31</b>		
12	Athgarh Division	Cuttack	Narasinghpur	157,201	7,560	4.81	34,571	21.99
			Badamba	149,793	8,472	5.66	28,542	19.05
			Tigiria	74,639	2,562	3.43	9,833	13.17
			Athagad	144,670	17,946	12.4	22,016	15.22
			<b>Athgarh Division Total</b>		<b>526,303</b>	<b>36,540</b>	<b>6.94</b>	<b>94,962</b>

No	Forest Divisions	District	CD Blocks	Total Population	ST Population		SC Population	
					No	%	No	%
13	Athamallik Division	Anugul	Kishorenagar	107,821	21,638	20.07	16,086	14.92
			Athmallik	110,552	26,452	23.93	18,041	16.32
	<b>Athamallik Division Total</b>			<b>218,373</b>	<b>48,090</b>	<b>22.02</b>	<b>34,127</b>	<b>15.63</b>
14	Nayagarh Division	Nayagarh	Dasapalla	103,908	25,585	24.62	21,157	20.36
			Khandapada	107,260	2,938	2.74	19,934	18.58
			Bhapur	105,532	3,231	3.06	11,809	11.19
			Nayagarh	149,994	569	0.38	16,918	11.28
			Nuagaon	93,253	10,962	11.76	16,634	17.84
			Odagaon	169,379	2,361	1.39	22,597	13.34
<b>Nayagarh Division Total</b>			<b>729,326</b>	<b>45,646</b>	<b>6.26</b>	<b>109,049</b>	<b>14.95</b>	
15	Kalahandi North Division	Kalahandi	Golamunda	129,499	32,655	25.22	22,480	17.36
			Bhawanipatna	170,527	56,564	33.17	34,711	20.36
			Kesinga	115,828	31,849	27.5	19,078	16.47
			Karlamunda	57,418	8,411	14.65	9,686	16.87
			Madanpur Rampur	80,524	31,535	39.16	11,142	13.84
			Narala	120,992	32,026	26.47	22,963	18.98
<b>Kalahandi North Division Total</b>			<b>674,788</b>	<b>193,040</b>	<b>28.61</b>	<b>120,060</b>	<b>17.79</b>	
16	Bolangiri	Balangir	Khaprakhol	93,557	32,651	34.9	11,457	12.25
			Belpara	128,916	44,283	34.35	20,710	16.06
			Turekela	82,781	28,924	34.94	13,089	15.81
			Bangomunda	117,089	18,726	15.99	23,116	19.74
			Muribahal	114,839	27,259	23.74	21,014	18.3
			Titlagarh	121,751	24,183	19.86	23,338	19.17
			Saintala	120,206	23,913	19.89	21,169	17.61
<b>Bolangiri Division Total</b>			<b>779,139</b>	<b>199,939</b>	<b>25.66</b>	<b>133,893</b>	<b>17.18</b>	
17	Rairakhol Division	Sambalpur	Rairakhol	55,833	13,774	24.67	8,000	14.33
			Naktideul	63,826	17,559	27.51	9,912	15.53
				<b>119,659</b>	<b>31,333</b>	<b>26.19</b>	<b>17,912</b>	<b>14.97</b>
		Subarnapur	Biramaharajpur	95,376	4,934	5.17	22,865	23.97
<b>Rairakhol Division Total</b>			<b>215,035</b>	<b>36,267</b>	<b>16.87</b>	<b>40,777</b>	<b>18.96</b>	
18	Ghumusar South Division	Ganjam	Buguda	114,272	2,095	1.83	24,187	21.17
			Bellanguntha	113,436	663	0.58	16,499	14.54
			Surada	143,428	17,111	11.93	29,321	20.44
			Dharakote	107,946	8,845	8.19	20,445	18.94
			Asika	144,132	952	0.66	26,981	18.72
			Polasara	133,386	3,826	2.87	23,554	17.66
			Seragad	127,807	1,195	0.94	25,194	19.71
<b>Ghumusar South Division Total</b>			<b>884,407</b>	<b>34,687</b>	<b>3.92</b>	<b>166,181</b>	<b>18.79</b>	
19	Rajnagar WL	Jagatsinghapur	Naugaon	77,634	263	0.34	14,437	18.6
			Balikuda	165,275	260	0.16	33,078	20.01
			Kujang	176,065	462	0.26	41,187	23.39
			Ersama	146,273	629	0.43	29,514	20.18
				<b>565,247</b>	<b>1,614</b>	<b>0.29</b>	<b>118,216</b>	<b>20.91</b>
		Kendrapara	Rajkanika	138,979	51	0.04	31,859	22.92
			Rajnagar	170,110	2,221	1.31	21,576	12.68
			Aali	139,628	459	0.33	35,754	25.61
			Pattamundai	162,348	280	0.17	45,976	28.32
			Kendrapara	151,136	775	0.51	37,591	24.87
			Mahakalapada	212,463	3,577	1.68	37,409	17.61
			<b>974,664</b>	<b>7,363</b>	<b>0.76</b>	<b>210,165</b>	<b>21.56</b>	

No	Forest Divisions	District	CD Blocks	Total Population	ST Population		SC Population	
					No	%	No	%
	<b>Rajnagar WL Division Total</b>			<b>1,539,911</b>	<b>8,977</b>	<b>0.58</b>	<b>328,381</b>	<b>21.32</b>
20	Bamara WL	Sambalpur	Bamra	96,088	60,494	62.96	11,182	11.64
			Kochinda	71,316	36,668	51.42	11,535	16.17
			Jamankira	93,711	52,807	56.35	11,647	12.43
	<b>Bamara WL Division Total</b>			<b>261,115</b>	<b>149,969</b>	<b>57.43</b>	<b>34,364</b>	<b>13.16</b>
21	Hiarakud WL	Jharsuguda	Lakhanpur (K. Lakhanpur)	142,047	46,508	32.74	27,281	19.21
			<b>Hiarakud WL Division Total</b>			<b>142,047</b>	<b>46,508</b>	<b>32.74</b>
22	Deogarh Division	Debagarh	Tileibani	74,484	43,114	57.88	8,345	11.2
			Barkot	108,170	34,356	31.76	20,953	19.37
			Reamal	107,476	27,486	25.57	18,948	17.63
	<b>Deogarh Division Total</b>			<b>290,130</b>	<b>104,956</b>	<b>36.18</b>	<b>48,246</b>	<b>16.63</b>
23	Keonjhar Division	Kendujhar	Joda	125,728	75,053	59.69	11,824	9.4
			Champua	115,321	52,966	45.93	10,255	8.89
			Jhumpura	113,149	57,186	50.54	7,985	7.06
			Banspal	102,527	81,548	79.54	4,477	4.37
			Telkoi	96,590	50,406	52.19	10,903	11.29
			Kendujhar Sadar (Kendujhargarh)	161,931	81,350	50.24	16,082	9.93
			Ghatgaon	118,307	74,909	63.32	6,828	5.77
			Patana	101,518	53,405	52.61	7,706	7.59
	Saharapada	88,314	51,332	58.12	7,137	8.08		
<b>Keonjhar Division Total</b>			<b>1,023,385</b>	<b>578,155</b>	<b>56.49</b>	<b>83,197</b>	<b>8.13</b>	
24	Angul Division	Anugul	Kaniha	143,109	12,082	8.44	30,829	21.54
			Talcher	142,622	13,211	9.26	26,527	18.6
			Chhendipada	166,751	17,890	10.73	35,818	21.48
			Banarpal	209,465	15,345	7.33	43,346	20.69
<b>Angul Division Total</b>			<b>661,947</b>	<b>58,528</b>	<b>8.84</b>	<b>136,520</b>	<b>20.62</b>	
25	Deogarh Division	Anugul	Palalahada	129,806	50,892	39.21	19,968	15.38
			<b>Deogarh Division Total</b>			<b>129,806</b>	<b>50,892</b>	<b>39.21</b>
26	Parlakhemundi Division	Gajapati	Mohana	133,598	78,251	58.57	5,026	3.76
			R. Udaygiri	64,123	44,558	69.49	1,529	2.38
			Nuagada	54,696	42,145	77.05	228	0.42
			Guma	79,520	60,332	75.87	2,763	3.47
			Kashinagara	51,414	18,396	35.78	8,014	15.59
			Gosani (Parlakhemundi)	69,447	10,926	15.73	10,698	15.4
	Rayagada	70,866	57,326	80.89	1,809	2.55		
<b>Parlakhemundi Division Total</b>			<b>523,664</b>	<b>311,934</b>	<b>59.57</b>	<b>30,067</b>	<b>5.74</b>	
27	Roulkela Division	Sundargarh	Kuanrunda	106,913	82,264	76.94	6,257	5.85
			Nuagaon	106,156	70,233	66.16	7,821	7.37
			Bisra	90,185	45,846	50.84	5,075	5.63
			Lathikata	146,312	85,181	58.22	9,013	6.16
			Rajagangapur	105,065	85,116	81.01	5,939	5.65
<b>Roulkela Division Total</b>			<b>554,631</b>	<b>368,640</b>	<b>66.47</b>	<b>34,105</b>	<b>6.15</b>	
28	Balasore WL	Baleshwar	Jaleswar	204,090	39,701	19.45	41,045	20.11
			Bhograi	283,586	7,193	2.54	52,266	18.43
			Baliapal	197,259	11,258	5.71	44,800	22.71
			Basta	188,768	22,718	12.03	32,320	17.12
			Baleshwar (Baleshwar Sadar)	247,047	29,525	11.95	69,544	28.15
			Remuna	180,044	26,463	14.7	46,370	25.75



No	Forest Divisions	District	CD Blocks	Total Population	ST Population		SC Population	
					No	%	No	%
			Nilagiri	129,360	74,701	57.75	12,761	9.86
			Oupada	82,917	16,556	19.97	13,879	16.74
			Khaira	179,884	11,502	6.39	40,936	22.76
			Similia	121,516	6,354	5.23	26,566	21.86
			Soro	140,607	8,758	6.23	29,015	20.64
			Bahanaga	138,369	3,763	2.72	42,190	30.49
<b>Balasure WL Total</b>				<b>2,093,447</b>	<b>258,492</b>	<b>12.35</b>	<b>451,692</b>	<b>21.58</b>
29	Bhadrak WL	Bhadrak	Bant	152,063	7,932	5.22	37,926	24.94
			Bhandaripokhari	127,158	4,134	3.25	29,632	23.3
			Dhamanagar	181,281	1,077	0.59	41,917	23.12
			Bhadrak	217,849	11,750	5.39	42,876	19.68
			Tihidi	194,768	619	0.32	58,023	29.79
			Chandabali	250,037	885	0.35	56,192	22.47
			Basudebpur	219,108	583	0.27	52,257	23.85
<b>Bhadrak WL Total</b>				<b>1,342,264</b>	<b>26,980</b>	<b>2.01</b>	<b>318,823</b>	<b>23.75</b>
30	Rayagada Division	Rayagada	Muniguda	93,564	29,108	31.11	24,262	25.93
			Chandrapur	41,129	29,606	71.98	4,469	10.87
			Gudari	42,737	31,523	73.76	5,857	13.7
			Bishamakatak	92,490	55,195	59.68	15,642	16.91
			Kalyanasingpur	63,753	40,841	64.06	9,238	14.49
			Kashipur	140,633	84,357	59.98	29,403	20.91
			Rayagada	127,333	82,003	64.4	13,724	10.78
			Kolnara	73,839	52,387	70.95	6,940	9.4
			Ramanguda	52,632	34,456	65.47	4,768	9.06
			Padmapur	56,459	28,336	50.19	5,672	10.05
Gunupur	81,041	60,207	74.29	4,002	4.94			
<b>Rayagada Division Total</b>				<b>865,610</b>	<b>528,019</b>	<b>61</b>	<b>123,977</b>	<b>14.32</b>
31	Jeypore Division	Koraput	Kotpad	94,994	59,748	62.9	13,609	14.33
			Boriguma	153,128	77,504	50.61	22,772	14.87
			Jeypur	122,318	58,206	47.59	23,753	19.42
			Kundura	71,629	36,638	51.15	12,209	17.04
			Boipariguda	110,746	65,842	59.45	14,717	13.29
<b>Jeypore Division Total</b>				<b>552,815</b>	<b>297,938</b>	<b>53.89</b>	<b>87,060</b>	<b>15.75</b>
32	Phulbani Division	Kandhamal	Khajuripada	51,470	25,872	50.27	16,372	31.81
			Phulabani	39,948	22,513	56.36	8,329	20.85
			Phiringia	83,428	48,225	57.8	14,695	17.61
			Raikia	51,854	29,377	56.65	6,131	11.82
			G. Udayagiri	30,621	20,101	65.64	3,378	11.03
			Tikabali	49,405	27,095	54.84	9,848	19.93
			Chakpad	43,892	19,950	45.45	11,199	25.51
<b>Phulbani Division Total</b>				<b>350,618</b>	<b>193,133</b>	<b>55.08</b>	<b>69,952</b>	<b>19.95</b>
33	Bonai Division	Sundargarh	Gurundia	66,988	53,195	79.41	3,698	5.52
			Baneigarh	69,891	37,448	53.58	8,740	12.51
			Lahunipara	99,526	67,541	67.86	6,426	6.46
			Koida	86,818	60,938	70.19	5,475	6.31
<b>Bonai Division Total</b>				<b>323,223</b>	<b>219,122</b>	<b>67.79</b>	<b>24,339</b>	<b>7.53</b>
<b>Total</b>				<b>22,530,448</b>	<b>6,544,783</b>	<b>29.05</b>	<b>3,791,087</b>	<b>16.83</b>

Source: Compiled by JICA Survey Team (2016) based on information from Census of India 2011

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## Attachment 7.3.3 Scheduled Tribe and Forest Dependents Plan Framework

### 1.1 Salient Features of the Forest Dependents Plan Framework

#### (1) Objective of Forest Dependents Plan Framework

The Scheduled Tribe and Forest Dependents Plan Framework (STFDPF) is to be applied as an additional framework that works together with the Environmental and Social Management System Framework (ESMSF), the primary project safeguards document for the Project. The STFDPF is specifically applied in situations where Scheduled Tribes (ST), Scheduled Castes (SC), Other Backward Classes (OBC), forest dwellers and other forest dependents are affected by project activities and provides guidance for specific measures which may be required in addition to the provisions of the ESMSF.

#### (2) Structure of STFDPF

STFDPF is structured in an almost identical way to the ESMSF for easy usage by simply referring the ESMSF. The structure of STFDPF is described below.

- 1) Definition of “Scheduled Tribes and Forest Dwellers” as “Indigenous People” and as Target of STFDPF
- 2) Safeguard Policies of JICA on ST and Forest Dependents
- 3) Legal and Policy Framework for ST and Forest Dependents
- 4) Environmental and Social Risks and Mitigation Measures
- 5) Framework and Procedures/ Detail Procedures of STFDPF (Preparation of Scheduled Tribe and Forest Dependents Plan, Free, Prior and Informed Consultation, Social Assessment, Micro planning, Selection and Screening of Sub-project, Monitoring and Evaluation (M&E), and Grievance Procedures
- 6) Capacity Development

### 1.2 Definition of “Scheduled Tribes and Forest Dwellers” as “Indigenous People” and as Target of STFDPF

STFDPF is prepared referring to the format provided in the World Bank’s OP 4.10 Annex C on Indigenous Peoples Plan Framework (IPPF). In consideration of the World Bank’s OP 4.10, the Forest (Recognition of Rights) Act 2006, and the Indian/ Odisha contexts, following categories of the people who will be affected, particularly adversely affected, by project activities to be regarded as the target of IPPF/ STFDPF for the Project.

- **Scheduled Tribes (ST)**
- **Scheduled Castes (SC)**
- **Other Backward Classes (OBC) minorities**
- **Forest Dwellers and Other Forest Dependents**

Basically, so called “Indigenous Peoples” as per the World Bank’s definition (i.e. STs), “Forest Dwellers” as per the Forest (Recognition of Rights) Act 2006, and other forest dependents are included since the proposed Project will be mainly implemented in the forest areas through community institutions which by nature are the forest dependent communities/institutions.

The proposed Project regards both tribal and non-tribal communities who reside within and on the fringes of the forest areas and adversely affected by project activities to be the target of the IPPF. Since the targets of IPPF for the Project are not only “Indigenous Peoples” but also “Forest Dwellers/ Dependents”, therefore, the term “Scheduled Tribes and Forest Dependents will be adopted instead of the “Indigenous Peoples”. In case there are scheduled tribes and forest dependents to be the target of STFDPF, “Scheduled Tribes and Forest Dependents Plan (STFDP)” to be prepared for such stakeholders.

### **1.3 Safeguard Policies of JICA on ST, and Forest Dependents**

The STFDPF aims to ensure that JICA's safeguards policies relating to the protection of indigenous peoples with respect to their lands, territories and livelihood to be an essential part in the project framework, and sub-projects are designed and implemented in a way that fosters full respect for indigenous peoples. The JICA Guidelines for Environmental and Social Considerations (2010) states that appropriate environmental and social considerations for indigenous people should be undertaken, according to the nature of the Project, based on the following:

- 1) Any adverse impacts that a project may have on indigenous peoples are to be avoided when feasible by exploring all viable alternatives. When, after such an examination, avoidance is proved unfeasible, effective measures must be taken to minimize impacts and to compensate indigenous peoples for their losses.
- 2) When projects may have adverse impacts on indigenous peoples, all of their rights in relation to land and resources must be respected in accordance with the spirit of relevant international declarations and treaties, including the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Efforts must be made to obtain the consent of indigenous peoples in a process of free, prior and informed consultation.
- 3) Measures for the affected indigenous peoples must be prepared as an indigenous peoples plan (which may be a part of other documents for environmental and social consideration) and must be made public in compliance with the relevant laws and ordinances of the host country. In preparing the indigenous peoples plan, consultations must be made with the affected indigenous peoples based on sufficient information made available to them in advance. When consultations are held, it is desirable that explanations be given in a form, manner, and language that are understandable to the people concerned.

The JICA Guideline states that it is desirable that the indigenous peoples plan include the elements laid out in the World Bank Safeguard Policy, OP 4.10, Annex B.

### **1.4 Legal and Policy Framework for ST and Forest Dependents**

The main legislation and policies pertaining to the rights and social welfare of ST, SC, Forest Dwellers OBC and other forest dependents are provided in the ESMSF.

There are issues related to how tribes, castes and other minorities are defined, which may be academic in nature but have very real implications in terms of who or which groups are actually safeguarded by the national legal and policy framework as well as their eligibility for various social welfare benefits and programmes. Recognizing the historical discrimination and deprivation, list of caste and tribe were identified in government schedule as a target group for reservation policies. Anyone not mentioned in the list of ST (in terms of Article 342 of the Indian Constitution) is considered a non-tribe and vice-versa. This is important in the case of the Project and this particular safeguards document because it means that by simply following the Government of India's classification system, some of the disadvantaged and marginalized groups may be left out.

### **1.5 Environmental and Social Risks and Mitigation Measures**

The overall environmental and social concerns of the Project have been discussed in the ESMSF. The key impacts of the Project on the ST and Forest Dependents have been described below. Details of potential positive and negative impact will be examined at the initial stage of the Project implementation by OFSDS through consultation with relevant agencies, local governments and stakeholders.

**(1) Potential Positive and Adverse Impacts**

The Project will have mainly positive environmental and social impacts. The outline below lists the key benefits and positive environmental and social impacts on ST and Forest Dependents by the Project

- a. Forest / Natural and Physical Capital Benefits
  - Improved forest quality and quantity
  - Reduced human-animal conflicts
  - Increased production
  - Improved environmental services derived from forests such as improved watershed protection, reduced soil erosion
  - Better awareness toward forest protection
- b. Social Capital Benefits
  - Strengthened community institutions
  - Judicious use of land, water, and etc. due to the project interventions safeguarding the environment
- c. Financial Capital Benefits
  - Increased incomes
  - Direct and indirect employment opportunities arising from project activities
  - Diversification of income sources and reduced financial risk
  - Value addition and better marketing for their produces
- d. Human Capital Benefits
  - Increased technical capacity for sustainable forest management
  - Increased entrepreneurial and business management capacity of SHGs
- e. Improved Structures and Processes
  - Increased participation in community development planning and activities
  - Increased participation of local people in forest management

Though the Project is not likely to have any significant negative impacts on the ST and Forest Dependents, the Project potentially could bring a number of adverse environmental impacts. The following table presents potential adverse risks and mitigation measures on ST and Forest Dependents by the Project.

**Summary of Adverse Environmental / Social Risks and Mitigation Measures for ST and Forest Dependents**

Activities	Potential Adverse Risks	Possible Mitigation Measures
Planning	<ul style="list-style-type: none"> <li>- Disempowerment of customary village forest management institutions</li> <li>- Community conflicts</li> <li>- Micro planning could lead to increased conflict over natural resources through formalization of previously fluid, flexible and informal agreements and practices</li> </ul>	<ul style="list-style-type: none"> <li>- Participatory procedures for screening of sub-projects and avoidance of major impacts</li> <li>- Procedural steps for ensuring adequate consultation and participation of vulnerable groups in micro planning</li> <li>- Promotion of best-practice participatory approaches to forest management planning</li> <li>- Prioritization of vulnerable groups as beneficiaries</li> </ul>
Community Development	<ul style="list-style-type: none"> <li>- Encroachment</li> <li>- Loss of common property resources</li> <li>- Loss of property, houses and other physical assets</li> <li>- Loss of other customary land/resource access and use</li> <li>- Disempowerment of customary institutions</li> </ul>	<ul style="list-style-type: none"> <li>- Strict delineation and survey of forest boundaries</li> <li>- Stringent action against encroachment</li> <li>- Increased awareness programs</li> <li>- Participatory procedures for screening of sub-projects and avoidance of major impacts</li> <li>- No use of private land or resettlement for Community infrastructures</li> <li>- Ensure members of the community participation in Gram Sabha</li> </ul>
	<ul style="list-style-type: none"> <li>- Construction activities related air, water, soil and noise pollution</li> <li>- Possible damage to flora and fauna</li> </ul>	<ul style="list-style-type: none"> <li>- Participatory procedures for screening of sub-projects and avoidance of major impacts</li> <li>- Proper design and planning of infrastructure activities to minimize environmental risks</li> <li>- Community-based/participatory land/resource use planning</li> </ul>
Livelihood and Traditional	<ul style="list-style-type: none"> <li>- Denial of basic rights</li> <li>- Increased dependency</li> <li>- Loss of traditional livelihood</li> </ul>	<ul style="list-style-type: none"> <li>- Proper implementation and monitoring of ESMSF, STFDPF and Social Assessment</li> <li>- Clear and equitable beneficiary selection and prioritizing</li> </ul>

Activities	Potential Adverse Risks	Possible Mitigation Measures
Knowledge	<ul style="list-style-type: none"> <li>- Loss of traditional knowledge/skill</li> <li>- Inequitable benefit sharing</li> <li>- Resource use conflicts</li> <li>- Gender issues</li> </ul>	<ul style="list-style-type: none"> <li>forest dependents, poor and vulnerable households</li> <li>- Documentation and utilization of traditional knowledge/practices</li> <li>- Active bottom-up approach</li> <li>- Community involvement and employment in all aspects of construction, operation and maintenance</li> <li>- Corpus fund to ensure sustainability of investment</li> <li>- Selection of female beneficiaries with deliberate attempts to empower women</li> </ul>
Sustainable Forest Management	<ul style="list-style-type: none"> <li>- Impacts from construction/ earthwork activities including air (dust), water (siltation of water bodies), soil (soil contamination, erosion, and loss), local fauna and flora, noise pollution, waste disposal etc.</li> <li>- Possibility of loss of access to customary lands and resources</li> <li>- Potential loss of customary/traditional knowledge as communities are trained in formal management approaches</li> </ul>	<ul style="list-style-type: none"> <li>- Participatory procedures for micro planning, screening of sub-projects and avoidance of major impacts</li> <li>- Proper design and planning of activities to minimize environmental risks</li> <li>- Community-based/participatory land/resource use planning</li> <li>- Prioritization of vulnerable groups as beneficiaries</li> <li>- Documentation and utilization of traditional knowledge/practices</li> <li>- Local regulations</li> </ul>

Source: JICA Survey Team (2016)

## 1.6 Framework and Procedures of STFDPF

### (1) Preparation of Scheduled Tribe and Forest Dependents Plan

#### 1) Process

The Scheduled Tribe and Forest Dependents Plan shall be prepared at the Gram Panchayats/ VSS/EDC level when adverse impacts of the Project to the ST and Forest Dependents are anticipated. The content of the of Scheduled Tribe and Forest Dependents Plan should be a part of the Micro Plan to be prepared. The Scheduled Tribe and Forest Dependents Plan should be prepared by the lead of field officers/ animators and with active participation of ST and Forest Dependents of the village/ habitation. The indicative steps for preparation of the of Scheduled Tribe and Forest Dependents Plan have been described at the table below.

#### Processes for Preparation of Scheduled Tribe and Forest Dependents Plan

Step	Safeguard Activity, Methods, Processes
Screening and Basic Information Collection	<ul style="list-style-type: none"> <li>- Consultation and confirmation of whether the plan is necessary to prepare or not.</li> <li>- Collection of basic information on the village/habitation such as status of ST and forest dependents; possibility of forest dwellers' participation of ST and forest dependents in the Project; potential impact of the Project on ST and forest dependents.</li> </ul>
Social Assessment	<ul style="list-style-type: none"> <li>- Assessments of needs and priorities of ST and forest dependents by participatory rural appraisal tools</li> </ul>
Consultation with ST and Forest Dependents	<ul style="list-style-type: none"> <li>- Workshops and discussion for identification of mitigation measures and other support activities</li> </ul>
Drafting and Approval of the Plan	<ul style="list-style-type: none"> <li>- Preparation based on workshop/discussion activities</li> <li>- Meeting of VSSs/EDCs</li> </ul>

Source: JICA Survey Team (2016)

#### 2) Contents of Scheduled Tribe and Forest Dependents Plan

The Scheduled Tribe and Forest Dependents Plan shall include at least the following contents.

### Indicative Contents of Scheduled Tribe and Forest Dependents Plan

Chapter	Descriptions
Introduction	- To define the basic purpose of the plan, its scope and a brief outline of how the report is organised. - To define Scheduled Tribe and Forest Dependents
Sub-Project Description	- To provide brief details of the sub-project – rationale, objectives, area, key activities, the proposed implementation schedule etc.
Socio-economic Baselines	- To provide brief profiles of the target area. - To provide baseline information on the demographic, social, economic and cultural characteristics of ST and Forest Dependents - Baseline information on the natural resources (land, water and forest) managed and used by the ST and Forest Dependents.
Summary of the Social Assessment and Free, Prior and Informed Consultation	- To identify key project stakeholders - To describe consultation with the ST and forest dependents - To assess the potential adverse and positive effects of the Project
Action Plan	- To identify measures to be taken up for avoiding and/ or mitigating the potential adverse effects of the Project - To identify activities to be carried out for supporting the ST and forest dependents to participate in the Project
Public Consultation and Information Disclosure	- To document and present results of public consultation events with the communities.
Cost estimates and financing plan	- To provide activities wise budget and possible sources of finance
Monitoring Plan	- To provide details of monitoring mechanism upon implementation of Scheduled Tribe and Forest Dependents Plan

Source: JICA Survey Team (2016)

## (2) Institutional Framework for STFDPF

In principle, the institutional framework for ESMSF will be applied for implementation of STFDPF

### 1.7 Detail Procedures of STFDPF

#### (1) Free, Prior and Informed Consultation

It is important that the target population (ST and Forest Dependents) of the Project are consulted in the process of establishing broad community support for the Project at local levels. At the preparatory stage, the locations where each of these communities live and derive a livelihood will be mapped. It should be ensured that these communities are adequately represented in consultation meetings and during the preliminary information disclosure. In consultation meetings and disclosing information including written materials, language of communication should be Oriya. Contents of written materials should be simple enough for everyone to follow. Also, opportunities and facilities to facilitate participation of women, elders and other vulnerable should be considered. It should be the responsibility of the animators/ field officers to make sure that visualization and visual presentations are used as much as possible. A well designed program would benefit from well documented consultations with indigenous communities.

#### (2) Social Assessment and Micro Planning

Social assessment and micro planning process shall involve specific procedures ensuring that the needs and priorities of vulnerable groups are reflected in sub-projects under the Project.

In principle, the social assessment for STFDP should follow the procedure determined in the ESMSF. However, in case, there are targets of STFDP, following issues should be also covered in the Social Assessment.

- a. Demography, cultural and political characteristics of affected ST & Forest Dependents.
- b. Lands which affected ST & Forest Dependents have been traditionally possessing or customary using/occupying.

- c. Natural resources which affected ST & Forest Dependents rely on for their social as well as economic bases.

Many Gram Panchayats may already have existing micro plans or similar documents in place. In this case, micro plans or similar documents will be subject to a participatory review. Where Gram Panchayats do not have existing micro plans or similar documents, participatory development of micro plans will take place. Micro plan shall concentrate on proposals concerning Gram Panchayats who reside within and on the fringes of the forest area. The micro plans shall also stipulate community development and livelihood needs/priorities expressed by villagers.

### **(3) Selection and Screening of Sub-projects**

Selection of sub-projects will be prioritized keeping in mind the target beneficiaries (ST and Forest Dependents) will face no/minimum negative impacts by the project activities. All sub-projects to be supported by the Project need and to be finalized through participatory consultation processes and vulnerable communities will be an integral part of this process. Target beneficiaries will have preferential treatment even during the project implementation stage.

### **(4) Monitoring and Reporting**

Basically the monitoring and reporting related to the Scheduled Tribe and Forest Dwellers Plan to be monitored through regular project monitoring and evaluation system. The Project will include participatory monitoring where identified ST and forest dependents should be consulted separately. In this process, they are a part of the beneficiary community, ensuring that they have a fair opportunity to provide feedback on project implementation.

### **(5) Grievance Procedures**

Grievance procedures for ST and forest dependents are the same as that of other vulnerable groups provided in the ESMSF. However, if deemed necessary, it is important to establish a grievance redress committee to respond effectively in a timely and responsible manner.

## **1.8 Capacity Development**

Capacity development for addressing ST and forest dependents need to be included in the proposed training plan for Gram Sabha, VSSs/EDCs or any other group identified by the Project and expressed in ESMSF. The capacity development modules should cover the social assessment, micro planning, ESMSF procedures, and participatory community based resources manageme

### **Attachment 8.1.1 Roles and Responsibilities within Institutional Arrangements**

<b>Component</b>	<b>Roles and Responsibility</b>
High Powered Committee (HPC)	<ul style="list-style-type: none"> <li>• Highest decision-making authority over the Project</li> <li>• Approval of budget and annual plan of operations of the Project; and review the project performance every six-months</li> <li>• Approval of the Operation Manual (including Financial Rules/ procedures) for the Project;</li> <li>• Framing operational procedures for the Project for smooth and effective implementation;</li> <li>• Facilitating inter-departmental coordination for required synergy and convergence, and also to oversee to minimising duplication of efforts;</li> <li>• Taking up initiatives to resolve issues with GOI and JICA, if required.</li> </ul>
Governing Body (GB)	<ul style="list-style-type: none"> <li>• Highest decision-making body of the autonomous society</li> <li>• Providing authority to the PMU for day-to-day functioning;</li> <li>• Supporting the PMU in approval of budget and annual plan of operation, and other proposals of the project;</li> <li>• Rigorously review the project progress vis-à-vis annual plans at least once every quarter; monitor financial and physical progress</li> <li>• Facilitate budgets &amp; release and monitor the fund disbursement status</li> <li>• Guide the PMU in the preparation of Operation Manual;</li> <li>• Prepare proposals for the HPC whenever necessary for the smooth implementation of the Project</li> </ul>
Project Management Unit (PMU)	<ul style="list-style-type: none"> <li>• Final decision maker with regards to day-to-day Project activities, and would utilize autonomy to ensure smooth and timely implementation of the project</li> <li>• PMU will manage the budgets &amp; releases and monitor the project activities</li> <li>• Keep track of the project implementation, and responsible to guide, issue instructions, prepare guidelines, execute capacity development plan, establish and operate M&amp;E system,</li> <li>• Undertake field visits and provide-hand holding support in field in almost all respect for ensuring efficient implementation of the project</li> <li>• Collate and consolidate the expenditure statements from divisional and field offices and prepare Statement of Expenditures (SOEs) for getting reimbursement of claims</li> <li>• Organize annual planning and review workshop at state level, and also conduct AGM</li> <li>• Undertake statutory and internal/ concurrent audits</li> </ul>
Project Management Consultants (PMC)	<ul style="list-style-type: none"> <li>• Will provide technical and managerial support to PMU</li> <li>• Support PMU by a team of experts to augment various skills required for the project implementation</li> </ul>
Circle Offices	<ul style="list-style-type: none"> <li>• Will hold responsibilities for the regular overseeing of DFO/ DMU offices</li> <li>• Cross-check project works vis-à-vis financial and physical progress reporting</li> <li>• Conduct monthly meetings / hearings for Grievance Redressal</li> <li>• Chair and participate in Annual Planning and Review Workshop and other events organized at divisional level</li> </ul>
Divisional Management Unit (DMU)	<ul style="list-style-type: none"> <li>• Assist the PMU in planning, fund management, work progress monitoring and documentation at the field level</li> <li>• Supervise, monitor, review and guide field functionaries and activities; and conduct monthly review meetings</li> <li>• Prepare physical and financial reports, and timely submit SOEs and utilization certificates</li> <li>• Maintain separate bank account and records for project funds, and facilitate audits</li> <li>• Organize annual planning and review workshop at divisional level, and execute capacity building plan</li> <li>• Provide budgets to VSSs/ EDCs Prepare as per approved micro-plans/ annual implementation plans</li> </ul>



<b>Component</b>	<b>Roles and Responsibility</b>
Field Management Unit (FMU)	<ul style="list-style-type: none"> <li>• Assist the DMU in planning, fund management, work progress monitoring and documentation at the field level</li> <li>• Facilitate micro-planning process, and support its implementation</li> <li>• FMU will provide technical assistance directly to implementing institutions (VSSs, EDCs, SHGs) and Partner NGOs</li> <li>• Maintain separate bank account and records for project funds, and facilitate audits</li> <li>• Prepare physical and financial reports, and timely provide utilization certificates for all annual releases to FMU and VSSs/ EDCs</li> </ul>
Partner Non-government Organizations (NGOs)	<ul style="list-style-type: none"> <li>• Facilitate community organizing and strengthening of implementing organizations (VSSs, EDCs, SHGs)</li> <li>• Provide guidance and support for undertaking prescribed project processes</li> <li>• Undertake/ facilitate capacity building of implementing organizations</li> <li>• Provide technical assistance to SHGs on market research, assistance, business planning, micro-enterprise development, product development, etc.</li> <li>• Reporting the progress of the activities carried out at village level</li> <li>• Maintain records for project funds, and regular progress reporting</li> </ul>
Field-level Implementing organizations (VSSs/ EDCs, SHGs)	<ul style="list-style-type: none"> <li>• Receive funds from the DMU in project account as per the annual implementation plan, and execute the actual work in the field as per prescribed rules, processes and guidelines; timely provide the utilization certificates</li> <li>• Responsible for planning, implementation, monitoring and reporting at the lowest level</li> <li>• Maintain separate bank account and records for project funds, and facilitate audits</li> <li>• Prepare physical and financial reports</li> <li>• Engage Animators, would be an educated person identified by community, to support their functioning</li> </ul>

Source: JICA Survey Team (2016)

### Attachment 8.2.1 Draft Procurement and Implementation Methods

Component / Sub-Component	Activities	Proponent / Owner	Executor/ Contractor	Method
<b>Component 1: Preparatory Works</b>				
<b>1.1</b>	<b>Constitution of PMU, DMU, FMU and deployment of Staff</b>			
	Constitutions of PMU/ DMU/ FMU	OFD	OFD/ OFSDS	MOU/ GO
	Recruitment of Contractual Staff	PMU	PMU	Hiring through Placement Agency or Direct Recruitment
<b>1.2</b>	<b>Deployment of NGOs for Community Development and SFM</b>	PMU	PMU	Local Competitive Bidding
<b>1.3</b>	<b>Procurement of PMC (refer Component 9)</b>	PMU	PMU	Local Competitive Bidding
<b>1.4</b>	<b>Orientation for PMU/ DMU/ FMU by PMU</b>	PMU	PMU	Direct Implementation
<b>1.5</b>	<b>Identification of VSSs (By PMU/ DMU/ FMU)</b>	PMU	PMU	Direct Implementation
<b>1.6</b>	<b>Survey and Demarcation</b>			
	Mapping	PMU	Mapping Agency	Local Competitive Bidding or Direct Contract by Quotation
<b>1.7</b>	<b>Review and Revision of Project Manuals/ Training materials</b>			
	Review and Revision of Project Manuals/ Training materials	PMU	PMU/ PMC	Direct Implementation
	Preparation of Training materials	PMU	Specialised Agency	Direct Contract by Quotation
<b>1.8</b>	<b>Engagement of VSS/ EDC Animators</b>	PMU	VSS/ EDC/ PNGOs	Direct Implementation
<b>1.9</b>	<b>Micro Planning</b>	PMU	VSS/ EDC/ PNGOs/ FMU	Direct Implementation
<b>1.10</b>	<b>Revisiting Micro Planning (after 4th year)</b>	PMU	VSS/ EDC/ FMU	Direct Implementation
<b>1.11</b>	<b>Annual Planning</b>	PMU	VSS/ EDC/ PNGOs/ FMU	Direct Implementation
<b>1.12</b>	<b>Social and Environmental Consideration</b>	PMU	PMU/Local Consultant	Direct Implementation/ Direct Contract
<b>Component 2: Sustainable Forest Management</b>				
<b>2.1</b>	<b>JFM-Mode</b>			
2.1.1	Treatment Area/ Drainage Line Specific Planning & Monitoring	FMU	VSS/ FMU	Direct Implementation
2.1.2	Drainage Line Treatment (Ex-situ SMC Work)			
	Procurement of Materials and Labour	FMU	VSS/ FMU	Direct Procurement
	1) Drainage Line Treatment/ SMC work exposure visit	FMU	VSS/ FMU/ PNGOs	Direct Implementation
	2) JFM Mode Model Drainage Line Treatment (DTL)	FMU	VSS/ FMU	Direct Implementation
	a) DTL Establishment	FMU	VSS/ FMU	Direct Implementation
	b) DLT Maintenance 1 (after 1 yr. and 3 yrs of establishment)	FMU	VSS/ FMU	Direct Implementation
2.1.3	ANR			
	0) Procurement of Materials and Labour	FMU	VSS/ FMU	Direct Procurement
	1) ANR with no gap planting	FMU	VSS/ FMU	Direct Implementation
	2) ANR with gap planting	FMU	VSS/ FMU	Direct Implementation
2.1.4	Block Plantation			
	0) Procurement of Materials and Labour	FMU	VSS/ FMU	Direct Procurement
	1) Fuel and Fodder Plantation	FMU	VSS/ FMU	Direct Implementation
	2) NTFP Plantation	FMU	VSS/ FMU	Direct Implementation
	3) Other Block Plantation	FMU	VSS/ FMU	Direct Implementation
2.1.5	Fire Protection			
	1) Fire Line (FL) Construction and Maintenance	FMU	VSS/ FMU	Direct Implementation
	2) Provision of Incentive Measures	FMU	VSS/ FMU	Direct Implementation

Component / Sub-Component	Activities	Proponent / Owner	Executor/ Contractor	Method
<b>2.2</b>	<b>Non JFM Mode</b>			
2.2.1	Consolidation and Demarcation of Forest Boundaries			
	1) Consolidation and Demarcation of Forest Boundaries	DMU	DMU/FMU	Direct Implementation
	2) Maintenance of Forest Boundaries	DMU	DMU/FMU	Direct Implementation
2.2.2	Construction /Improvement of Permanent Nurseries			
	1) Infrastructure Development			
	a) Construction of Permanent Nurseries	DMU	Contractor / FMU	Local Competitive Bidding / Direct Implementation
	b) Maintenance of Permanent Nurseries	DMU	DMU	Direct Implementation
	c) Root Trainer / Material Replacement	DMU	DMU	Direct Procurement
2.2.3	Drainage Line Treatment (Ex-situ SMC Work)			
	1) Drainage Line Treatment/ SMC work exposure visit	DMU	DMU	Direct Implementation
	2) Non-JFM Mode Model Drainage Line Treatment (DTL)			
	a) DLT Establishment	DMU	DMU/FMU	Direct Implementation
	b) DLT Maintenance 1 (after 1 yr. and 3 yrs of establishment)	DMU	DMU/FMU	Direct Implementation
<b>2.3</b>	<b>Farm Forestry</b>			
	<b>Promotion of Mixed Model</b>			
	a) Plantation	DMU	VSS/ EDC/ FMU	Direct Implementation
	b) Incentive (90% survival rate)	DMU	DMU	Direct Implementation
<b>2.4</b>	<b>Scientific management of Bamboo involving VSSs</b>	DMU	VSS/ EDC/ FMU	Direct Implementation
<b>Component 3: Sustainable Biodiversity Management</b>				
<b>3.1</b>	<b>Sustainable Biodiversity Management incorporating concept of SATOYAMA model</b>			
	1) Biodiversity Inventory	PMU	Specialised Agency	Direct Procurement by Quotation
	2) Ecosystem Valuation	PMU	Specialised Agency	Direct Procurement by Quotation
	3) Creation of People Biodiversity Register	PMU	EDC/ FMU/ Biodiversity Committee	Direct Implementation
	4) Micro Planning	FMU	EDC/ FMU/ PNGOs	Direct Implementation
	5) Sustainable Livelihood Activities	FMU	EDC/ FMU/ PNGOs/ Other line departments	Direct Implementation or by Other line departments
	6) Documentation and Promotion of Traditional Knowledges	FMU	EDC/ PNGOs	Direct Implementation
<b>3.2</b>	<b>Establishment of Scientific Monitoring System at Bhitarkanika</b>	PMU	Specialised Agency	Direct Procurement by Quotation
<b>Component 4: Livelihood Improvement</b>				
<b>4.1</b>	<b>Community Development Fund</b>	PMU	VSS/ EDC	Direct Implementation
<b>4.2</b>	<b>Promotion of IGAs</b>			
4.2.1	Identification and formation of SHGs	LRC/ PMU	PNGOs	Direct Implementation
	1) Assessment of SHGs	LRC/ PMU	PNGOs	Direct Implementation
	2) Formation of SHGs	LRC/ PMU	PNGOs	Direct Implementation
4.2.2	Revolving Fund for SHGs	LRC/ PMU	VSS/ EDC	Direct Implementation
<b>4.3</b>	<b>Promotion of Product Cluster at DMU Level</b>			
4.3.1	Market Linkage			
	1) Value Chain Assessment & Development of Cluster Plan	LRC/ PMU	Specialised Agency	Direct Procurement by Quotation
	2) Market Linkage Support	LRC/ PMU	Specialised Agency	Direct Procurement by Quotation
	3) Packaging and Brand Promotion Support	LRC/ PMU	Specialised Agency	Direct Procurement by Quotation

Component / Sub-Component	Activities	Proponent / Owner	Executor/ Contractor	Method
4.3.2	Infrastructure Development Fund			
	1) IGA infrastructure for SHGs with VSS	LRC/ PMU	SHGs/ VSS/ EDC/ Contractor	Direct Procurement by Quotation
	2) Cluster infrastructure development with DMU	LRC/ PMU	Cluster Organisation/ Contractor	Direct Procurement by Quotation
<b>4.4</b>	<b>NTFP Based Livelihood Interventions</b>			
4.4.1	Inventorizing of NTFP	FMU	VSS/ EDC/ PNGOs	Direct Implementation
4.4.2	Developing NTFP Collection and Marketing Strategy	LRC/ PMU	LRC/ Specialised Agency	Direct Implementation/ Direct Procurement by Quotation
4.4.3	Business Development Services including R&D	LRC/ PMU	LRC/ Specialised Agency	Direct Implementation/ Direct Procurement by Quotation
4.4.4	Promotion of Lac Cluster	LRC/ PMU	LRC/ Specialised Agency	Direct Implementation/ Direct Procurement by Quotation
<b>4.5</b>	<b>Livelihood Resource Centre (LRC)</b>			
4.5.1	Staff	PMU	PMU	Direct Recruitment
4.5.2	Business Plan Development for LRC	PMU	Specialised Agency	Direct Procurement
4.5.3	R & D and Product Development	LRC/ PMU	LRC/ Specialised Agency	Direct Implementation/ Direct Procurement by Quotation
4.5.4	Livelihood Development Fund (with PMU)			
	1) Revolving Fund	LRC/ PMU	LRC	Direct Implementation
	2) Cluster Development Fund	LRC/ PMU	LRC	Direct Implementation
	3) Corpus Fund	LRC/ PMU	LRC	Direct Implementation
4.5.5	Facilitation of CSR/ Private Sector Partnership	LRC/ PMU	LRC	Direct Implementation
4.5.6	LRC Business Plan Review and Advisory Committee Meetings	PMU	PMU	Direct Implementation
<b>4.6</b>	<b>Annual Partner NGOs Review Meeting</b>	LRC/ PMU	LRC	Direct Implementation
<b>Component 5: Capacity Development</b>				
<b>5.1</b>	<b>Executing Agency</b>			
5.1.1	Training Plan Development			
	1) National (by PMC)	PMU	PMC	Direct Implementation
	2) Overseas (by PMC)	PMU	PMC	Direct Implementation
5.1.2	Regular Trainings			
	1) PMU/ DMU			
	a) Managerial/ Skill Improvement	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	b) Technical/ Engineering	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	c) M&E/ MIS, GIS	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	d) Gender Training	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	2) FMU			
	a) Managerial/ Skill Improvement	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	b) Technical/ Engineering	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	c) M&E/ MIS, GIS	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	d) Gender Training	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	3) Environmental and Social Consideration			
	a) Environmental and Social Consideration Training (PMU)	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement

Component / Sub-Component	Activities	Proponent / Owner	Executor/ Contractor	Method
	b) Environmental and Social Consideration Training (DMU)	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
5.1.3	Refresher Trainings			
	1) PMU/ DMU			
	a) Managerial/ Skill Improvement	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	b) Technical/ Engineering	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	c) M&E/ MIS, GIS	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	d) Gender Training	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	2) FMU			
	a) Managerial/ Skill Improvement	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	b) Technical/ Engineering	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	c) M&E/ MIS, GIS	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	d) Gender Training	PMU	PMC/ Specialised Institution	Direct Implementation/ Direct Procurement
	3) Environmental and Social Consideration			
	a) Environmental and Social Consideration Training (PMU)	PMU	PMU/PMC/ Specialised Agency	Direct Implementation/ Direct Procurement
	b) Environmental and Social Consideration Training (DMU)	PMU	PMC/ Specialised Agency	Direct Implementation/ Direct Procurement
5.1.4	Exposures			
	1) National/ Outside State (PMU/DMU/FMU)			
	a) JICA assisted states	PMU	PMC/ PMU/ Specialised Agency	Direct Implementation/ Direct Procurement
	b) States having Inter-sectoral/ Livelihoods models	PMU	PMC/ PMU/ Specialised Agency	Direct Implementation/ Direct Procurement
	2) Overseas	PMU	PMC/ PMU/ Specialised Agency	Direct Implementation/ Direct Procurement
	3) Hi-Tech Nursery Exposure visit	PMU	PMC/ PMU/ Specialised Agency	Direct Implementation/ Direct Procurement
5.1.5	National Workshops/ Seminars	PMU	PMU	Direct Implementation
5.1.6	Impact Assessment - Capacity Building	PMU	Specialised Agency	Local Competitive Bidding or Direct Contract by Quotation
<b>5.2</b>	<b>Community Institutions</b>			
5.2.1	Promotion of IGAs			
	1) Training on SHG Governance and Management	LRC/ PMU	DMU/ FMU/ PNGOs	Direct Implementation
	2) Orientation on Government Schemes	LRC/ PMU	DMU/ FMU/ PNGOs	Direct Implementation
	3) Training on Convergence Meeting	LRC/ PMU	DMU/ FMU/ PNGOs	Direct Implementation
5.2.2	Skill Training to promote IGAs			
	1) Exposure Visit to successful IGAs	LRC/ PMU	LRC/ DMU/ FMU/ PNGOs	Direct Implementation
	2) Training on Business Plan Development	LRC/ PMU	LRC/ PNGOs/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
	3) Skill Training of Master Trainers	LRC/ PMU	LRC/ PNGOs/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
	4) Skill Training of SHG Members	LRC/ PMU	LRC/ PNGOs/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation

Component / Sub-Component	Activities	Proponent / Owner	Executor/ Contractor	Method
	5) Field Demonstrations - Off-farm/ farm, Non Farm/ NTFP	LRC/ PMU	LRC/ PNGOs/ Specialised Agency/ Line departments	Direct Implementation/ Direct Contract by Quotation
	6) Training on Sustainable NTFP Harvesting Practices	LRC/ PMU	LRC/ PNGOs/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
	7) Training on Post Harvest Management Practices	LRC/ PMU	LRC/ PNGOs/ Specialised Agency/ Line departments	Direct Implementation/ Direct Contract by Quotation
	8) Training on Micro Enterprise Management	LRC/ PMU	LRC/ PNGOs/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
	9) Training on Revolving Fund Management to VSS/ EDC	LRC/ PMU	LRC/ PNGOs/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
5.2.3	<b>Training of VSS/ EDC</b>			
	1) Training need analysis and module development	PMU	PNGOs/FMU	Direct Implementation
	2) Re-organisation of VSS - batch 1 and 2 - 2 nos. per DMU	PMU	PNGOs/FMU	Direct Implementation
	3) Microplanning: TOT - Module 1 and 2	PMU	PNGOs/FMU	Direct Implementation
	4) Orientation of VSS/ EDC on Microplanning	PMU	PNGOs/FMU	Direct Implementation
	5) Documentations and maintenance records – TOT	PMU	PNGOs/FMU	Direct Implementation
	6) Documentation & Maintenance of VSS records - 7 per FMU	PMU	PNGOs/FMU	Direct Implementation
	7) Forest protection and management (Basic) - 7 per FMU	PMU	PNGOs/FMU	Direct Implementation
	8) Sustainable Biodiversity Management - 2 nos. per FMU	PMU	PNGOs/FMU	Direct Implementation
	9) Orientation of VSS/ EDC members	PMU	PNGOs/FMU	Direct Implementation
	10) Social Audit	PMU	PNGOs/FMU	Direct Implementation
	11) Community Disaster Management - 2 nos. per FMU	PMU	PNGOs/FMU	Direct Implementation
	12) Wildlife - Human Conflict	PMU	PNGOs/FMU	Direct Implementation
	13) Workshop of VSS/EDC Leaders - 2 nos. per DMU	PMU	PNGOs/FMU	Direct Implementation
	14) Workshop of VSS/EDC Leaders - 6 nos. per FMU	PMU	PNGOs/FMU	Direct Implementation
5.2.4	Exposure visits (within the DMU) - by DMU	PMU	DMU	Direct Implementation
5.2.5	Exposure visits (within the State) - by PMU	PMU	PMU	Direct Implementation
5.2.6	Exposure visits (Outside of the State)	PMU	PMU	Direct Implementation
5.2.7	<b>Gender Training</b>			
	1) VSS/ EDC	PMU	PNGOs/ Specialised Agencies/ FMU	Direct Implementation
	2) SHGs	PMU	PNGOs/ Specialised Agencies/ FMU	Direct Implementation
<b>5.3</b>	<b>Training of Partner NGOs on promotion of IGAs</b>			
	1) Orientation on Facilitating Convergence	LRC/ PMU	LRC/ PNGOs/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
	2) Training for implementation of Small IGAs through SHGs	LRC/ PMU	LRC/ PNGOs/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
	3) Training on Cluster Development	LRC/ PMU	LRC/ PNGOs/ Specialised Agency/ DMU	Direct Implementation/ Direct Contract by Quotation

Component / Sub-Component	Activities	Proponent / Owner	Executor/ Contractor	Method
	4) Exposure Visit on Cluster Development	LRC/ PMU	LRC/ DMU/ FMU/ PNGOs/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
<b>5.4</b>	<b>Training of Animators</b>			
	1) Orientation on Facilitating Convergence	PMU	FMU/ PNGOs	Direct Implementation
	2) Training for implementation of Small IGAs through SHGs	PMU	FMU/ PNGOs	Direct Implementation
<b>5.5</b>	<b>Promotion of Product Cluster at DMU Level</b>			
5.5.1	Institution Development			
	1) Exposure Visit to Clusters / Producer Organizations	LRC/ PMU	LRC/ DMU/ FMU/ PNGOs/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
	2) Formation and strengthening of Producer Organizations	LRC/ PMU	LRC/ PNGOs/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
	3) Revolving Fund Assistance	LRC/ PMU	LRC/ DMU/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
5.5.2	Skill Training			
	1) Skill Training of Master Trainers	LRC/ PMU	LRC/ DMU/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
	2) Skill Training of Members	LRC/ PMU	LRC/ DMU/ Specialised Agency/ PNGOs	Direct Implementation/ Direct Contract by Quotation
<b>5.6</b>	<b>Quality enhancement of Kendu Leaf</b>	LRC/ PMU	LRC/ DMU/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
<b>5.7</b>	<b>Training &amp; Extension of Farm Forestry</b>			
	1) Mixed Model	DMU	FMU/ VSS/ EDC	Direct Implementation
<b>5.8</b>	<b>Capacity Development - REDD+ Readiness</b>			
	1) National Level Training	PMU	PMC/ PMU/ DMU/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
	2) District Level Training	PMU	PMC/ PMU/ DMU/ Specialised Agency	Direct Implementation/ Direct Contract by Quotation
<b>Component 6: REDD+ Readiness</b>				
	1) Purchasing of Satellite Imageries	PMU	PMU	Direct Procurement by Quotation
<b>Component 7: Supporting Activities</b>				
<b>7.1</b>	<b>Institutional and Project Management Support</b>			
7.1.1	Strengthening of PMU Office			
	1) Equipment/ Office automation/ Gadgets	PMU	PMU/ Supplier	Direct Procurement by Quotation
	2) Refurbishing of PMU office - furniture/ fixtures	PMU	Supplier	Direct Procurement by Quotation
	3) PMU Building			
	a) Extension of PMU building	PMU	Contractor	Local Competitive Bidding/ Direct Procurement by Quotation
	b) Maintenance of Extended PMU building	PMU	Contractor	Direct Procurement by Quotation
	c) Renovation of Existing PMU building.	PMU	Contractor	Local Competitive Bidding/ Direct Procurement by Quotation

Component / Sub-Component	Activities	Proponent / Owner	Executor/ Contractor	Method
	d) Existing PMU building renovation	PMU	Contractor	Local Competitive Bidding/ Direct Procurement by Quotation
	4) Vehicles for Project at PMU level	PMU	Supplier	Direct Procurement by Quotation
	5) Human Resource Support - PMU			
	a) Contractual/ Direct Hiring	PMU	PMU	Direct Hiring
	b) Outsourcing	PMU	Outsourced Agency	Direct Contract to the Outsourced Agency
7.1.2	Strengthening of DMU Office			
	1) Equipment/ Office automation/ Gadgets	PMU	PMU/ DMU/ Supplier	Direct Procurement by Quotation
	2) Refurbishing of DMU office - furniture/ fixtures	DMU	Supplier	Direct Procurement by Quotation
	3) DMU Building			
	a) DMU Building Extension	DMU	Contractor	Local Competitive Bidding/ Direct Procurement by Quotation
	b) DMU Building Extension Maintenance (after 3rd yr.)	DMU	Contractor	Direct Procurement by Quotation
	4) Vehicles for project at DMU level	DMU	Supplier	Direct Procurement by Quotation
	5) Human Resource Support - DMU			
	a) Contractual/ Direct Hiring	PMU	PMU	Direct Hiring
	b) Outsourcing	PMU	Outsourced Agency	Direct Contract to the Outsourced Agency
7.1.3	Strengthening of FMU Office			
	1) Equipment/ Office automation/ Gadgets	DMU	PMU/ DMU/ Supplier	Direct Procurement by Quotation
	2) Refurbishing of FMU office - furniture/ fixtures	DMU	Supplier	Direct Procurement by Quotation
	3) FMU Building			
	a) FMU Building Extension	DMU	Contractor	Direct Procurement by Quotation
	b) FMU Building Extension Maintenance (after 3rd yr.)	DMU	Contractor	Direct Procurement by Quotation
	4) Vehicles for project at FMU level	FMU	FMU	Direct Procurement by Quotation
	5) Human Resource Support - FMU			
	a) Contractual/ Direct Hiring	PMU	PMU	Direct Hiring
	b) Outsourcing	PMU	Outsourced Agency	Direct Contract to the Outsourced Agency
7.1.4	Strengthening of Circle Office			
	1) Equipment/ Office automation/ Gadgets	PMU	PMU/ Supplier	Direct Procurement by Quotation
	2) Refurbishing of Circle office - furniture/ fixtures	PMU	PMU/ Supplier	Direct Procurement by Quotation
	3) Vehicles for project at Circle level	PMU	PMU/ Supplier	Direct Procurement by Quotation
	4) Human Resource support - Contractual Staff	PMU	PMU/ Supplier	Direct Contract to the Outsourced Agency
<b>7.2</b>	<b>Monitoring &amp; Evaluation (M&amp;E)</b>			
7.2.1	Monitoring			
	1) Concurrent Monitoring and Periodic Reviews			
	a) PMU	PMU	PMU	Direct Implementation
	b) DMU	DMU	DMU	Direct Implementation
	c) FMU	FMU	FMU	Direct Implementation
	d) VSS (one per week by each)	FMU	PNGOs/ Animators/ VSS/ EDC	Direct Implementation



Component / Sub-Component	Activities	Proponent / Owner	Executor/ Contractor	Method
	e) Circles (6 nos. - one per Quarter by each)	Circle	Circle	Direct Implementation
	f) HPC/ JICA (2 nos. - one per year by each)	PMU	PMU	Direct Implementation
	g) APCCF (M&E & IV), OFD (one per year)	PMU	PMU/ OFD	Direct Implementation
	2) Inter-sectoral Coordination Meetings			
	a) Principal Secretary (Planning & Coordination)	PMU	PMU	Direct Implementation
	b) District Magistrate/ ADM (10 nos.)	DMU	DMU	Direct Implementation
	c) Block Development Officer (40 blocks)	FMU	FMU	Direct Implementation
	3) Community Self-monitoring	FMU	VSS/ EDC/ PNGOs/ Animators	Direct Implementation
	4) Computerized MIS (in-house)	PMU	PMU	Direct Implementation
	5) Computerized Accounting System			
	a) PMU	PMU	PMU	Direct Implementation
	b) DMU	PMU	DMU	Direct Implementation
	c) FMU	PMU	FMU	Direct Implementation
	6) GIS	PMU	PMU/ PMC	Direct Implementation
	7) Annual Strategy Planning & Review Workshops			
	a) PMU	PMU	PMU	Direct Implementation
	b) DMU	DMU	DMU	Direct Implementation
7.2.2	Impact Assessment			
	1) Annual Outcome Assessments	PMU	Specialised Agency	Local Competitive Bidding/ Direct Procurement by Quotation
	2) Baseline and Impact Surveys			
	a) Socio-economic/ Gender Surveys			
	i) Baseline	PMU	Specialised Agency	Local Competitive Bidding/ Direct Procurement by Quotation
	ii) Impact (mid and end-term)	PMU	Specialised Agency	Local Competitive Bidding/ Direct Procurement by Quotation
	b) Physical Surveys			
	i) Baseline	PMU	Specialised Agency	Local Competitive Bidding/ Direct Procurement by Quotation
	ii) Impact (mid and end-term)	PMU	Specialised Agency	Local Competitive Bidding/ Direct Procurement by Quotation
	3) Thematic and Short Studies	PMU	Specialised Agency	Local Competitive Bidding/ Direct Procurement by Quotation
7.2.3	Audits			
	1) Social Audits	DMU	FMU/ PNGOs/ VSS/ EDC	Direct Implementation
	a) Batch -1			
	b) Batch -2			
	c) Batch -3			
	2) Statutory Financial Audits			
	a) PMU/ DMU/ FMU	PMU	Chartered Accountant	Local Competitive Bidding/ Direct Procurement by Quotation
	b) VSS	DMU	Chartered Accountant	Local Competitive Bidding/ Direct Procurement by Quotation
	Batch -1			

Component / Sub-Component	Activities	Proponent / Owner	Executor/ Contractor	Method
	Batch -2			
	Batch -3			
	3) Concurrent Audits			
	a) PMU	PMU	PMU	Direct Implementation
	b) DMU	DMU	PMU/ DMU	Direct Implementation
	4) Grievance Redressal, RTI and Public Disclosure	Circle	Circle/ DMU	Direct Implementation
<b>7.3</b>	<b>Communication/ Publicity</b>	PMU	PMU/ Specialised Agencies	Direct Implementation/ Direct Contract by Quotation
7.3.1	Knowledge Management Support			
	1) Design & Development of IEC material	PMU	PMU/ Specialised Agencies	Direct Implementation/ Direct Contract by Quotation
	2) Printing of IEC material	PMU	PMU/ Specialised Agencies	Direct Implementation/ Direct Contract by Quotation
7.3.2	Internal Communication Support			
	1) Equipment and aids	PMU	Supplier	Direct Contract
	2) Bulk SMS/ email services	PMU	Service Provider	Direct Contract
7.3.3	External Communication Support			
	1) Folk Media	PMU	PMU/ Specialised Agencies/ Local Resource	Direct Contract
	2) Print Media	PMU	PMU/ Specialised Agencies	Direct Contract
	3) Electronic media (Radio/ TV)	PMU	PMU/ Specialised Agencies	Direct Contract
	4) Newsletter/ Magazine	PMU	PMU/ Specialised Agencies	Direct Contract
	5) Short films	PMU	PMU/ Specialised Agencies	Direct Contract
	6) Exhibitions/ Melas - participation support	PMU	PMU/ DMU	
	a) Product Conclaves	LRC/ PMU	LRC/ PMU	Direct Implementation
	7) Workshop/ Seminars	PMU	PMU	Direct Implementation
	8) Publications	PMU	PMU	Direct Implementation
<b>Component 8: Phase-Out/ Phase-In</b>				
<b>8.1</b>	<b>Preparation of Phase-Out/ Phase-In</b>			
	1) Creation of the Asset Inventory and Manuals	PMU	PMU	Direct Implementation
	2) Revisiting Micro Planning	PMU	FMU/ VSS/ EDC	Direct Implementation
	3) Phase-Out Training for VSS/ EDC/ SHGs	PMU	FMU/ VSS/ EDC	Direct Implementation

Source: JICA Survey Team



Detail Implementation Schedule																																
Work Breakdown	2017			2018			2019			2020			2021			2022			2023			2024			2025			2026				
<b>2) Provision of Incentive Measures</b>																																
a) Batch-1 (25% VSS each year; for 3 years)																																
b) Batch-2 (25% VSS each year; for 3 years)																																
c) Batch-3 (25% VSS each year; for 3 years)																																
d) Batch-4 (25% VSS each year; for 3 years)																																
<b>2.2 Non JFM Mode</b>																																
<b>2.2.1 Consolidation and Demarcation of Forest Boundaries</b>																																
1) Consolidation and Demarcation of Forest Boundaries																																
2) Maintenance of Forest Boundaries																																
<b>2.2.2 Construction /Improvement of Permanent Nurseries</b>																																
a) Construction of Permanent Nurseries																																
b) Maintenance of Permanent Nurseries																																
c) Root Trainer / Material Replacement																																
<b>2.2.3 Non-JFM Drainage Line Treatment (DLT) (Ex-situ SMC V)</b>																																
a) DLT Establishment																																
b) DLT Maintenance 1 (after 1 yr. of establishment)																																
c) DLT Maintenance 2 (after 3 yrs. of establishment)																																
<b>2.3 Farm Forestry</b>																																
<b>2.3.1 Promotion of Mixed Model</b>																																
<b>1) Batch-1</b>																																
a) Plantation																																
b) Incentive (90% survival rate)																																
<b>2.3.2 Scientific management of Bamboo involving VSSs</b>																																
Batch 1																																
Batch 2																																
Batch 3																																
Batch 4																																
<b>Component 3: Sustainable Biodiversity Management</b>																																
<b>3.1 Sustainable Biodiversity Management incorporating concept of S</b>																																
3.2 Establishment of Scientific Monitoring System at Bhitarkanika																																
<b>Component 4: Livelihood Improvement</b>																																
<b>4.1 Community Development Fund</b>																																
Batch 1																																
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Batch 4																																
<b>4.2 Promotion of IGAs</b>																																
<b>4.2.1 Identification and formation of SHGs</b>																																
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<b>4.2.2 Revolving Fund for SHGs</b>																																
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Batch 4																																
<b>4.3 Livelihood Resource Centre (LRC)</b>																																
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Detail Implementation Schedule	2017												2018												2019												2020												2021												2022												2023												2024												2025												2026											
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d) Batch-4																																																																																																																								
5) Field Demonstrations - Off-farm/ farm, Non Farm/ NTFFP																																																																																																																								
6) Training on Sustainable NTFP Harvesting Practices																																																																																																																								
7) Training on Post Harvest Management Practices																																																																																																																								
8) Training on Micro Enterprise Management																																																																																																																								
a) Batch-1																																																																																																																								
b) Batch-2																																																																																																																								
c) Batch-3																																																																																																																								
d) Batch-4																																																																																																																								
9) Training on Revolving Fund Management to VSS/ EDC																																																																																																																								
<b>5.2.3 Training of VSS/ EDC</b>																																																																																																																								
1) Training need analysis and module development																																																																																																																								
2) Re-organisation of VSS - 2 nos. per DMU																																																																																																																								
3) Orientation of VSS/ EDC on Microplanning																																																																																																																								
4) Documentation & Maintenance of VSS records - 7 per FMU																																																																																																																								
5) Forest protection and management (Basic) - 7 per FMU																																																																																																																								
6) Sustainable Biodiversity Management - 2 nos. per FMU																																																																																																																								
7) Orientation of VSS/ EDC members																																																																																																																								
8) Social Audit																																																																																																																								
9) Community Disaster Management - 2 nos. per FMU																																																																																																																								
10) Wildlife - Human Conflict																																																																																																																								
11) Workshop of VSS/EDC Leaders - 2 nos. per DMU																																																																																																																								
12) Workshop of VSS/EDC Leaders - 6 nos. per FMU																																																																																																																								
<b>5.2.4 Exposure visits (within the DMU) - by DMU</b>																																																																																																																								
<b>5.2.5 Exposure visits (within the State) - by FMU</b>																																																																																																																								
<b>5.2.6 Exposure visits (Outside of the State)</b>																																																																																																																								
<b>5.2.7 Gender Training</b>																																																																																																																								
1) VSS/ EDC																																																																																																																								
2) SHGs (3 per VSS/ EDC)																																																																																																																								



Detail Implementation Schedule

Work Breakdown	2017												2018												2019												2020												2021												2022												2023												2024												2025												2026											
<b>7.2 Monitoring &amp; Evaluation (M&amp;E)</b>																																																																																																																								
<b>7.2.1 Monitoring</b>																																																																																																																								
<b>1) Concurrent Monitoring and Periodic Reviews</b>																																																																																																																								
a) PMU																																																																																																																								
b) DMU																																																																																																																								
c) FMU																																																																																																																								
d) VSS (one per week by each)																																																																																																																								
e) Circles (6 nos. - one per Quarter by each)																																																																																																																								
f) HPC/ JICA (2 nos. - one per year by each)																																																																																																																								
g) APCCF (M&E & IV), OFD (one per year)																																																																																																																								
<b>2) Inter-sectoral Coordination Meetings</b>																																																																																																																								
a) Principal Secretary (Planning & Coordination)																																																																																																																								
b) District Magistrate/ ADM (10 nos.)																																																																																																																								
c) Block Development Officer (40 blocks)																																																																																																																								
3) Community Self-monitoring																																																																																																																								
4) Computerized MIS & GIS staff (in-house development)																																																																																																																								
5) Computerized Accounting System																																																																																																																								
6) GIS - Satellite images for Monitoring																																																																																																																								
7) Annual Strategy Planning & Review Workshops																																																																																																																								
<b>7.2.2 Impact Assessment</b>																																																																																																																								
<b>1) Annual Outcome Assessments</b>																																																																																																																								
<b>2) Baseline and Impact Surveys</b>																																																																																																																								
i) Baseline																																																																																																																								
ii) Impact (mid and end-term)																																																																																																																								
<b>3) Thematic and Short Studies</b>																																																																																																																								
<b>7.2.3 Audits</b>																																																																																																																								
<b>1) Social Audits</b>																																																																																																																								
a) Batch-1																																																																																																																								
b) Batch-2																																																																																																																								
c) Batch-3																																																																																																																								
d) Batch-4																																																																																																																								
<b>2) Statutory Financial Audits</b>																																																																																																																								
a) PMU/ DMU/ FMU																																																																																																																								
b) VSS																																																																																																																								
a) Batch-1																																																																																																																								
b) Batch-2																																																																																																																								
c) Batch-3																																																																																																																								
d) Batch-4																																																																																																																								
<b>3) Concurrent Audits</b>																																																																																																																								
a) PMU																																																																																																																								
b) DMU																																																																																																																								
<b>4) Grievance Redressal, RTI and Public Disclosure</b>																																																																																																																								
<b>7.3 Communication/ Publicity</b>																																																																																																																								
<b>7.3.1 Knowledge Management Support</b>																																																																																																																								
<b>7.3.2 Internal Communication Support</b>																																																																																																																								
1) Equipment and aids																																																																																																																								
2) Bulk SMS/ email services																																																																																																																								
<b>7.3.3 External Communication Support</b>																																																																																																																								
1) Folk Media																																																																																																																								
2) Print Media																																																																																																																								
3) Electronic media (Radio/ TV)																																																																																																																								
4) Newsletter/ Magazine																																																																																																																								
5) Short films																																																																																																																								
6) Exhibitions/ Melas - participation support																																																																																																																								
7) Workshop/ Seminars																																																																																																																								
8) Publications																																																																																																																								

Detail Implementation Schedule																															
Work Breakdown	2017			2018			2019			2020			2021			2022			2023			2024			2025			2026			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Component 8: Preparation of Phase-Out/ Phase-In																															
8.1 Preparation of Phase-Out/ Phase-In																															

Source: JICA Survey Team