

**The Attappady Hills Area Development Society-
Centre for Comprehensive Participatory Resource
Management, India**

**Preparatory Survey for
Wayanad
Comprehensive Environment
Conservation and Community
Development Project
in India**

Final Report

Volume I: Executive Summary

December 2014

Japan International Cooperation Agency (JICA)

NIPPON KOEI CO., LTD.

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Exchange Rate (As of September 2014)

Rs.1.0=JPY1.72

USD1.0=Rs. 60.44=JPY103.77

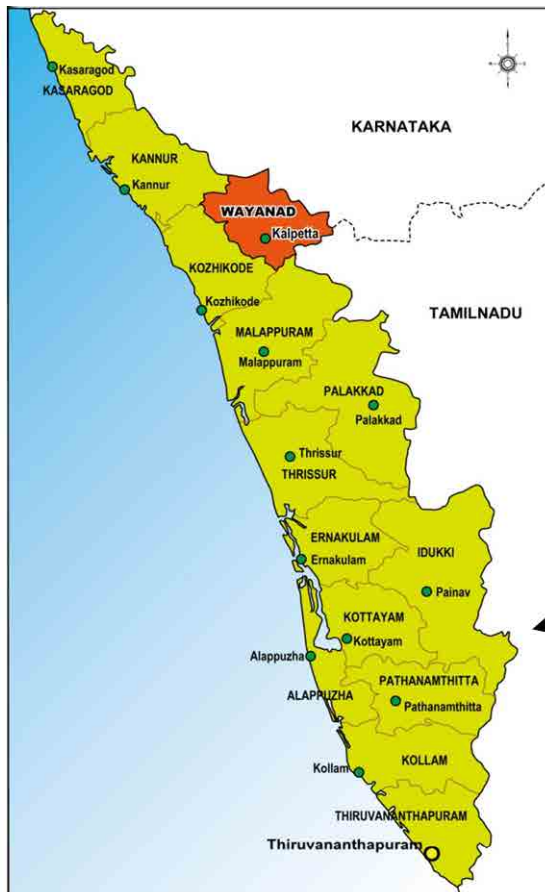
Unit

1 Crore = 10,000,000

1 Lakh=100,000

1 acre =0.41 ha

1 cent=0.01 acre



Administrative Boundary Map of India

Administrative Boundary Map of Kerala State

Source: Drawn based on

<http://www.mapsofindia.com/maps/kerala/kerala.htm>
(2014.1.15)



Grama Panchayat Boundary Map of Wayanad

Source: JICA Survey Team (2014)

Structure of the Report

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List of Acronyms

Acronym	Description
AHADS	Attappady Hills Area Development Society
AHADS-CCPRM	Attappady Hills Area Development Society -Centre for Comprehensive Participatory Resource Management
ANR	Assisted Natural Regeneration
BPL	Below Poverty Line
CFC	Common Facility Centre
CHC	Community Health Centre
DCS	Dairy Cooperative Societies
DDD	Dairy Development Department
DPR	Detailed Project Report
EDC	Eco Development Committee
EIRR	Economic Internal Rate of Return
EMS	<i>E. Manakkil Shankaran</i> (Housing scheme)
ESMF	Environmental and Social Management Framework
FC	Foreign Currency
FDDF	Forest Dwellers/Indigenous People's Development Framework
FHH	Female Headed Households
GoI	Government of India
GoK	Government of Kerala
HH	Household
IAY	<i>Indira Awaz Yogana</i> (Social Benefit Program to Give Housing for the Person of Rural Areas)
ICDS	Integrated Child Development Services
IGA	Income Generation Activity
JPY	Japanese Yen
LC	Local Currency
LP	Lower Primary
LS	Lamp Some
MHH	Male Headed Household
MOU	Memorandum of Understanding
MP	Medical Plant
NHG	Neighborhood Help Group
NPV	Net Present Value
NTFP	Non Timber Forest Produces
O & M	Operation and Maintenance
OBC	Other Backward Class
PHC	Primary Health Centre
PI	Peoples' Institution
PMC	Project Management Consultant

Acronym	Description
PMGSY	<i>Pradhan Mantri Gram Sadak Yojana</i> (A scheme to provide all weather road connection, Ministry of Rural Development)
PMU	Project Management Unit
PTA	Parent Teacher Association
Rs.	Indian Rupees
SC	Scheduled Caste
SHG	Self Help Group
ST	Scheduled Tribe
UP	Upper Primary
VS	<i>Vikasana Samithi</i> (People's Institution)
VSS	<i>Van Samrakshana Samithies</i> (Village Forest Committee)

Preparatory Survey for Wayanad Comprehensive Environment Conservation and Community Development Project

Final Report
Executive Summary
December 2014
Nippon Koei Co., LTD. Tokyo

Introduction

- Part I: Overview of the Survey
 - Background and Objectives of the Survey
 - Record of the Survey
- Part II: Present Conditions of the Survey Area
 - Present Conditions
 - Results of Socio-Economic Survey
- Part III: Review of DPR
- Part IV: Proposed Project Plan
 - Project Rationale
 - Project Activities & Work Quantities
 - Project Cost and Evaluation

PART I: Overview of the Survey



Background of the Survey

- **In 2012**, the Detailed Project Report (DPR) of the Wayanad Comprehensive Environment Conservation and Community Development Project was submitted by the Department of Local Self Government of Kerala to JICA to request financial assistance.
- **In 2013**, the DPR was recast in a “Concept Note”, in which target of the project was expanded from ST in the DPR to BPL households.
- JICA decided to review the proposal in detail through field survey on grant basis seeking for further possible assistance.
- **In 2014**, JICA dispatched a Preparatory Survey Team to conduct the field survey.

Objectives and Scope of the Survey

■ General Objective

- To validate the necessity and relevance of the project

■ Specific Objectives

- To scrutinise project components, project cost, implementation schedule, method of implementation, implementation and operational & maintenance structure, and environment and social consideration,
- To collect additional data/information required for loan appraisal concerning the said survey items

Record of the Survey

■ Survey Team and Input

- 8 International Experts : 20.04 M/M in total
- 10 National Specialists: 18.50 M/M in total

■ Survey Period

- Field Work
 - March 7 – 25, 2014
 - April 20 – July 23, 2014

■ Counterpart Agency of the Survey

- AHADS-CCPRM (nominal, no staff except for Executive Director and one Deputy Executive Director)

Part II: Present Conditions of the Survey Area



Evergreen/Semi-evergreen forests in the mountainous area in Wayanad
South Division

Natural Condition in Wayanad District

■ Area, Location and Topography:

- Area: 2,129.17 km² , accounting for 5.48% of total land area of Kerala State
- Elevation level ranged from 700 m to 2,100 m above sea level. The whole district area is situated in mountainous plateau of Western Ghats.

■ Climate and Season:

- Four seasons in a year such as 1) Southwest monsoon (wet): June to September, 2) Northeast monsoon (wet): Oct. to Nov. , 3) Cold weather (dry): Dec. to Feb. , 4) Hot weather (dry): Mar. to May.

■ Rainfall and Temperature:

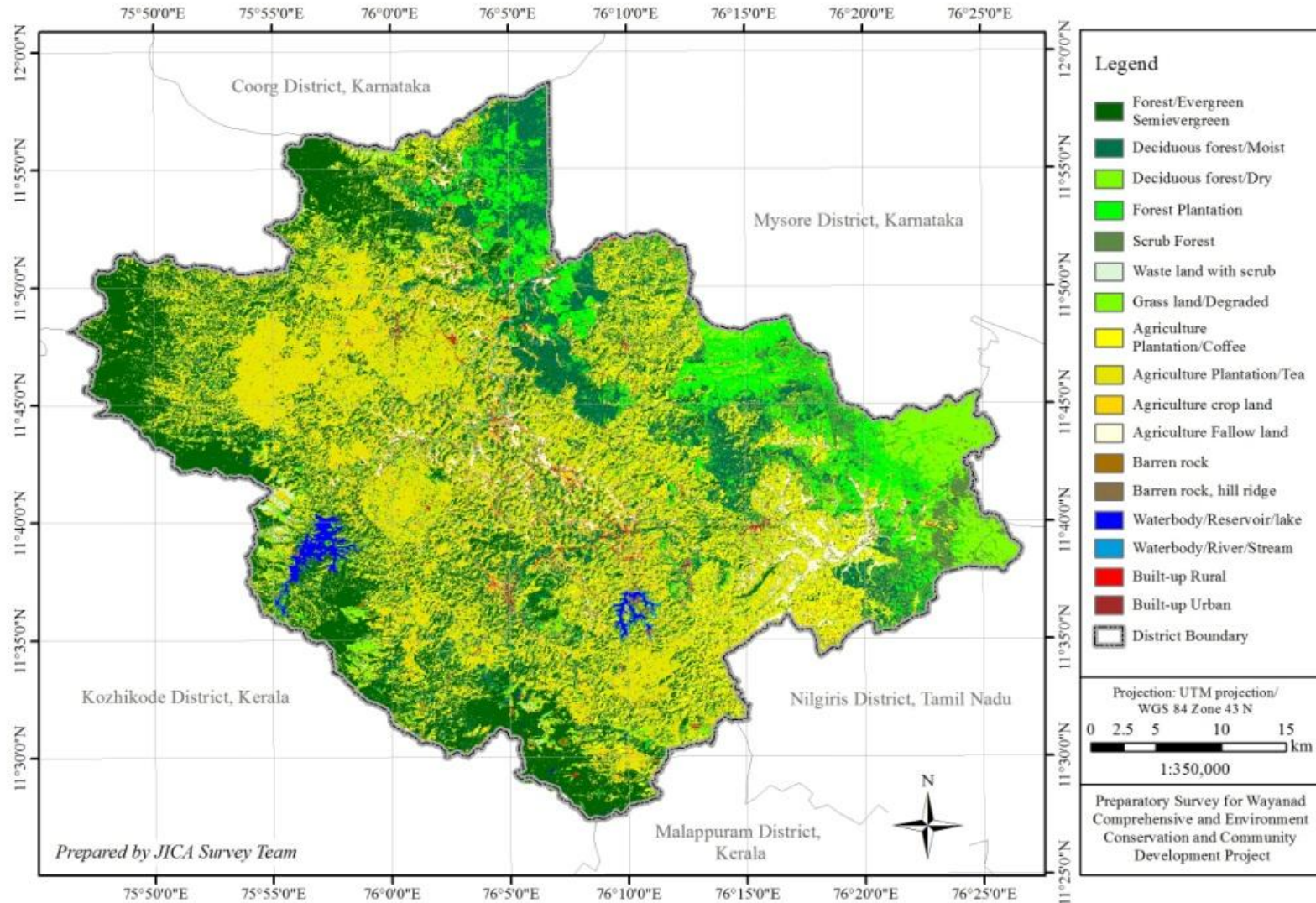
- Around 2,000 mm of annual rainfall on an average. Temperatures range from 15 °C to 29 °C in a cold and dry weather seasons.

■ Major soil types: Major part of the district is covered with Clay soil.

■ River systems :

- Four major river systems in the district such as from north to south, Bavali River, Mananthavady River, Kabini River and Panamaram River basins.

Vegetation and Land Use in Wayanad District



Note: A result of the analysis of satellite images taken in 2013.

Key Features in Vegetation and Land Uses in Wayanad District

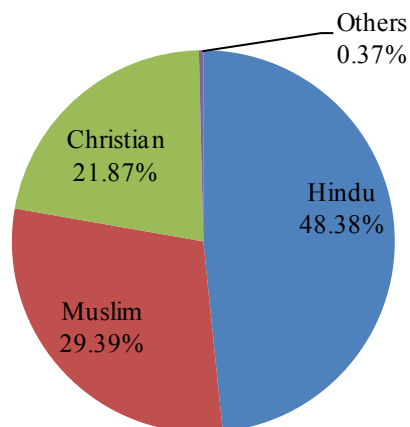
- Evergreen/semi-evergreen forests which forms very/moderately dense forests are distributed along the western border sharing with Kozhikode district.
- Hilly and higher altitude areas in the Western Ghats mountains extending from north-central to south-eastern area is another major habitat of such types of natural forests.
- Along the eastern border with Karnataka State, plantation of Teak and Eucalyptus are widely distributed since the mid of 20th century. Currently the areas including plantations are managed as a Wildlife Sanctuary vested to the Government of Kerala (Forest and Wildlife Department).
- Surrounded by the forested areas above, central rolling hilly and valley areas are extensively used for agriculture and other economic activities. There are the varieties of farming practices and crop productions, such as;
 - Valley and flat area: paddy and several food/tree crops, such as maize, banana, cassava, vegetable, coconuts, areca palm
 - Hilly area: plantation of coffee, tea, etc.

Demography of Wayanad District

Total Number of Household		183,375
Male		386,283
Female		399,557
Total		785,840
SC Population	30,378	3.87%
ST Population	148,215	18.86%

Source: Census 2011, Census of India

% of Population by religion

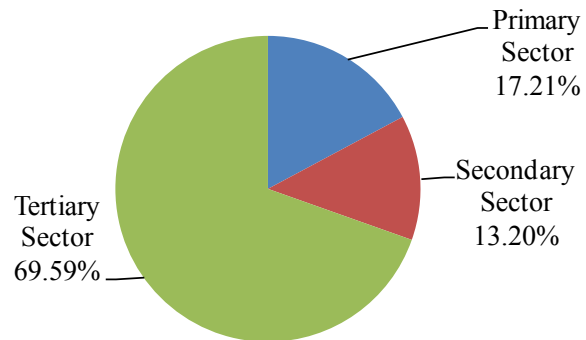


Source: Census 2011, Census of India

- ST Population accounts for 18.86%
- ST communities: Adiya and Paniya, Kuttunaikka (PVTG)
- Religion wise: Hindu being the majority followed by Muslims and Christians
- Female Headed Households: 23,295 or 12.67% of the total households
- Unwedded mothers: 358 persons

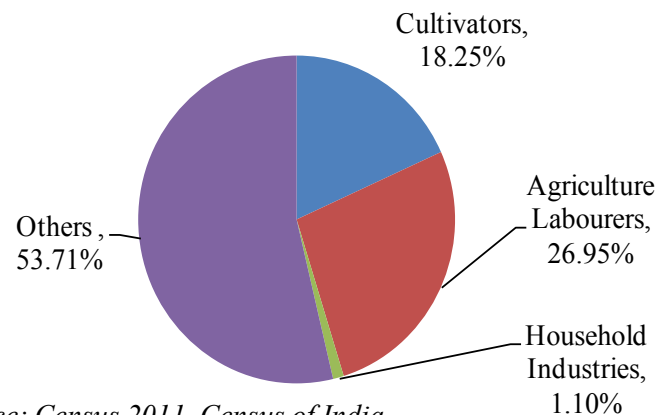
Socio Economic Conditions

**Gross District Domestic Product
(2004-05 constant price) in 2012-13**



Source: Gross District Domestic Product, Dept. of Economics and Statistics, Government of Kerala

Labour Structure



Source: Census 2011, Census of India

- The value of production generated by primary sector in 2012-13 has reduced by 53% from 2005-06.
- Secondary and tertiary sector in the same period has grown nearly double the scale of value produced in 2005-06.
- Per capita income: Rs. 77,243 in 2012-13 current price
- According to the Census 2011, 26.95% of the work force is engaged in agriculture labour. Cultivators are 18.25%.

BPL Households in Wayanad

Particulars	No of Households	% in Total BPL Households
ST	32,537	31.66%
SC	7,926	7.71%
General	24,511	23.85%
Minority	37,788	36.77%
Total Number of BPL Households	102,762	100.00%
% to Total Number of Households in Wayanad (2009)		57.55%

Note: General category is comprised of the Hindu communities other than ST and SC categories.

Source: BPL Survey (2009)

- According to BPL Survey 2009, 57.55% or 102,762 households are categorised as BPL.
- Minority social groups constitute the majority of the BPL households.
- ST households are 31.66%.
- Different BPL criteria are set by the Central government and State government.

Socio Economic Survey (1/7)

Social Group	Number of Households	%
OBC	366	36.56%
ST	284	28.37%
General	257	25.67%
SC	94	9.39%
Total	1001	100.00%

Note: General category includes all the social groups other than ST, SC and OBC. This includes Forward Castes, Christians, Muslims and other religious minority groups. However, the Survey data suggested that there was no minority groups other than Christians and Muslims interviewed in this Survey.

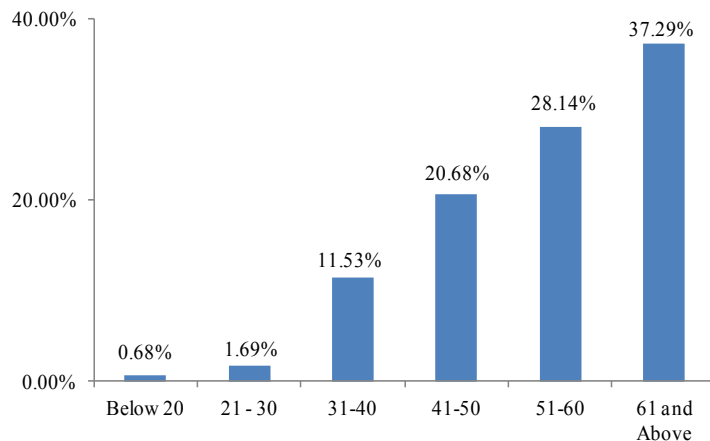
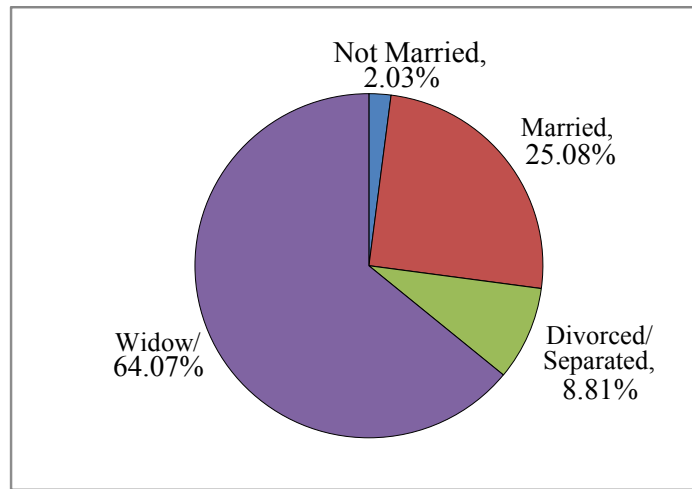
Source: Socio Economic Survey, JICA Survey Team (2014)

- **Sample Households:** 1,001 households selected from 2 wards in each Panchayat
- **Sampling Method:** Simple random sampling
- **Survey Method:** Household interview using questionnaire
 - Questionnaire was developed by the Survey Team and reviewed with the sub-contractor.
 - Field interviews and preliminary data analysis were undertaken by the sub-contractor.

Results of the Socio Economic Survey (2/7)

BPL Households

Marital status of Female Heads of Households



- **Settlement Pattern:** 96.48% of the ST households live in a Hamlet. Non ST households live in a mixed settlement area.
- **Female Headed Households (FHH):**
 - 29.47% or 295 households out of 1,001 sample households.
 - Widow accounted for 64.07% .
 - Out of FHH, more than 60% of female heads of households are below 60 years old.

Source: Socio Economic Survey, JICA Survey Team (2014)

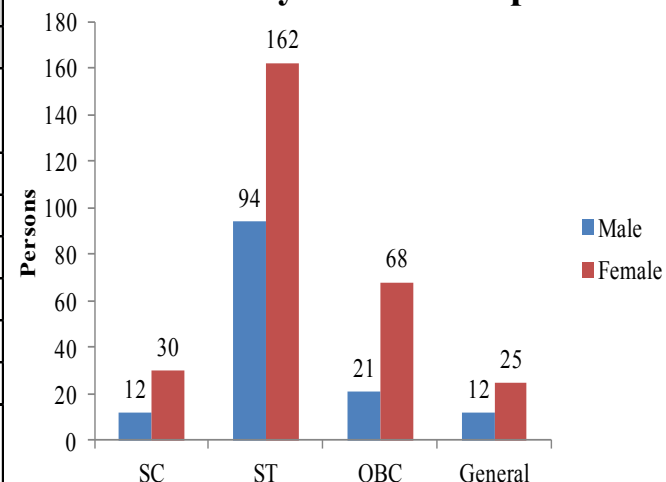
Results of the Socio Economic Survey (3/7)

Literacy and Education of BPL Households

Education Background of Heads of Household

Education Background	Male Heads of Households		Female Heads of Households		Total	
	Persons	%	Persons	%	Persons	%
Kindergartedn/ Anganwadi	20	2.83%	10	3.39%	30	3.00%
LP	219	31.02%	74	25.08%	293	29.27%
UP	183	25.92%	70	23.73%	253	25.27%
Secondary	156	22.10%	24	8.14%	180	17.98%
Higher Secondary	16	2.27%	5	1.69%	21	2.10%
College and above	4	0.57%	1	0.34%	5	0.50%
Non literate	97	13.74%	99	33.56%	196	19.58%
Literate through non- formal education	11	1.56%	12	4.07%	23	2.30%
Total	706	100.00%	295	100.00%	1,001	100.00%

Number of Non Literate Persons in the Sample Households by Social Groups



Source: Socio Economic Survey, JICA Survey Team (2014)

- Higher % of male heads of households received secondary education.
- Non literate female heads of households was higher than that of male heads of households.
- The number of non literate ST women is the highest among the social groups.

Results of the Socio Economic Survey (4/7)

Livelihoods among BPL Households

Activities	MHH		FHH	
	Number of Heads of Household	%	Number of Heads of Household	%
Agriculture labourer	352	49.86%	92	31.19%
Non Agriculture labourer	161	22.80%	40	13.56%
Employed in private companies	9	1.27%	2	0.68%
Government employee	7	0.99%	3	1.02%
Self Employed in non-agriculture sector	33	4.67%	2	0.68%
Self Employed in agriculture and allied activities	27	3.82%	5	1.69%
Not employed	45	6.37%	27	9.15%
Student	1	0.14%	1	0.34%
Stay at home/ Housewife	3	0.42%	66	22.37%
Seeking work/ available to work	5	0.71%	2	0.68%
Unable to work	63	8.92%	55	18.64%
Total	706	100.00%	295	100.00%

Source: Socio Economic Survey, JICA Survey Team (2014)

- More than 70% of MHH and about 45% of FHH are engaged in either agriculture or non agriculture labour.
- Seasonal fluctuation of employment opportunities – fluctuation of income is inevitable.
- MGNREGA provides alternative sources of income for such households. But not all is engaged.

Results of the Socio Economic Survey (5/7)

Loan and Household Expenses

Status of Loan Liability (Unit: Households)

Status	MHH				FHH				Total			
	SC	ST	OBC	General	SC	ST	OBC	General	MHH	%	FHH	%
Have	45	79	196	133	22	29	76	65	453	64.16%	192	65.08%
Do not Have	20	127	61	45	7	49	33	14	253	35.84%	103	34.92%
Total	65	206	257	178	29	78	109	79	706	100.00%	295	100.00%

.Source: Socio Economic Survey, JICA Survey Team (2014)

Amount of Loan Liability at the Time of the Survey (Unit: Rs.)

Amount	MHH				FHH				Total	
	SC	ST	OBC	General	SC	ST	OBC	General	MHH	FHH
Average	80,244	43,018	111,314	151,024	72,274	24,462	79,776	124,326	107,976	85,644
Max	750,000	420,000	1,000,000	2,000,000	500,000	100,000	250,000	821,000		
Min	500	500	1,000	5,000	25	100	500	1,000		

Note: General includes all the social groups other than SC, ST and OBC.

Source: Socio Economic Survey, JICA Survey Team (2014)

- The average weekly cash requirement for MHHs was Rs. 1,427.32 and that of FHH was 1,104.30.
- 42% of the expenditure of MHH and 45% of the same for FHH is spent for food.
- BPL households depend on ration though they hardly experience food shortage.
- Take loan to meet medical and other household expenses.

Results of the Socio Economic Survey (6/7) Land Ownership among BPL Households

Status of Land Ownership

Owner of Land	MHH				FHH				Total			
	SC	ST	OBC	General	SC	ST	OBC	General	MHH	%	FHH	%
Husband	28	78	125	87	2	11	17	18	318	45.04%	48	16.27%
Wife	3	15	44	34	14	18	45	27	96	13.60%	104	35.25%
Joint Ownership	5	11	24	12	2	5	7	5	52	7.37%	19	6.44%
Others	6	13	8	9	4	3	18	15	36	5.10%	40	13.56%
Do not own land	23	89	56	36	7	41	22	14	204	28.90%	84	28.47%
Total	65	206	257	178	29	78	109	79	706	100.00%	295	100.00%

Source: Socio Economic Survey, JICA Survey Team (2014)

Average Land Holding Size

(Unit: cents/ 1 cent = 0.004ha)

Particulars	MHH				FHH				Total Average	
	SC	ST	OBC	General	SC	ST	OBC	General	MHH	FHH
Average Size	9.08	17.91	18.05	21.00	10.91	13.63	21.93	18.66	17.93	17.77

Source: Socio Economic Survey, JICA Survey Team (2014)

- 72% of the households own land.
- Average land holding size for both MHH and FHH is approximately 0.07ha.

Results of the Socio Economic Survey (7/7)

Household Amenities and Community Infrastructure available for BPL Households

■ **Housing:**

- 56.94% of MHH and 50.51% of FHH live in permanent structured house.
- 49 MHH and 18 FHH live in temporary housing.

■ **Access to Grid Electricity Connection:** 86.26% (MHH)/ 83.73% (FHH)

■ **Access to Domestic Water:** All households use open well for domestic water.

■ **Toilet at Homestead:** 87.82% of MHH and 87.80% of FHH have toilet at home. Those having toilets use the facilities at home.

■ **All weather road connection:** 62.61% of MHH and 57.63% of FHH have access.

■ **CHC/ PHC:** Mostly accessible on foot.

Source: Socio Economic Survey, JICA Survey Team (2014)

Livelihoods of Female Heads of Households and Unwedded Mothers

Female Heads of Households

- Daily wage labour
- Income of those depend on daily wage labour: Between Rs. 1,500 – 2,000 per month
- Common problems
 - Insecure income
 - Lack of fund for education for children
 - Debts
- Difficulty in accessing welfare scheme: A widow was unable to apply housing scheme – land ownership still under joint ownership with her late husband.

Unwedded Mothers

- Daily wage labour but limited employment opportunity
- Income between Rs. 750 – 1,000 per month
- Borrowing money from neighbours to survive
- Problems:
 - Lack of support from the household members
 - Those living with their parents do not have BPL ration card. – limited food security

Source: JICA Survey Team (2014)

Kudumbasree and Income Generation Activities

Profile of Neighbourhood Group Members (NHGs)

Particulars	APL		BPL		Total	
	No of Households	%	No of Households	%	No of Households	%
SC	345	5.50%	5,924	94.50%	6,269	100.00%
ST	406	1.94%	20,485	98.06%	20,891	100.00%
General	10,263	25.64%	29,763	74.36%	40,026	100.00%
Minority	11,343	25.82%	32,592	74.18%	43,935	100.00%
Total	22,357	20.12%	88,764	79.88%	111,121	100.00%

Note: General category is comprised of the population other than SC, ST and Minority.

Source: Kudumbasree District Mission, Wayanad (2014)

- Kudumbasree (State Poverty Alleviation Mission) mobilised poor women in Wayanad to form thrift and credit group – Neighbourhood Group (NHG)
- 8,965 NHGs formed by 111,121 households.
- 436 Groups for Income Generation Activities formed by the members of NHG
 - Activities: dairy, goat rearing, calf rearing, pickle making, curry powder making, herbal medicine making, mushroom production etc.
 - Activity Groups have members between 2-5 persons but not more.

Agriculture and Livestock (1/2)

Distribution of Landholding in Wayanad				
Holding size class (ha)		No. of HH*	ha	ha/ HH*
Marginal	>1.00	154,863	33,950	0.22
Small	1.00-1.99	13,341	21,091	1.58
Semi-medium	2.00-3.99	4,832	13,678	2.83
Medium	4.00-9.99	1,177	6,465	5.49
Large	10.00 ≥	203	15,272	75.23
Total		174,416	90,456	0.52

Source: Prepared by JICA Survey Team (2014) based on Provisional report on 9th agricultural census (Phase I)2010-11

➤ The Survey revealed that farmers with landholding size less than 0.8 ha are generally categorised as BPL.

*HH: Household

Distribution of Cropped Area in Wayanad			
Crops	Area (ha)	Crops	Area (ha)
Paddy	10,230	Tapioka	2,134
Pulses	759	Tubers	1,745
Spices	26,946	Vegetables	1,689
Fresh Fruit	26,218	Oil Seeds	10,039
Plantation Crops	83,431	Non Food Crops	6,572
		Others	119
		Total	170,613

Source: Prepared by JICA Survey Team (2014) based on Agricultural statistics 2012-2013

➤ Net area sown is reported to be some 115,000 ha. This implies about 55,600 ha are utilized for more than once for cropping a year

Agriculture and Livestock (2/2)

■ Major livestock in Wayanad

Unit: heads

Cattle	Buffalo	Pig	Goat	Poultry
72,907	72,907	5,191	3,515	35,132

Source: Prepared by JICA Survey Team (2014) based on Quick estimate Panchayat wise Wayanad District-Livestock Census 2012

■ Dairy Farming in Wayanad – Well Established Cooperative Based Production and Marketing System

◆ Dairy Farmers in Wayanad

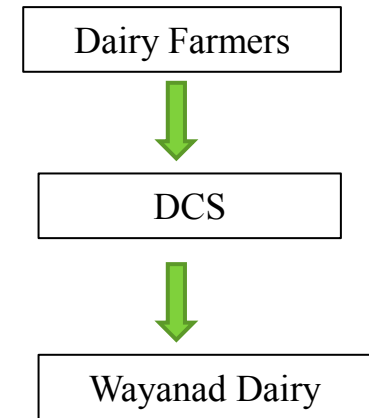
- Registered dairy farmers to 55 DCS : 53,040 farmers
- Active farmers selling milk to 55 DCS constantly: 20,000 farmers
- Volume of milk procured by 55 DCS: 150,000 l/day (in 2013/14)

◆ Collection System

- Dairy Cooperative Society (DCS) is a basic unit at the Grama Panchayat level under Dairy Development Department (DDD) for milk collection.
- Registered farmers are given membership in DCS.

◆ Milk Processing Unit

- Wayanad Dairy : member of Malabar Regional Cooperative Milk Marketing Federation Ltd.
- 53 DCS supply milk to Wayanad Dairy



(Processing & Marketing)

Source: JICA Survey Team (2014)

Forest and Forest Management

Key Data of Each Forest Division in Wayanad District

Name of Division	Area (ha)	No. of Forster	No. of Range	No. of Van Samrakshana Samiti Samiti (VSS/ Village Forest Committee)/ Eco Development Committee (EDC)
Wayanad North	22,389.76	103	3	17 (VSS)
Wayanad South	29,371.40	84	3	18 (VSS)
Wayanad Wildlife	34,444.00	93	3	14 (EDC)
Total	86,205.16	280	9	49 (VSS/EDC)

Source: Prepared by JICA Survey Team (2014) based on the current Working plan

Area of Each Forest Category in the State Forest Land

Category	Reserved Forest *	Vested Forest	Ecologically Fragile Land (EFL)	Total
Area (ha)	56,481.20	27,051.27	2,672.69	86,205.16

* It includes the area of Proposed Reserve Forest (1,874.80 ha).

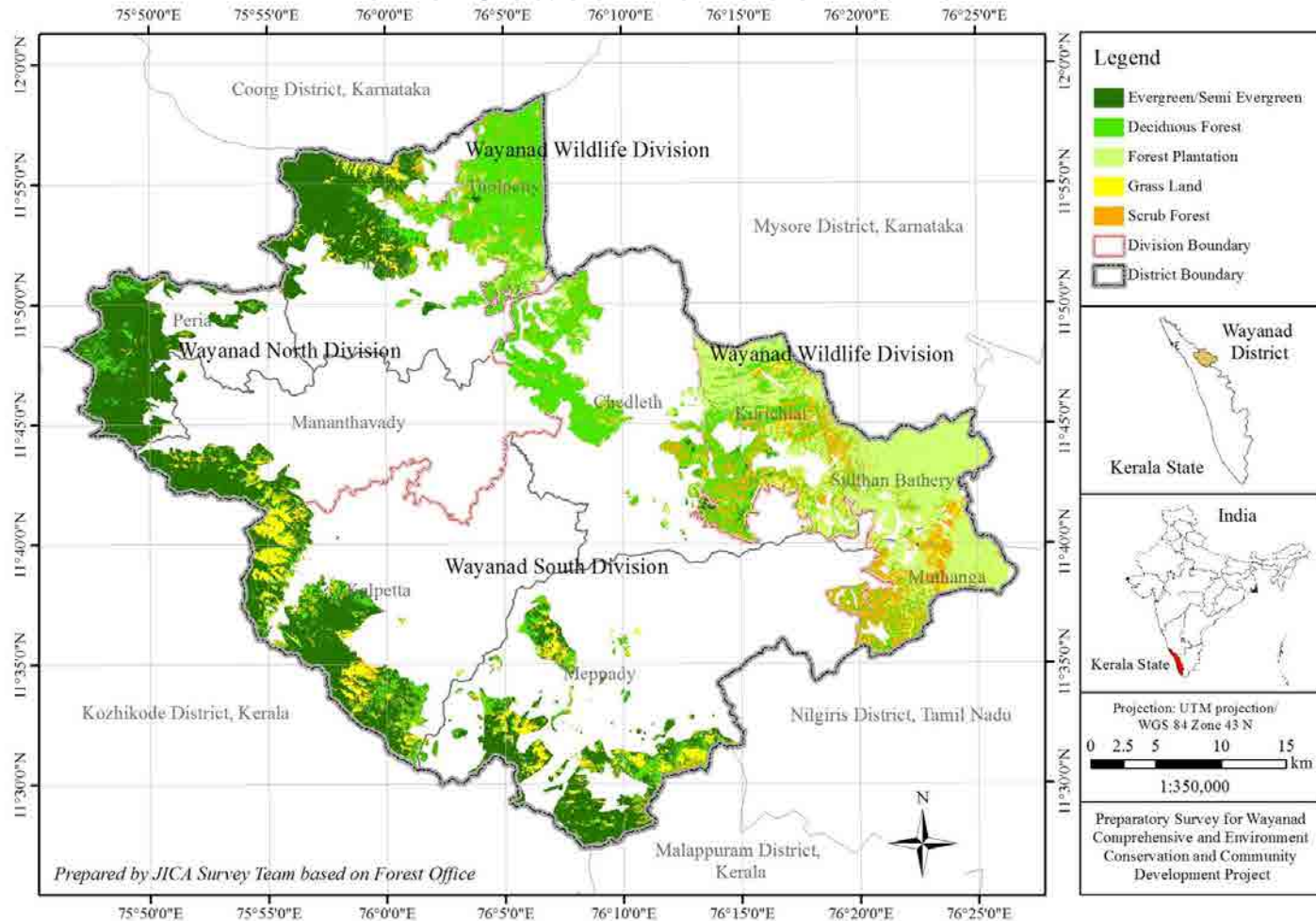
Source: Prepared by JICA Survey Team (2014) based on the current Working plan

Forest types and other vegetation/land use in the State Forest Land

Category	Evergreen /Semi-evergreen	Deciduous Forest	Forest Plantation	Scrub forest	Grass land	Others	Total
Area (ha)	27,875	21,471	16,392	8,939	4,632	6,896	86,205

Source: JICA Survey Team (2014)

Forest Types and Other Vegetation/ Land Uses in the State Forest Land



- Scrub Forest is mostly found in the Wildlife Division.
- Degradation of the forest vegetation in the Wildlife Division led to the increased incidences of human- animal conflicts. – Increased financial compensation paid by the Forest Department.

Community Infrastructure

Infrastructure	Current State of Infrastructure Development
Housing (EMS*)	12,462 houses were sanctioned in 2009. Completion rate was 48% as end March 2014
Housing (IAY**)	4,808 houses were sanctioned in April 2013. 22 % completed and 50% uncompleted at end March 2014
Electricity Supply	87% of the total households have electricity connection.
Source of Domestic Water	21% piped water, 41 % well, 14% public well, 12% public tap
Household Toilet	91% household
Health Care Facilities	Public Hospital=3, CHC/PHC=31, Sub Center=204, Private=76
Anganwadi ***	882 centres, 42 mini Anganwadi centres
Education	LP= 144, UP=71, High school= 78, Higher Secondary School=43

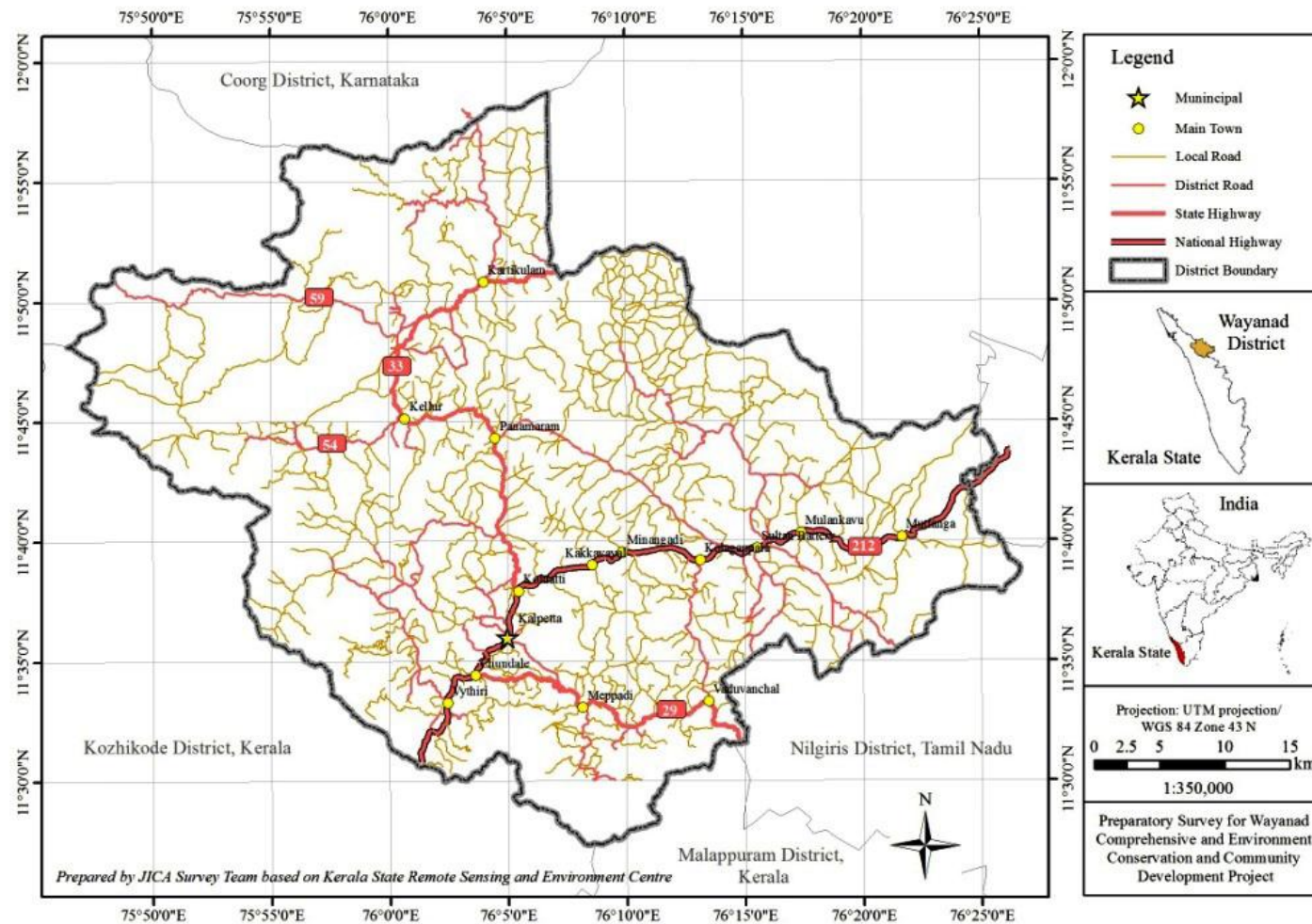
*EMS: E. Manakkil Shankaran. A housing scheme funded by the Government of Kerala.

** IAY: Indira Awas Yojana. A housing scheme funded by the Government of India.

*** Anganwadi: An establishment for early childhood education, maternal child health programme run by the Integrated Child Development Services, Government of India.

Source: JICA Survey Team (2014)

Present Road Network in Wayanad



■ Road network is well established.

■ PMGSY (Central Government Rural Road Scheme) continues its work to provide all weather road connection to the communities in Wayanad.

Issues and Problems

■ BPL

- Heterogeneity of socio-economic condition among the BPL households
 - WHHs and Unwedded mothers- weak economic capacity and lack of support from other household members and government
- Dependency on wage labour – Fluctuation of income

■ Agriculture

- Small size landholding of BPL farmers
 - Little space for irrigated paddy cultivation by BPL farmers

■ Natural Environment

- Expansion of exotic weeds and degradation of natural forest
- Frequent occurrences of human-animal conflict

■ Non Agriculture Based Livelihood

- Preference towards assured income - Low risk taking
- Low profitability of IGA
 - Difficulties in production management and marketing
 - Lack of strategic selection of products and planning of enterprise
 - Limited value addition option

PART III: Review of DPR



Livelihood Improvement: Herbal products made by a SHG in Meppady Panchayat (above)

Agriculture: Small scale dairy farmer in Noolpuzha Panchayat (below)



Salient Features of the Project Components in DPR (1/3)

	Components/Intervention	Quantity	Amount (Rs. Million)	
			Total	Break Ups
2.	Agriculture Allied Activities			
2.1	Land Based Activities		1,100	
	(1) Land and Agriculture Development - Introduction of optimum land utilization	n.a		700
	(2) Structural Measures for Soil and Water Conservation - Soil and water conservation intervention - Drainage line treatment	10,000 ha 100 km		400
2.2	Livelihood Improvement Activities		200	
	(1) Livestock Development - Provision of a pair of milch cow	10% of BPL ST		100
	(2) Sericulture Development - Cash provision of Rs.100,000/farmer	1,000 farmers		100
2.3	Income Generating Activities		210	
	(1) Revolving Fund	LS		180
	(2) Training and Necessary Arrangement	LS		30

Source: Prepared by JICA Survey Team (2014) based on DPR

	Components/Intervention	Quantity	Amount (Rs. Million)	
			Total	Break Ups
3.	Eco-restoration, Augmentation of Natural Resource Base			
3.1	Augmentation/Reforestation for Natural Regeneration	7,000 ha	350	
3.2	Biomass Conservation and Fire Protection	17,500 ha	350	
3.3	Bamboo and Rattans Cultivation	2,000 ha	100	
3.4	Soil and Moisture Conservation - Check dam and gully plugging - Stabilization of watercourse banks	13,750 ha	275	
3.5	Non Timber Forest Produces - Training for scientific collection of NTFP - Technical training and tools for primary processing - Ware housing - Engaging Processing Experts - Processing units, promotion and marketing	LS	100	5 5 30 5 55
3.6	Medicinal Plant - Survey and Demarcation of Medicinal Plant Area (MPA) - Conservation and enrichment of endangered and threatened species (RET) - Enrichment planting of commercial MP - Training for scientific collection of MP - Technical training and tools for primary processing - Engaging Processing Expert - MP based processing units, promotion and marketing	LS	100	5 30 44 5 5 1 10
3.7	Eco Tourism - Promotion, marketing and study tours - Training tribal guides - Providing camping gears eco tourism groups - Establishing ethnic village for overnight stay - Logistics for trekking, tree huts, tents, etc.		83	2 3 25 48 5

Salient Features of the Project Components in DPR (2/3)

Source: Prepared by JICA Survey Team (2014) based on DPR

	Components/Intervention	Quantity	Amount (Rs. Million)	
			Total	Break Ups
4.	Housing Development - THDP (Housing and Landscaping)	1,625 houses	650	
5.	Household Amenity			
5.1	Energy Security		105	
(1)	Electricity Connection	LS		80
(2)	Energy Efficient Choola	5,000 houses		25
5.2	Solar Lantern and Street Light		50	
	- Solar lantern	7,000 no.		20
	- Street light	1,000 no.		30
5.3	Bio-gas Units	1,500 BPL	30	
5.4	Providing Drinking Water	14,166 households	150	
5.5	Community Resource Centre	100 no.	100	
5.6	Access Roads to Hamlet and Bridges		150	
(1)	Access Road	100 km		90
(2)	Hanging/Small Bridge	24 no.		60
5.7	Sanitation Facilities	5,000 households	75	
6.	Project Infrastructure and Health Care Facilities			
6.1	Project Infrastructure Development		109	
(1)	AHADS Headquarter and Facilities	LS		50
(2)	Infrastructure for Panchayat	26 no.		39
(3)	Vehicles and Furniture	LS		20
6.2	Social Infrastructure Development			
(1)	Health Infrastructure (PHC, CHC, Taluk/District Hospital)	29	150	
	- Additional building			100
	- Equipment			50
(2)	Education Infrastructure		250	
	- Infrastructure			200
	- Equipment			50
(3)	Electrification of BPL Household		93	
(4)	Public Sanitation Facilities	100 site	25	

Salient Features of the Project Components in DPR (3/3)

Source: Prepared by JICA Survey Team (2014) based on DPR

Review on Project Goal, Objective and Approaches

DPR	Summary of the Review by the Survey Team
1. Project Goal	
Enhance livelihood security and social capital for BPL people	As per the Request for Proposal for the Survey “To contribute the improvement of the livelihood and balanced socio-economic development in Wayanad ”
2. Objectives of Project	
Enhance that most vulnerable and marginalised people have great access to productive assets, decent employment, skill development, social protection and sustainable livelihoods based on sustainable ecosystem	As per the Request for Proposal for the Survey , which indicates twin objectives as follows: - Improvement of livelihood and living conditions focusing on BPL households - Restoration of ecosystem
3. Approaches	
<ul style="list-style-type: none"> - Apply a completely participatory approach - Formulating an area based development plan (micro plan) - Designing intensive inputs on capacity building of the implementing bodies - Establishing implementation arrangement to link VSs to their respective Grama Panchayats 	<ul style="list-style-type: none"> i) The first objective stated above is focusing on BPL families, who are spread across the Wayanad . Thus area based development approach is inappropriate to achieve the first objective. ii) The “restoration of ecosystem ” is applicable to the forestlands in a limited way with area based approach . iii) The two objectives require respective implementing bodies or project beneficiaries, and there is no organic integration between the two objectives. iv) Considering the situations stated above, approaches proposed in DPR need to be revisited.

Source: JICA Survey Team (2014)

Review on Agriculture/Livestock Related Activities

Component	Summary of the Review by the Survey Team
2.1 Land based activities	
(1) Land and agriculture development for food and livelihood security	i) Most of BPL owns marginal size of land on hillside or sloped land. Although the area of farmland is very limited, it is being efficiently utilized. There may not be excess space to promote further optimum utilization of land.
- Optimum utilization of land	
- Paddy cultivation	ii) The BPL owns their land only in upper land and they have little access to paddy cultivation in lowland. In this condition, promotion of paddy field may not be relevant.
	iii) Alternative activity conceivable is fodder and hay production in combination with livestock rearing
(2) Structural measures for soil and water conservation	i) The farmland owned by BPL is efficiently used and well managed, and land degradation or soil erosion is not common.
-Soil and water conservation measure	ii) Considering the current cropping system on the marginal size sloped land, installation of drainage or irrigation facilities may not be required.
-Drainage line treatment	
-Minor irrigation structures	
2.2 Livelihood Improvement Activity	
(1) Livestock development - Support of milch cows for 10% BPL households	i) Livestock rearing is possible to be done in a limited homestead yards, so that it is an activity applicable for BPL households with marginal size land and that it is suitable for those who are difficult to go out for hard labour work.
	ii) Cattle rearing is a prominent activity because of high milk demand and well established marketing system in Wayanad.
(2) Sericulture development	iii) Although sericulture department is established in Wayanad, there are no data available for production of sericulture. No evident potential of sericulture in Wayanad was assessed.

Review on Income Generation / Livelihood Improvement

DPR	Summary of the Review by the Survey Team
2.3 Income Generation Activities	
- Agriculture Marketing	i) Paddy farming and allied activities are not relevant to the Project because of limited landholding size of BPL families
- Procurement Centres Offices	
(1) Training	i) Skills training in agriculture marketing and allied activities may be relevant in some cases. ii) Many of the training activities could be done through convergence with Agriculture Department, KVK and Tamil Nadu Agriculture University.
(2) Revolving fund for tribes – jointly manage with Kudumba Sree	i) Providing loan will not be appropriate for the highly indebted communities of Wayanad. ii) Although, revolving fund will be a part of the intervention, working with Kudumba Sree may not be the way forward as seen in lessons learned from Attappady.
3.5 NTFP	
- Training	i) NTFP sector in Wayanad requires organised collection of NTFPs and enhanced value addition.
-Ware housing	ii) Marketing support is also required.
-Engaging experts/ resource persons for value addition of products	
-NTFP based processing units, promotion and marketing	
7.1 Training	
(1) Training for empowerment	i) 750 programmes are proposed in DPR. Subjects and number of the programme should be carefully selected and decided to be relevant to the proposed interventions.
(2) Vocational Training for Landless Tribal	
7.2 Gender development	
-Mothers' Group	i) Objectives of Mothers' Group are to tackle social issues like alcoholism. Same was done in Attappady, yet the groups did not sustain themselves and some of them were not accepted by the community. ii) It would be more effective to support women through tangible interventions including de-addiction centre, counselling and livelihood support for their empowerment and transformation in the society.
7.3 (3) Literacy Programmes	i) Convergence with the State Literacy Mission
7.3 (4) Sensitising teachers on tribal culture	i) Most activities may be done through convergence.
7.3 (5) Learning Centre in Hamlets	i) Convergence with State Literacy Mission, Mahila Samakiya and ICDS (Anganwadi Centre as venue)
7.4 Promotion of Arts	i) Convergence may be sought with the relevant agency.
7.5 Sports Promotion	i) Convergence may be sought with the relevant agency.
7.6. (2) Health	
-Mobile De-addiction and Counselling Centre	i) New project has been launched in the District. ii) Convergence may be considered.

Source: JICA Survey Team (2014)

Review on Natural Environment Improvement

Subcomponents	Target	Results
3.1 Augmentation/restoration for natural regeneration:	7,000 ha	i) No tangible basis for the areal target is indicated in DPR. ii) No substantial needs were confirmed in the field
3.2 Biomass conservation and fire protection: Target is open forests with canopy cover less than 40 %	17,500 ha	
3.3 Bamboo and rattan production:	2,000 ha	
3.4 Soil and moisture conservation: Appropriate species will be planted along the water course to stabilize the banks.	13,750 ha	
3.5 Non-timber forest produce: - Enhancement of sustainable technologies of NTFP collection to target tribal people	Tribal community	i) Information on the target species of NTFP is not presented in DPR. ii) Needs are to be confirmed for enhancement of the technologies for sustainable NTFP collection. iii) However potentials of NTFPs to support livelihoods of the community were confirmed through VSS/EDC review
3.6 Medical plants (Ayuvedic medicines): - Identification of medical plant conservation area (MPCA) - Conservation of rare, endangered and threatened (RET) species. - Enhancement of enrichment planting - training for “scientific collection”.	No tangible target	i) Information on the tangible target is not indicated in DPR. ii) However potentials of medical plants to support livelihoods of the community were confirmed through VSS/EDC review
3.7 Ecotourism: - Establishment of “ethnic model village”:	Tribal community	i) Proposed components seem to be just an initial idea thus needs to be further studied and embodied

Source: JICA Survey Team (2014)

DPR	Target	Summary of the Review by the Survey Team
4. Housing Development-THDP	1,625 houses	i) Requirement of housing development is pretty high. But the quantity of target houses needs to be revisited. ii) In particular, selection criteria for beneficiaries need to be met with the vulnerable who has the real needs of the housing.
5. Household Amenity		
5.1 Energy Security - Energy Efficient Choola	5,000 houses	i) Convergence may be sought.
5.2 Solar Lantern and Street Light - Solar lantern - Street light	7,000 no. 1,000 no.	i) Needs are not so high. ii) Convergence may be sought.
5.3 Biogas Unit	1,500 BPL	i) This component is not relevant, because BPL families are mainly landless or marginal landholder.
5.4 Providing Drinking Water	14,166 families	i) Three drinking water supply schemes are on-going. ii) Drinking water of the existing water supply facilities are generally contaminated by bacteria. iii) Improvement of the water quality is urgent issues to be overcome. iv) Regular maintenance system of the existing facilities needs to be established in parallel with the on-going schemes.
5.5 Community Resource Centre	100 no.	i) There were few Grama Panchayat offices that recognised the needs of the community centres. ii) Convergence may be sought.
5.6 Access Road to Hamlet and Bridges		i) No detailed information is given in DPR on this intervention.
(1) Access Road	100 km	ii) However, needs of the access roads and hanging/small bridges were verified by the Survey Team (Chapter 10). iii) Considering that lack of funds for maintenance/ repair is ordinary occurrence, construction of durable concrete/steel structures is desirable.
(2) Hanging/Small Bridge	24 no.	
5.7 Sanitation Facilities	5,000 families	i) Convergence may be sought, if necessary.
6.1 Project Infrastructure Development		
(1) AHADS Headquarter and Facilities	LS	i) Creation of new fixed asset in addition to the huge assets in Agali is not relevant. ii) In Wayanad, it is realistic to rent a office space for PMU of AHADS-CCPRM.
(2) Infrastructure for Panchayat	26 no.	i) Not relevant.
6.2 Social Infrastructure Development		
(1) Health Infrastructure	29 no.	i) Field survey identifies the needs of upgrading medical check and treatment facilities/equipment in CHCs and PHCs as well.
(2) Educational Infrastructure	LS	i) The important components to upgrade the existing lower primary schools are (i) renovation of the existing toilet (building), (ii) construction of additional classrooms (building), (iii) provision of the facilities and equipment for the education and the management.
(3) Electrification of BPL household	LS	i) Convergence.
(4) Public Sanitation Facilities	100 sites	i) Convergence.

Review on Community Infrastructure

Source: JICA Survey Team (2014)

Summary of the DPR Review

- Many of the activities proposed in the DPR could not be justified with reference to the Survey results.



Reconfiguration of the Project Plan basing on the present conditions of Wayanad was required

PART IV: Proposed Plan

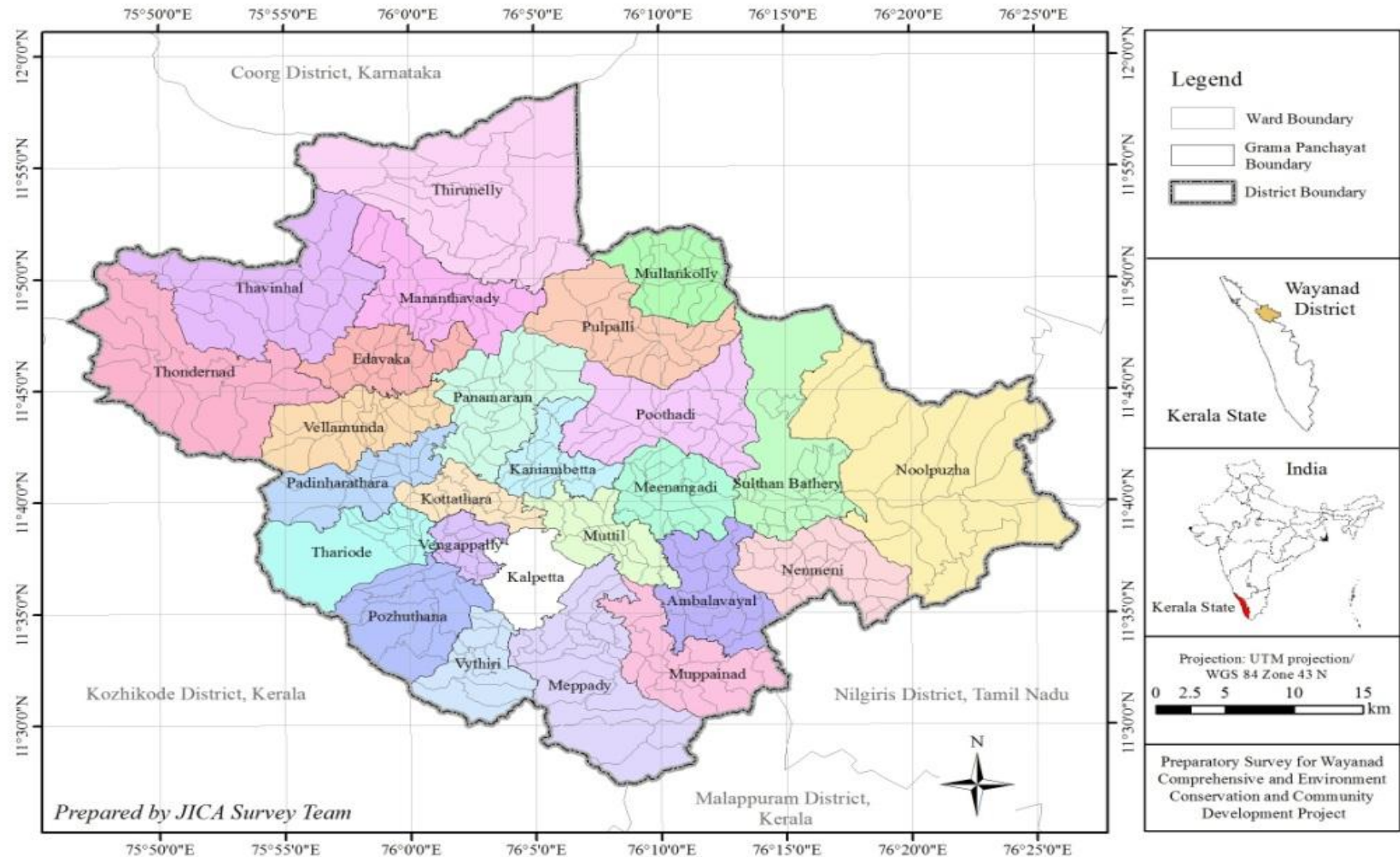


Community Infrastructure: House under construction in
Ward 8, Thavinhal Grama Panchayat

Survey/ Project Area

- Survey/ Project Area:
 - Wayanad District except for Kalpetta Municipality
 - Geographical area : 2,129.17 km²
- Panchayat Raj Institution (Local Self Government)
 - District Panchayat: 1 Panchayat
 - Block Panchayat : 4 Panchayat
 - Grama Panchayat: 25 Panchayat
 - Grama Sabha: 461 Grama Panchayat Ward (2014)

Survey/ Project Area : Wayanad District



Project Rationale

- Relevance in promoting livelihood improvement in the light of the development policy of India and Kerala
- In need of providing livelihood options for the BPL households who are particularly vulnerable and have limited access to employment and to minimise fluctuation of income
- A need to provide alternative livelihood options which are not land based
- Frequent man-animal conflict implying needs for improvement of natural environment
- Need to build capacity of VSS/ EDCs for Participatory Forest Management
- An attempt to improve the livelihood of the vulnerable in line with ODA policy of Japan and JICA

Overall Goal and Project Objectives

Overall Goal

“Contribute to the improvement of the livelihood and balanced socio economic development in Wayanad through improvement of livelihood and living condition of BPL household and restoration ecosystem”

Project Objectives

- i. Improve the livelihood condition of the vulnerable households
- ii. Improve the living condition in Wayanad
- iii. Restore ecosystem in the forest land along with improvement of environmental condition for the livelihood of the local people who are dependent on the forest resources or whose livelihood are affected by the surrounding natural environment

Basic Approach to Implementation

- Non area based approach
- Community participation to ensure delivery of benefits and sustainability
- Handholding supports to PIs
- Gender consideration
- Holistic approach to livelihood improvement to the Vulnerable through convergence
- Embedded Phase-Out / Phase-In works for ensured sustainability

Project Components

Component I: Institutional arrangement and setting up of the executing agency

Component II: Preparatory Work

Component III: Main Components

III-1: Livelihood Improvement Work

III-2: Natural Environment Improvement Work

III-3: Community Infrastructure Development

Component IV: Supporting Components

IV-1: Capacity Development

IV-2: Institutional Strengthening

IV-3: Research & Development and Dissemination

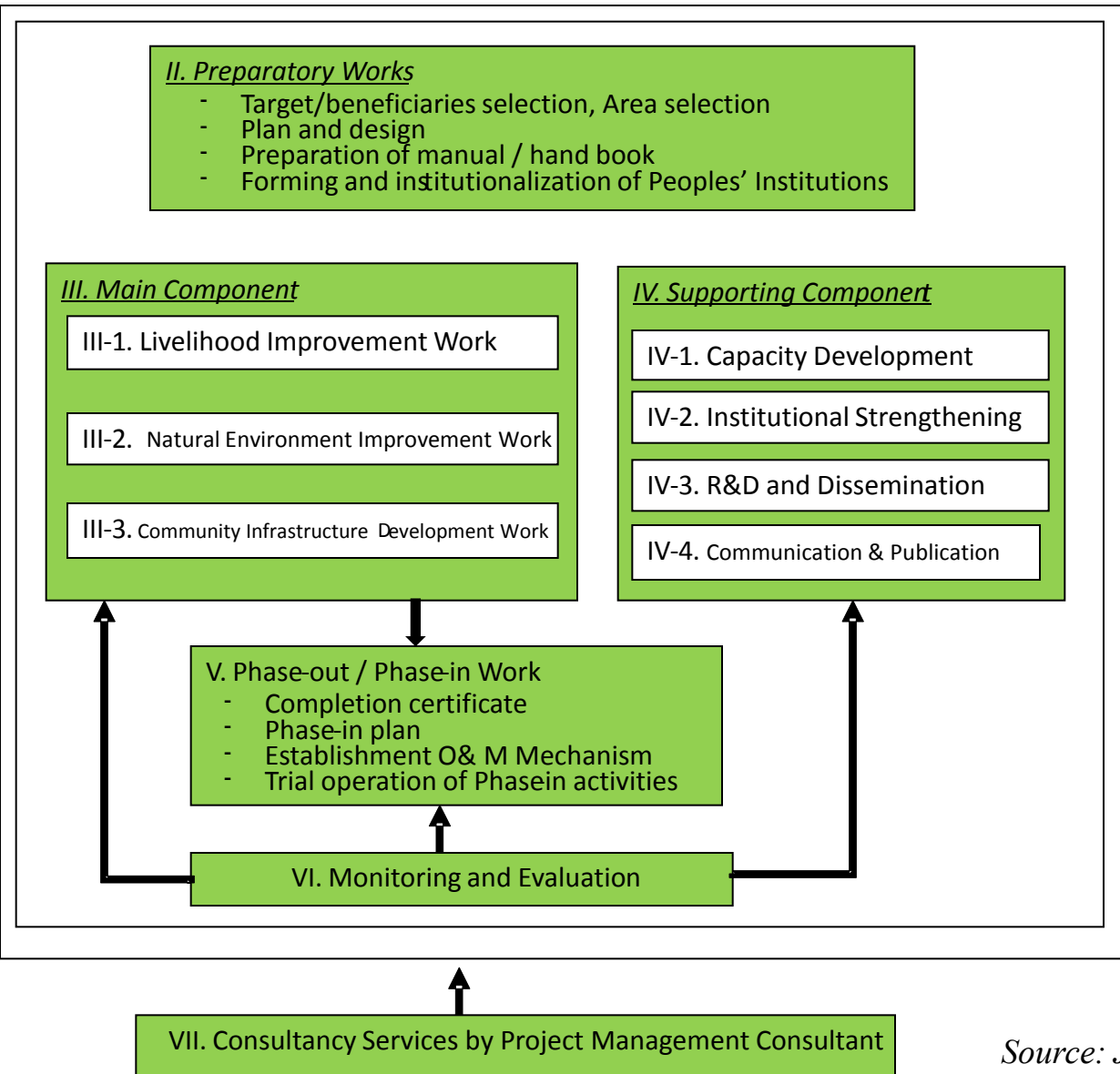
IV-4: Communication and Publication

Component V: Phase-Out / Phase-In Work

Component VI: Monitoring and Evaluation

Component VII: Consultancy Services by the Project Management Consultant

I. Institutional Arrangement and Setting up of Executing Structures



Project Components

- 3 sub-components under Main Components are independent.
- Component II and IV are also designed for each sub-component.

Component II: Preparatory Works

Purposes

- To select target/beneficiary
- To select target intervention areas/sites
- To develop plan and design
- To prepare necessary manuals/handbooks

Activities

- Target/beneficiary selection, areas/site selection
- Plan and design
- Preparation of manual /handbook
- Formation and institutionalisation of Peoples' Institutions (PIs)

Component III-1: Livelihood Improvement Work

Purposes

- To provide alternative source of income to mitigate the livelihood shocks among the vulnerable
- To help the vulnerable households to manage household economy
- To facilitate linkage between the vulnerable ant various schemes and programmes

Activities

- IGA development
- Product development
- Marketing
- Livelihood support services

Component III-2: Natural Environment Improvement Work

Purposes

- To mitigate the human-animal conflict in/around the Wildlife Sanctuary
- To restore the forest ecosystem through preventing wildfires
- To improve livelihood of local people through enhancing NTFP development and ecotourism

Activities

- Improvement of animal habitat
- Installation of protection facilities from damages by elephant
- Eco-restoration
- VSSs/EDCs development

Component III-3: Community Infrastructure Development Work

Purposes

- To improve living conditions of the vulnerable
- To improve accessibility of local peoples residing colonies/ hamlets
- To improve sanitary condition of the lower primary schools
- To upgrade medical check and treatment conditions of CHCs/ PHCs

Activities

- Housing work
- Access roads and small/suspension bridges
- Renovation of school toilet
- Upgrading medical care equipment

Component IV-1: Capacity Development

Purposes

- To enable PMU and field level staff to implement the project activities following the project specific modalities
- To enable PIs to acquire skills and knowledge required to implement the project activities as the implementing bodies
- To create awareness/understanding among the stakeholders of the project for consensus building toward the project implementation

Activities

- Training for PMU staff
- Training and exposure visits for SHGs
- Training for VSS/EDC members

Component IV-II. Institutional Strengthening

Purpose

- To fix working environment of PMU and PIs for the smooth and effective project implementation

Activities

- Construction of VSS/EDC offices and CFCs
- Procurement of furniture/equipment for PMU office, VSS/EDC offices and CFCs

Component IV-3: R&D and Dissemination

Purposes

- To generate useful technologies and knowledge for the project implementation
- To obtain first hand data through ante, mid-term and post surveys for the impact evaluation of the specific activities

Activities

- Enhancement of IGA development
- Improvement of ANR of understory vegetation

Component V: Phase-out / Phase-in Works

Purpose

- To develop sustainable mechanism for PIs including involvement of government agencies relevant to the Project

Activities

- Completion certificate of the project works
- Phase-in plan for IGA-SHG
- Phase-in plan for VSS/EDC
- Establishment of post project O&M mechanism
- Trial operation of phase-in activities

Component VI: Monitoring and Evaluation

Purposes

- To understand physical/financial progress and issuers/problems of the Project in timely manner so that decision making by PMU is appropriate and effective
- To evaluate impact of the Project activities

Activities

- Progress monitoring and analysis
- Evaluation of Project physical impact
- Evaluation of Project socioeconomic impact

Work Quantities of Main Component Activities

Project Works			Work Quantity	
1	Livelihood Improvement Work			
	1-1	Non Dairy IGA development (300 SHGs)	30	cluster
	1-2	Dairy IGA development	50	SHG
	1-3	Product development	7	year
2.	Natural Environment Improvement Work			
	2-1	Mitigation of Human -animal Conflict		
		(1)	ANR of understory vegetation	6,400 ha
		(2)	Water post development	160 site
		(3)	Elephant proof trench/wall/fence	214.5 km
	2-2	Eco-restoration		
		(1)	Fire line management (for 5years)	500 km
		(2)	Procurement of fire fighting equipment	59 set
	2-3	VSS/EDC Development		
		(1)	NTFP development	10 VSS
	(2)	Eco-tourism development	10 VSS/ EDC	
3.	Community Infrastructure Development Work			
	3-1	House Construction		1,000 houses
	3-2	Access Road Construction		100 km
	3-3	Small/Suspension Bridge Construction		50 bridge
	3-4	Renovation of School Toilet		25 LP
	3-5	Upgrading Medical Care Equipment		25 CHC/PHC

Source: JICA Survey Team (2014)

9 Year - Implementation Schedule

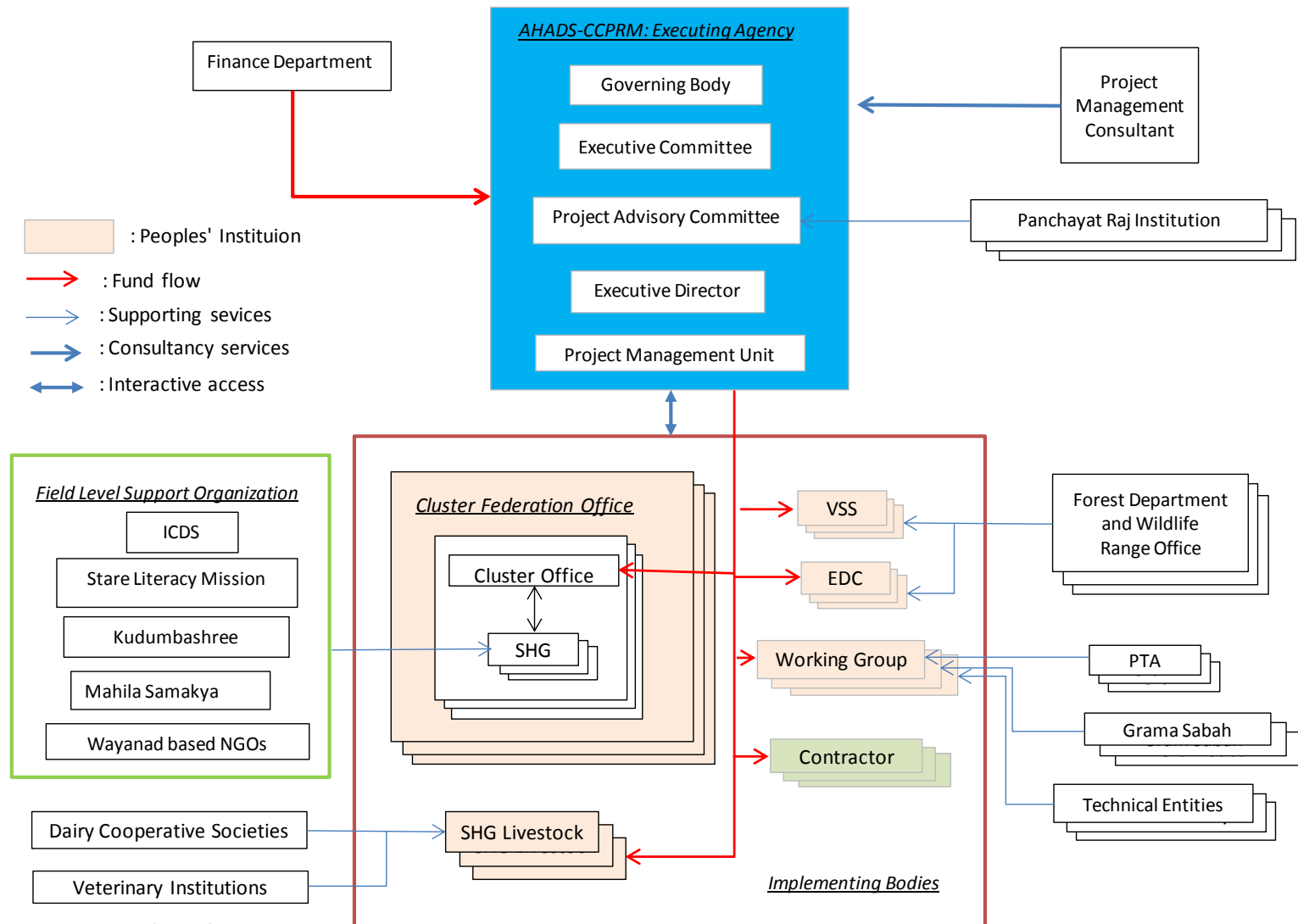
Work Component	Year of Implementation									
	0	1st	2nd	3rd	4th	5th	6th	7th	8 th	9th
0. Fund arrangement	—									
1. Procurement of PMC		—								
2. Institutional arrangement		—								
3. Preparatory works			—	—	—	—	—	—		
4. Institutional strengthening			—	—						
5. Capacity development			—	—	—	—	—			
6. Livelihood improvement work				—	—	—	—	—		
7. Natural environment improvement work				—	—	—	—	—		
8. Community infrastructure development work				—	—	—	—	—		
9. R&D and dissemination					—	—	—	—		
10. Communication and publication				
11. Monitoring and evaluation				
12. Phase-out / phase-in work									—	—
13. Consulting services				—	—	—	—	—	—	—

Source: JICA Survey Team (2014)

Procurement and Implementation Method

Project Works	Implementing Body	Procurement Method
Livelihood Improvement work	SHG/Cluster	MOU
Natural Environment Improvement Work	VSS/EDC	MOU
Community Infrastructure Development Work		
(1) Housing	Working Group	MOU
(2) Access Road Construction	Working Group	MOU
(3) Small /Suspension bridge Construction	Contractor	Contract Agreement
(4) Renovation of School Toilet	Contractor/ Working Group	Contract Agreement/ MOU
(5) Upgrading Medical Care Equipment	Supplier	Contract Agreement

Institutional Arrangement for the Project Implementation



Project Cost Estimate

No.	Component	Project Cost		Total	
		FC (million JPY)	LC (million Rs.)	million JPY	million Rs.
1	Institutional Arrange. and Setting up Exe. Agency	0.0	0.0	0.0	0.0
2	Preparatory Work	0.0	230.9	397.2	230.9
3	Institutional Strengthening	0.0	104.7	180.0	104.7
4	Capacity Development	0.0	62.7	107.9	62.7
5	Livelihood Improvement Work	0.0	184.6	317.5	184.6
6	Natural Environment Improvement Work	0.0	543.3	934.5	543.3
7	Community Infrastructure Development Work	0.0	1,938.4	3,334.1	1,938.4
8	Research & Development and Dissemination	0.0	3.3	5.7	3.3
9	Communication and Publication	0.0	100.1	172.1	100.1
10	Monitoring and Evaluation	0.0	63.0	108.4	63.0
11	Phase-out / Phase-in Works	0.0	2.0	3.4	2.0
12	Total of Direct Cost (No.1~11)	0.0	3,233.0	5,560.8	3,233.0
13	Administration Cost	0.0	620.7	1,067.5	620.7
14	Sub-total (No.12+13)	0.0	3,853.7	6,628.3	3,853.7
15	Price Contingency	0.0	688.2	1,183.7	688.2
16	Sub-total (No.14+No.15)	0.0	4,541.9	7,812.0	4,541.9
17	Physical Contingency	0.0	196.1	337.2	196.1
18	Consulting Services	648.5	503.5	1,514.5	880.5
19	Tax and Duties	619.5	357.4	1,234.2	717.6
20	Grand Total (No.16~19)	1,268.0	5,598.8	10,898.0	6,336.0

Source: JICA Survey Team (2014)

Project Evaluation

Conditions

- Project cost related to Livelihood Improvement and Natural Environment components were used for estimation.
- Project Life: 30 Years

Economic Evaluation

Economic Index	Result
NPV (thousand Rs.)	21,789
EIRR	7.8%

Source: JICA Survey Team (2014)

Possible Employment Opportunities created by the Project

Project Component	Person Day
Institutional strengthening	78,472.35
Natural Environment	671,858.33
Community Infrastructure	1,802,352.92
Total	2,552,683.60

Source: JICA Survey Team (2014)

Project Risks / Important Assumptions

- Consensus between LSGD, Executing Agency and Local Stakeholder
 - Taking initiative for the Project implementation by LSGD as an administrative agency of the Project
 - Disseminating information of the Project to local stakeholder for awareness building and seeking corporation by LSGD
- Re-establishment of AHADS-CCPRM
 - Development of structural organization
 - Preparation of operation manual of PMU
 - Forming Project Advisory Committee
 - Posting deputation position
 - Recruiting staff members
 - Arrangement of PMU office
- Land for CFCs to be secured by LSGD and AHADS-CCPRM

Social and Environmental Safeguard (1/3)

Preliminarily Scoping on Proposed Sub-Projects

1) Overall Positive Impact:

Largely, the Project would contribute local economy and livelihood of people especially socially vulnerable people. Besides, would contribute conservation of natural resources in Wayanad.

2) Overall Negative Impact:

Significant negative impact in social and environmental aspects is not foreseen. Unknown adverse impacts; “religious matters” and “water pollution”, should be re-examined at the preparatory stage of the Project implementation.



Although it is not possible to precisely state what sub-projects will be implemented in which specific location/scale, eliminating all sub-projects involving significant adverse impacts through project-specific screening procedures is imperative.

Social and Environmental Safeguard (2/3)

Examination of Existing Legal and Policy Framework

- Overall, environmental and social safeguards policies and related implementing legislation in India do not deviate from the requirements of JICA Guidelines.
- No proposed sub-projects would involve resettlement, land acquisition or loss of livelihoods. It is envisaged that not to be required Environmental Assessment and/nor Environmental Clearance.

Current Institutional Capacity

- 1) **AHADS-CCPRM** does not have a comprehensive ESMS in place.
- 2) **Grama Sabha (or Oorukoottam in the tribal areas)** does not have a comprehensive ESMS in place. Awareness building on potential adverse impacts is imperative as such capacity seems to be limited.

Social and Environmental Safeguard (3/3)

Appropriate Frameworks for Environmental and Social Considerations

Considering the nature of the Project, its objective, proposed framework and existing safeguard capacity, two frameworks and one checklist are necessary.

- Environmental and Social Management Framework (ESMF)
- Forest Dwellers Development Framework (FDDF)
- ESMF Checklist (Annex 8.1, 8.2 and 8.3)

Definition and Identification of “Forest Dwellers” for FDDF

Understanding what the terms ‘forest dwellers’ and ‘indigenous peoples’ actually mean in JICA guidelines and Indian legislations, Forest Dwellers are defined to be “tribal and non-tribal communities who reside within and on the fringes of the Reserved Forests”. The fringe includes specifically for those hamlets whose customary land overlaps or adjacent to the boundary of the Reserved Forests.

Recommended Procedures for Environmental and Social Considerations

- Identification of ESMF Procedures
- Institutional Arrangements for ESMF
- Assignment of Individual Role and Responsibility for ESMF
- Capacity Development for ESMF
- Monitoring for ESMF

Operational Indicators (1/3)

Project Component	Sub-component	Operational Indicator	
		Indicator	Target* and Target Year
Livelihood Improvement	Preparatory Work	Number of formed IGA development plan	() By the end of the 2nd year of the Project
		Number of formed Clusters	() By the end of the Project
		Number of formed SHGs	() By the end of the Project
		Number of the members of SHGs	() By the end of the Project
	Main Work	Employment generation	() person-day By the end of the Project
		Profit earned from IGA activities	() Rs. per person By the end of the Project
		Number of Programmes/Schemes linked with the Project	()
	Institutional Strengthening	Number of the participants in the trainings	More than 90 % of the targeted SHG members in each training By the end of the 6 th year

Source: JICA Survey Team (2014)

*The target is to be defined by PMU after the baseline survey.

Operational Indicators (2/3)

Project Component	Sub-component	Operational Indicator	
		Indicator	Target* and Target Year
Natural Environment Improvement	Preparatory Work	Number of newly formed VSSs and EDCs	()
		Number of rearranged and activated VSSs and EDCs	()
		Number of developed Micro Plan	()
	Main Work	Size of the forests treated for ANR	() ha By the 8 th year of the Project
		Number of the developed water post	() water post development By the 8 th year of the Project
		Size of the developed elephant proof	Stone wall: Rail fence: Solar Power fence: By the 8 th year of the Project
		Size of the managed fire line	() m By the 7 th year of the Project
		Number of the members of VSS/ EDC to join NTFP collection	() person By the 5 th year of the Project
		Size of the improved/ developed roads or trails for eco-tourism development	Road: () m Trail: () m By the 5 th year of the Project
	Institutional Strengthening	Number of the participants in the trainings	More than 90 % of the targeted VSS/ EDC members in each training By the end of the 4 th year

Source: JICA Survey Team (2014)

*The target is to be defined by PMU after the baseline survey.

Operational Indicators (3/3)

Project Component	Sub-component	Operational Indicator	
Community Infrastructure Development	Preparatory Work	Number of formed working group	House: () Road: () School toilet: () Medical care equipment: () By the 7 th year of the Project
	Main Work	Number of the built houses, access roads, bridges, renovated school toilets per school, and upgraded medical care equipments	House: () Access road: () Footpath: () Concrete bridge: () Pedestrian bridge: () Steel Truss bridge: () Suspension bridge: () School toilet: () Medical care equipment: () By the 8 th year of the Project
	Institutional Strengthening	Number of the participants in the trainings	More than 90 % of the targeted VSS/ EDC members in each training By the end of the 4 th year

Source: JICA Survey Team (2014)

*The target is to be defined by PMU after the baseline survey.

Effect Indicators (1/3)

Project Component	Effect Indicator	
	Indicator	Target* and Target Year
Livelihood Improvement	Additional income from SHG work in the Project	()% increase in household income as a result of the Project activities By the end of the Project
	Sales and benefit of NTFP products	Sales: (Total) Rs./ VSS or EDC Benefit: (Total) Rs./ VSS or EDC By the end of the Project
	Increase rate in sales and benefit	()% increase in sales ()% increase in benefit By the end of the Project
	Sales and benefit of IGA products	()Rs./ SHG By the end of the Project

Source: JICA Survey Team (2014)

*The target is to be defined by PMU after the baseline survey.

Effect Indicators (2/3)

Project Component	Effect Indicator	
	Indicator	Target* and Target Year
Natural Environment Improvement	Regeneration % in the areas where ANR was implemented	()% increase in regeneration By the end of the Project
	Number of occurrence of elephant attack and its damage	()% decrease in the number of the occurrence
		()% decrease in the amount of the paid compensation for damage caused by elephant attack By the end of the Project
	Number and size of forest fire outbreak and its damage	()% decrease in the number of the occurrence Decreased area size of forest fire By the end of the Project
	Increase rate of the participants in the eco tour at the places, where the work for eco-tourism development was implemented in the Project	()% increase in the number of the participants By the end of the Project
	Increase of income from guide for eco-tourism	()% increase in the income from guide work for eco-tourism
Increase of income opportunity from guide work in the arranged area by eco-tourism development work	() days increase for guide work in the arranged area	

Source: JICA Survey Team (2014)

*The target is to be defined by PMU after the baseline survey.

Effect Indicators (3/3)

Project Component	Effect Indicator	
	Indicator	Target* and Target Year
Community Infrastructure Development	Increase rate of the patients diagnosed at the CHCs/PHCs whose medical equipment are upgraded	()% increase in the number of visitors By the end of the Project
	Number of the patients who take testing with the installed/upgraded medical equipment	() person By the end of the Project
	Number of medical staff of the CHCs/ PHCs, who learned the method of using the upgraded medical equipments	() persons By the end of the Project
Other	Achievement of progress monitoring, baseline survey, and annual review	Monitoring and evaluation are completed as per the plan, and the monitoring works provide necessary information for the project evaluation

Source: JICA Survey Team (2014)

*The target is to be defined by PMU after the baseline survey.