

**Questionnaire on Technical Cooperation Project for Farm Roads Bridge Design and Construction**  
**Detailed Planning Survey Mission**

**Directions:**

- Our questionnaire is made up of three parts, 1) Questions to Gross National Happiness Commission, 2) Questions to Ministry of Agriculture and Forests, and 3) Questions to Ministry of Works and Human Settlement (Department of Roads)
- Please kindly provide your answers to the column provided on the right side. Please specify papers, documents and other information sources in the column of "Reference", which include replies to the questions
- Please answer as many questions as possible and return them back in both hard and soft copy to the Mission on February 28<sup>th</sup> or earlier. For the remaining part, we would like to confirm through discussions in Thimphu.

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<b>Part2: Questions to Ministry of Agriculture and Forests</b>		
<b>No.</b>	<b>Questions</b>	<b>Answers</b>
2-1	<p><b>Organization Chart</b>            (1) Please provide the latest organization chart of MOAF, DoA and Engineering Division.            (2) Please provide a copy of legal documents that stipulate the organizational mandates and functions of MoAF and Engineering Division.</p>	<p>MoAF website            (1) Attached in Annexure I            (2) Attached in Annexure II</p>

Part2: Questions to Ministry of Agriculture and Forests		
No.	Questions	Answers
2-2	<p><b>Organization for Farm Road Bridge (Current Situation)</b></p> <p>(1) Please specify the current number of technical staffs who are in charge of farm road bridges.</p> <p>(2) Out of the above, how many staffs are working exclusively for the farm road bridges</p> <p>(3) Please provide a copy of the latest operational and financial plans of MoAF and DoA which indicate both the regular and special activities of each Department with their implementation schedules, total budget and its breakdown, and so forth.</p> <p>(4) Are there any foreign assisted projects of which MoAF primarily or partially acts as implementing agency?</p> <p>(5) If yes, please provide the details of the projects that are currently implemented, such as Project title, Project purpose, Donor name, Project Site(s), MoAF's involvement/component(s) for which MoAF is responsible, Type of aid (grant/loan).</p>	<p>(1) None</p> <p>(2) None</p> <p>(3) Annexure III: Will provide DoA's budget for the year 2010-11 (hard copy) when you are back</p> <p>(4) Yes</p> <p>(5) Attached in Annexure IV</p>
2-3	<p><b>Organization for Farm Road Bridge (Future Plan)</b></p> <p>(1) If you have a plan to establish a new section for farm road bridges, please specify it. In such case, how many staffs will be assigned? Has the plan been approved officially by RGOB?</p> <p>(2) How many technical staffs are supposed to work for the Technical Cooperation Project? (part time and full time). Which department / section do those personnel belong to?</p> <p>(3) At Dzonkhag level, who will be the responsible person for the farm road bridges (design, tender, construction supervision, O&amp;M)?</p>	<p>(1) If this technical corporation project comes through, it is planned that the Engineering Division, DoA, would recruit two new engineers specifically to work with the project. We are also planning to identify one engineer each from the collaborating Dzongkhags as focal engineers for farm road bridges.</p> <p>The plan is not officially approved, but we will process, if the project is approved.</p> <p>(2) Same as in (1) above. This staff would work under farm road section</p> <p>(3) The Dzongkhag Engineer is responsible for the farm road bridges at Dzongkhag level</p>

Part2: Questions to Ministry of Agriculture and Forests		
No.	Questions	Answers
2-4	<p><b>Experience of MOAF</b></p> <p>(1) Please provide list of farm road bridges constructed under MOAF budget or management. (name of bridge, location, type, length, financial source (RGOB/donor), completion year or current status, etc.)</p> <p>(2) If you have a map of farm roads and farm road bridges please provide the map.</p> <p>(3) If you have the criteria for the selection of the construction site, please provide the related documents.</p> <p>(4) How has MOAF utilized and/or revised “the Guideline for Design of Light-Load Bridge” which was prepared by JICA’s Development Study, “The Study on Agriculture and Farm Road Development in the Lhuntse And Mongar Districts in the Kingdom of Bhutan” (2003) ?</p>	<p>(1) Farm Roads did not allow bridges in the 9<sup>th</sup> plan. In the 10<sup>th</sup> plan, following farm road bridges were constructed through MoAF budget: (i) Reotala bridge in Trongsa (ii) Changchey bridge in Tsitrang (iii) Samarchu bridge in Dagana, (iv) Berti bridge in Zhemgnag, (v) Martshala bridge in Samdrup Jongkhar. The first 2 were damaged during severe monsoon floods.</p> <p>(2) Annexure V: Highlighted on map</p> <p>(3) Guidelines for Farm Road Development (2009)</p> <p>(4)The MoAF has not used the guideline, mainly because the demand has changed from light-load bridge to motorable bridges, since power tiller tracks are no more built.</p>

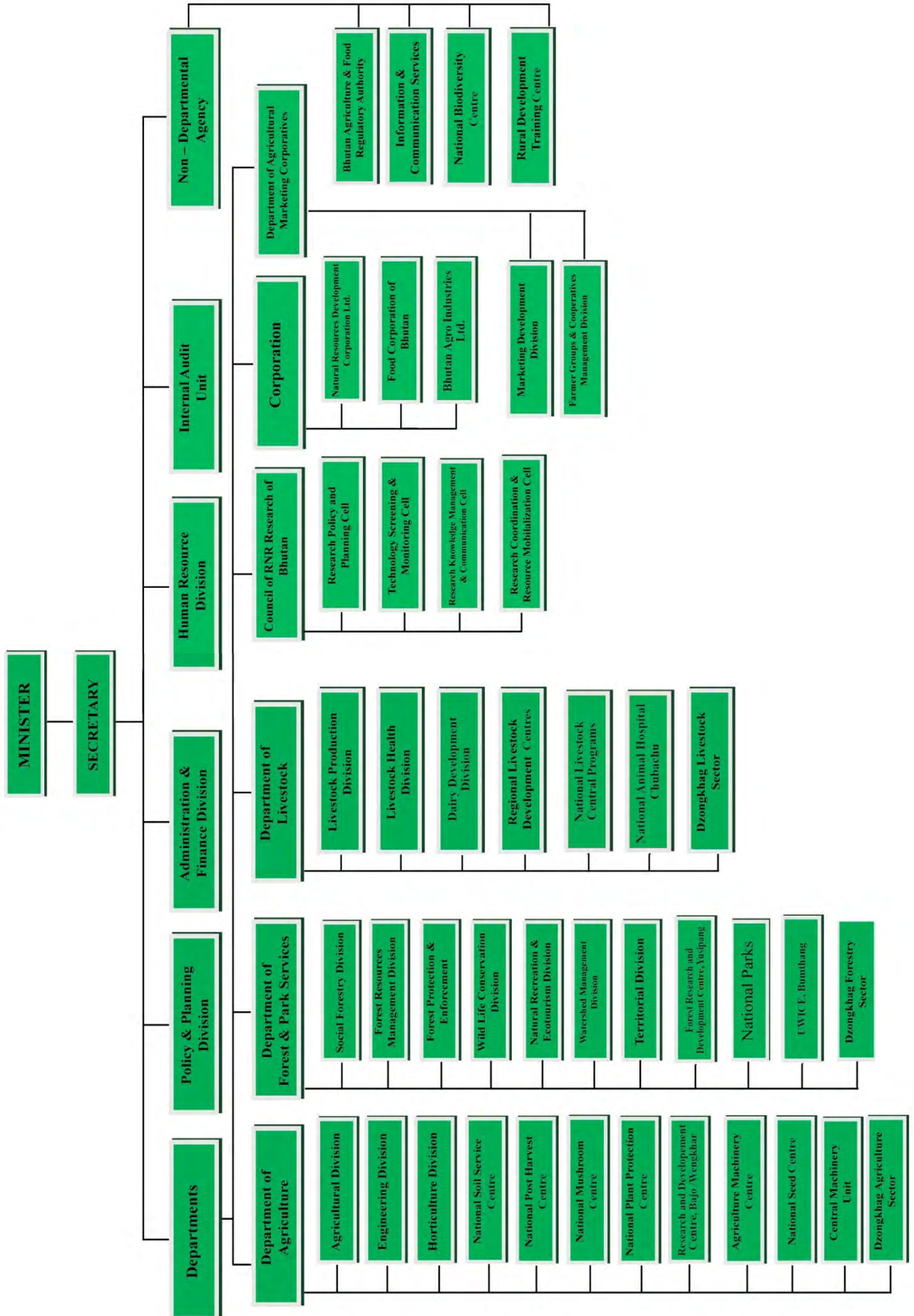
Part2: Questions to Ministry of Agriculture and Forests		
No.	Questions	Answers
2-5	<p><b>Purpose of Technical Cooperation Project</b></p> <p>(1) Which is the main purpose or the priority of the Project among items below:</p> <ul style="list-style-type: none"> <li>- MOAF engineers have sufficient capacity for design and/or construction supervision of farm road bridges by themselves.</li> <li>- MOAF engineers have sufficient capacity for implementation of farm road bridge projects (cost estimate, implementation planning, tendering process, construction management, etc.)</li> <li>- MOAF provides, train or development capacity of District Engineers for the farm road bridges construction on survey, design, cost estimation and ordering.</li> <li>- MOAF provides, train or development capacity of District Engineers for the farm road bridges construction on cost estimation and ordering.</li> </ul> <p>(2) How many engineers or specialists for farm road bridges does MOAF require? And by when?</p>	<p>(1) Currently, MoAF has no capacity in any of the items given in the right. Our purpose is to start from scratch. We hope to recruit and build capacity of at least two engineers at the DoA, and a few engineers in the collaborating Dzongkhags, who will serve as farm road bridge specialists. They will be expected to provide expertise in all matters related to farm road bridges- from planning, designing, construction supervision, estimation; They will provide the service as and when there are requests from the Dzongkhags. And later when they are competent, they could also provide trainings to other engineers from the Dzongkhags.</p> <p>(2) Initially, we plan to start as mentioned in (1). Depending on demand, we may increase in the long run.</p>
2-6	<p><b>Collaboration with DOR/MOWHS or Dzonkhags</b></p> <p>(1) We understand that MOAF has entrusted DOR design and implementation of the farm road bridges. How DOR will be involved in the proposed technical cooperation project?</p> <p>(2) Implementation or construction supervision of the farm roads or farm road bridges is handled by District Engineers. How district engineers will be involved in the proposed technical cooperation project?</p>	<p>(1) Initially, we did not plan any direct involvement of the DoR in this technical cooperation project, other than sharing their experience and expertise with the project.</p> <p>(2) As mentioned earlier in 2-3, and 2-5</p>

Part2: Questions to Ministry of Agriculture and Forests		
No.	Questions	Answers
2-7	<p><b>Model Site</b></p> <p>(1) If you have your own proposal for selection of model bridges, please specify the name of the bridges, reason and priority of the selection.</p> <p>(2) At this stage, the Project period is tentatively set 2~2.5 years. On the other hand, for a model bridge, it is considered difficult to design, procure and complete construction of the bridge within 2~2.5 years. Please give your idea to conduct the Project efficiently and effectively, particularly on “construction or implementation management” within such limited time frame.</p>	<p>(1) Our priority of selection would be: (i) Changchey, (ii)Woolathang-Tsachuphu, (iii) Hamche-Eusagom, (iv) Nahizam-Tashitsawa, (v) Goenshari, and (vi) Harazam-Lawa. The reason is based on number of beneficiaries, at the same time considering the length of the bridges.</p> <p>(2) If we consider two bridges the project duration of 2-2.5 years may not be too short. However, if we consider 6 bridges, then this period is quite short. But our idea is to then assign two engineers from the DoA and one engineer each from the Dzongkhags to the project.</p>
2-8	<p><b>Farm Road Development</b></p> <p>Please give following information on farm road development (for the first two points, please provide answers if changes have been made from what has been expressed in the “Preparatory Survey Report on The Project for Improvement of Machinery and Equipment for Construction of Rural Agricultural Road (Phase 2)” in December 2009)</p> <ul style="list-style-type: none"> <li>- Development Plan of Farm Roads (if you have master plan, action plan or 5-year plan, etc.) with location, length, approximate cost, etc.</li> <li>- Financial source for the above plan (MOAF, MOWHS, other RGOB, donor, etc.) (As you mentioned in the Application Form to JICA, “funding” for farm road bridge construction is a crucial issue. If you have concrete plan for financing, please specify it.)</li> <li>- If you have farm road bridge development projects which are to be financed by other donors, please specify them.</li> </ul>	<p>(1) Our priority of selection would be: (i) Changchey, (ii)Woolathang-Tsachuphu, (iii) Hamche-Eusagom, (iv) Nahizam-Tashitsawa, (v) Goenshari, and (vi) Harazam-Lawa. The reason is based on number of beneficiaries, at the same time considering the length of the bridges.</p> <p>(2) If we consider two bridges the project duration of 2-2.5 years may not be too short. However, if we consider 6 bridges, then this period is quite short. But our idea is to then assign two engineers from the DoA and one engineer each from the Dzongkhags to the project.</p> <p>(3) There is a list of farm roads to be constructed in the 10<sup>th</sup> plan. Annexure VI (a) is the total wish list submitted by all Gewogs and VI (b) is the government prioritized farm road list. This is not exactly a master plan but wish list submitted by all gewogs for the 10<sup>th</sup> plan.</p> <ul style="list-style-type: none"> <li>- Wherever relevant the funding source for the farm road is indicated.</li> <li>- MoAF do not have any projects specifically for farm road bridges. The Dzongkhags usually request the GNHC whenever they require constructing farm road bridges; one main source has been the Government of India’s Small Development Project.</li> </ul>

Part2: Questions to Ministry of Agriculture and Forests		
No.	Questions	Answers
2-9	<p><b>Procurement</b> Please give general information on procurement</p> <ul style="list-style-type: none"> <li>- From where do you procure materials for farm road bridges (super structure, cement, re-bars, etc.)?</li> <li>- If you procure a set of material from certain country, do you procure the assembly engineers at the same time?</li> <li>- If you do not procure a kind of assembly engineers, which organization construct/set up the bridges?</li> <li>- Please specify require</li> <li>- d time for procurement of the above items.</li> <li>- How long does it take to get price quotation of the above items?</li> <li>- Please specify standard process of contract bidding of consultants for detailed design and construction supervision. (with necessary time for each process)</li> <li>- Please specify standard process of contract bidding of construction works. (with necessary time for each process)</li> <li>- If processes of bidding differ by size of contracts, please specify them</li> <li>- Please provide information on the contractors and consultants (domestic, foreign) which have experiences of design and/or construction of farm road bridges contracted out by MOAF.</li> </ul>	<p>-superstructure from India; cement and re-bar are from Bhutan only -for superstructures, the suppliers bring their own assembly engineers -we do not have much experience in these matter; these are better asked to the DoR</p>
2-10	<p><b>Input by JICA</b> Please specify inputs from JICA which you expect (beside experts)</p> <ul style="list-style-type: none"> <li>(1) Equipment and Material</li> <li>(2) Facilities</li> <li>(3) Others</li> </ul>	<p>(1) Equipment and materials for the model bridges (2) Training facilities to the counterpart Bhutanese engineers</p>

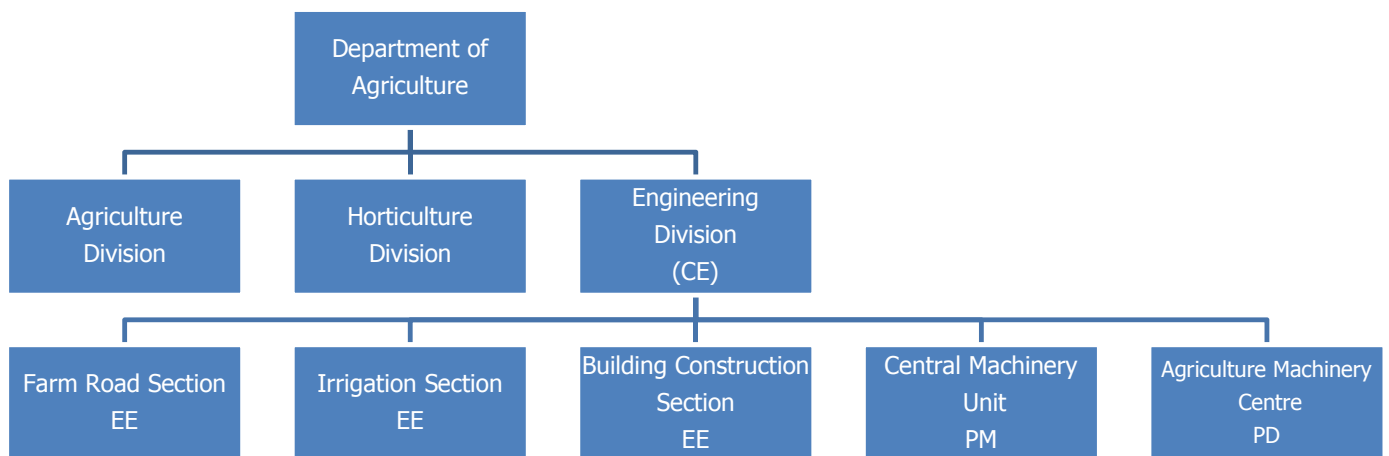
Part2: Questions to Ministry of Agriculture and Forests		
No.	Questions	Answers
2-11	<p><b>Undertaking of RGOB</b></p> <p>(1) Is it possible to assign full-time counterpart personnel to each expert? (at least two engineers)</p> <p>(2) Please check the items which you can provide for the Project</p> <ul style="list-style-type: none"> <li>- Office space in Thimphu (for experts and counterparts)</li> <li>- Office utilities (desks, telephone, furniture, electricity, water supply, others _____)</li> </ul>	<p>(1) Yes</p> <p>(2) Yes for both</p>

Organogram: Ministry of Agriculture and Forests





# ORGANOGRAM OF DoA & ED



### **Department of Agriculture (DOA)**

One of the objectives of the 10th Plan (2008 to 2013) is to reduce poverty from 23 % to 15 % of the population by the end of the plan period. Farming has an important role to play in meeting this objective since more than 90% of the population under poverty lives in the rural areas. There are 13 programs identified for the Department of Agriculture in the plan period with a capital budget provision of Nu.1318.586 million. DOA has appointed 8 commodity coordinators to realize targets of these programs. These programs of DOA are aimed to ensure food security and increase income through improved management of field and horticulture crops and medicinal plants. Access to markets, farm inputs, construction of farm roads and selection of improved technologies are some of the means prioritized.

DOA is one of the biggest departments under the Ministry of Agriculture and Forests with a total staff strength of more than 800 personnel. There are three divisions, namely Agriculture, Horticulture and Engineering Divisions under DOA headquarter office, based in Thimphu. The department reaches out to clients through a network of Extension, Research and Central program offices established at strategic locations throughout the country, taking services closer to the clients.

#### **Extension Wing**

The Department of Agriculture has deployed 20 Dzongkhag Agriculture Officers (DAO), 20 Assistant Dzongkhag officer (ADAO), and 205 Extension Officers in the 20 Dzongkhag (Districts). There is more than 300 agriculture staff in these Dzongkhags to support the farming communities to increase food production and manage local resources. These agriculture officers technically work with DOA, the Research Centres and Central Programs to provide assistances to address the agriculture production challenges of the local farming communities. These officers are transferred from one dzongkhag to another or within the same dzongkhag from geog to geog within a span of 3 to 5 years. The extension officers or geog agriculture officers help the local leaders to prepare the agriculture development plans, and they also help to draw up research agenda of the department of agriculture based on the needs of their local farming communities.

#### **Research Wing**

The Research System of the Ministry of Agriculture and Forests has gone under a series of changes to improve efficiencies. The research wing was with the extension division of the department of agriculture as Research and Extension Division (RED) in the late 1980s and the early 1990s. This morphed into the Research, Extension and Irrigation Department (REID) by the late 1990s with the merging of the Irrigation Section with RED.

The research wings of the three departments of the ministry were brought under one management, the Council of RNR Research of Bhutan (CORRB) by the early 2000, and named the regional centres as the Renewable Natural Resource Research Centers (RNRRC). The farming environments gradually changing from subsistence to more semi-commercial that demands more specialized advice and investments. Following these needs, the research wings were reverted to the parent departments during the first half of 2010.

The Department of Agriculture took administrative and technical responsibilities of the RDC Wengkher in the east, Bajo in the west central, and Bhur in the South. These are operating now as Research and Development Centres (RDC) looking into supporting the farming communities addresses their specific needs. Each centre continues to have both its national as well as regional research mandates. These research centres, provide technical support to the research and extension needs of the region. There are 170 research personnel in these Centres. Most of these research centres maintain their own websites.

## **Central Programs**

There are five central programs under DOA namely Agriculture Machinery Centre (AMC), National Post Harvest Centre (NPHC), and National Seed Centre (NSC) based in Paro; and National Soil Services Centre (NSSC) and National Plant Protection Centre (NPPC) based in Thimphu. The National Mushroom Centre (NMC) based in Yusipang now reports directly to the Horticulture Division of DOA. Similarly, the Central Machinery Unit (CMU) based in Bumthang that leads farm road construction, reports directly to the Engineering Division of DOA. These Centres provide extension and research services in consultation with RDCs and dzongkhag extension system. There is currently over 265 agriculture staff in these Centres.

National Seed Centre (NSC) was instituted in the early half of 2010 and was made responsible to take charge of Program 04 of DOA. NSC operated as Druk Seed Corporation (DSC) for the last 13 years. NSC under DOA is determined to produce quality seeds for the local and external markets, and make quality seeds and seedlings available and affordable to our farming communities.

Budget Form No.III

ENGINEERING DIVISION, DoA, MoAF  
 BUDGET PROPOSAL FOR THE FINANCIAL YEAR 2011-2012  
 KR - II Funds

Sub Prog. Code	Activity Project Code	Fin. Item Code	Object of Code	TITLE	Nu. in million		
					Current	Appropriations Sought Capital	Lending Repayment
				<b>KR - II Financing</b>			
		45.01		Training - HRD		3.600	
		45.02		Training - Others		2.000	
<b>Total</b>						<b>5.600</b>	

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**Engineering Division  
Department of Agriculture  
Ministry of Agriculture & Forests**

**Capital Budget  
Write-Up 2011-2012  
KR – II Budget (Spillover)**

**45.01 Training – HRD = Nu. 3.600 million**

Training on Basic Irrigation and Water Management

Due to shortage of engineers in the Dzongkhags, the Extension Agents in the geogs are given the additional responsibility by the Ministry to supervise and monitor the construction activities like farm roads, RNR buildings and irrigation channels besides their own assignment. This is a huge responsibility for the EAs given their limited knowledge on civil engineering works. However, despite their limitation they are working hard in assisting the site engineers in providing sustainable and quality rural infrastructures.

Therefore, a sum of **Nu. 3.600 million** is proposed for the Ex-Country training on basic irrigation and water management for 20 nos. of EAs working in those geogs which have big irrigation projects to equip them on the basic irrigation and water management concepts.

**45.02 Training – Others = Nu. 2.000 million**

Institutional capacity Buildings

The National farm Road Policy is the guiding documents for farm road development in the country. Given that there is enormous public demand for roads in the 10<sup>th</sup> FYP and the government's commitment towards its fulfillment, the Department of Agriculture took the initiative and came out with new and revised documents in 2009 on ***Policy and Guidelines for Farm road Development 2009; Technical Guidelines for the construction of farm Roads, 2009; Technical Specification and Standard Drawings for the construction of Farm roads, 2009***. These documents are very important for all the stakeholders involved in the development of Farm road to plan, guide and institute the processes for selection of road projects and their future maintenance.

However, some of the key people working in the geogs are not fully aware of the policy and guidelines. It is therefore, very critical that we trained these people on the policy and guidelines especially on maintenance part.

Therefore, two days training is being proposed for the key people working in the geogs like Local leaders, GAOs, Site engineers, etc. in all the 20 Dzongkhags.

- Training on Farm Road Development = Nu. 2.00 million (Nu. 0.100 million for each Dzongkhag)

Therefore a sum of **Nu. 2.000 million** is proposed for the fiscal year 2011-2012.

ENGINEERING DIVISION, DoA, MoAF  
 BUDGET PROPOSAL FOR THE FINANCIAL YEAR 2011-2012  
 KR - II Funds

Sub Prog. Code	Activity Project Code	Fin. Item Code	Object of Code	TITLE	Current	Nu. in million		
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		45.02		Training - Others		2.000		
<b>Total</b>						<b>5.600</b>		

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**Engineering Division  
Department of Agriculture  
Ministry of Agriculture & Forests**

**Capital Budget  
Write-Up 2011-2012  
KR – II Budget (Spillover)**

**45.01 Training – HRD = Nu. 3.600 million**

Training on Basic Irrigation and Water Management

Due to shortage of engineers in the Dzongkhags, the Extension Agents in the geogs are given the additional responsibility by the Ministry to supervise and monitor the construction activities like farm roads, RNR buildings and irrigation channels besides their own assignment. This is a huge responsibility for the EAs given their limited knowledge on civil engineering works. However, despite their limitation they are working hard in assisting the site engineers in providing sustainable and quality rural infrastructures.

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ENGINEERING DIVISION, DoA, MoAF  
BUDGET PROPOSAL FOR THE FINANCIAL YEAR 2011-2012  
GoI, SDP Funds

Sub Prog. Code	Activity Project Code	Fin. Item Code	Object of Code	TITLE	Nu. in million		
					Current	Capital	Lending Repayment
				<b>Gol - SDP Financing</b>			
				<b>A. Farm Road</b>			
55.01				Professional Services - (Construction Supervision)		23.000	
51.02				Exp. on Structures - Roads (Incl. culverts, drains)			
				Kurjey (zero point) - Sjabjithang farm road (Bumthang)		25.601	
				Changbi farm road (Bumthang)		7.111	
				Highway - Balayang farm road (Dagana)		7.111	
				Drujeygang- Khebisa farm road (Dagana)		17.067	
				Chungkha - Totowom farm road (Chukha)		19.912	
				Nebochey farm road (Punakha)		6.400	
				Lhagagang - Lhamjo farm road (Punakha)		3.556	
				Kado farm road (Samtse)		2.845	
				Getchu - Sangkhey farm road (Sarpang)		4.267	
				Hariyo Muga farm road (Sarpang)		4.267	
				Chachey - Serjithang farm road (Pataley) (Tsirang)		28.445	
				Mendrelgang - Barshong farm road (Tsirang)		17.067	
				Kakaling Bemji farm road (Trongsa)		14.223	
				Rekheyzampa - Goenkha C. School farm road (Wangduephodrang)		5.262	
				Ridhawom farm road (Wangduephodrang)		5.689	
				Girina - Sangkari/Pajaykha farm road (Haa)		8.534	
				Longpa - Nobgang farm road (Haa)		6.116	
				Kajayna - Nagtsho farm road (Haa)		4.267	
				Wamtakpa - Krasiphel farm road (Zhemgang)		4.836	
				Tsanglajong farm road (Zhemgang)		12.800	
				Haa - Dobjodzong (Tashigang Village) farm road (Paro)		4.267	

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<b>B. Irrigation</b>				
1.01	<b>Pay &amp; Allowances/Personnel Emoluments</b>		8,000	
55.01	<b>Professional Services</b>			6,000
51.04	<b>Exp. on Structures - Irrigation Channels</b>			
	Construction of Gangalum-Gerygang irrigation scheme, Shengana Geog, Punakha			5,000
	Construction of Aum Tsokem-Wolathang irrigation scheme, Teowong Geog, Punakha			8,000
	Construction of Sipsu-Biru irrigation scheme, Sipsu Geog, Samtse			7,000
	Construction of Lower Gatia irrigation scheme, Chargarey Geog, Samtse			4,000
	Construction of Paanch Khola irrigation scheme, Umling Geog, Sarpang			10,000
	Construction of Maogoon irrigation scheme, Dovan Geog, Sarpang			10,000
	Renovation of Gyensa irrigation scheme, Teop Geog, Punakha			2,750
	Renovation of Gorgan irrigation scheme, Menbee Geog, Lhuentse			4,000
	Renovation of Khamdar/Serchu irrigation scheme, Menbee Geog, Lhuentse			4,000
	Renovation of Buyang irrigation scheme, Khamdang Geog, Tlyangtse			7,000
51.08	<b>Exp. On Structure - Others</b>			
	Construction of water harvesting reservoirs in Wangdue, Samtse, Sarpang, S/Jongkhar, Punakha dzongkhags			6,000
	<b>Total</b>		<b>8,000</b>	<b>306,393</b>

Engineering Division  
Department of Agriculture  
Ministry of Agriculture & Forests

Current Budget  
Write-Up 2010-2011  
GoI - SDP Funds

**1.01 Personnel Emoluments/Pay & Allowances = Nu. 8.000 million.**

The Department of Agriculture is in the process of recruiting 10 nos. of irrigation engineers under contract to look after the irrigation projects under Accelerating Bhutan's Socio-economic Development/ SDP (GoI) project. Therefore, a total of **Nu. 8.000 million** is required to cover the payment for the personnel emoluments/pay & allowances for the 2011-12 fiscal year.

**Engineering Division  
Department of Agriculture  
Ministry of Agriculture & Forests**

**Capital Budget  
Write-Up 2010-2011  
GoI - SDP Funds**

The Department of Agriculture has a budget provision from the GOI, Small Development Projects under Accelerating Bhutan's Socio-economic Development for the Farm Road Rehabilitation Program and Construction and Renovation of Irrigation channels.

There are 21 roads under this project adding up to about 148 km under 12 Dzongkhags of Zhemgang, Trongsa, Bumthang, Tsirang, Dagana, Wangdue, Punakha, Sarpang, Haa, Paro, Chukha and Samtse. These are either existing Power Tiller Tracks (few) or Farm Roads (mostly) which require to be upgraded and improved. The main objective of the Farm Road Rehabilitation Program is to improve the quality of those existing roads going to larger settlement and agriculture production areas. It is to upgrade those roads which were built to earlier standards of smaller width and lesser infrastructure. The main activities would consist of improving steep gradients; widening of zigs, hairpin bends, and road width; improving roadside and natural drainages; constructing retaining and breast walls; providing base course, and small bridges and culverts.

Under the same project there are provision for construction of six new irrigation channels and rehabilitation of four existing irrigation channels across the country.

The 21 roads under this project are detailed below:

1. Kurjiej(zero point) - Sjabjithang farm road (Bumthang)
2. Changbi farm road (Bumthang)
3. Highway - Balaygang farm road (Dagana)
4. Drujeygang- Khebisa farm road (Dagana)
5. Chungkha - Totowom farm road (Chukha)
6. Nebchey farm road (Punakha)
7. Lhagagang - Lhamjo farm road (Punakha)
8. Kado farm road (Samtse)
9. Getchu - Sangkhey farm road (Sarpang)
10. Hariyo Muga farm road (Sarpang)
11. Chachey - Sergithang farm road (Pataley) (Tsirang)
12. Mendrelgang - Barshong farm road (Tsirang)
13. Kakaling Bemji farm road (Trongsa)
14. Rekheyzampa - Goenkha C. School farm road (Wangduephodrang)
15. Ridhawom farm road (Wangduephodrang)
16. Girina - Sangkari/Pajaykha farm road (Haa)
17. Longpa - Nobgang farm road (Haa)
18. Kajayna - Nagtsho farm road (Haa)
19. Wamtakpa - Krasiphel farm road (Zhemgang)
20. Tsanglajong farm road (Zhemgang)
21. Haa - Dobjodzong (Tashigang Village) farm road (Paro)

The Department intends to apply part of the proceeds/budget for the 2011-12 fiscal year for the following works:

## **1. FARM ROADS**

### **55.01 Professional Services – Nu. 23.000 million**

A sum of **Nu. 23.000 million** has been worked out and proposed for the procurement of consultancy services for the construction supervision of improvement of abovementioned 21 farm roads under this project for 2011-12 fiscal year.

### **51.02 Exp. On Structure – Roads (Including culverts, drains) - Nu. 209.640 million**

The total sum of **Nu. 209.640 million** is calculated and proposed for the improvement works of abovementioned 21 farm roads under this project for 2011-12 fiscal year.

## **2. IRRIGATION CHANNELS**

### **55.01 Professional Services – Nu. 6.000 million**

A sum of **Nu. 6.000 million** is calculated and proposed for the procurement of consultancy services for survey, design and supervision of irrigation channels under this project for the 2011-12 fiscal year.

### **51.04 Exp. On Structure – Irrigation Channels – Nu. 61.750 million**

#### **New Construction**

- i. A sum of **Nu. 5.000 million** is calculated and proposed for the construction of Gangalum-Gerygang irrigation scheme under Shengana Geog in Punakha Dzongkhag for 2011-12 fiscal year.
- ii. A sum of **Nu. 8.000 million** is calculated and proposed for the construction of Aum Tsokem-Wolathang irrigation scheme under Teowong Geog in Punakha Dzongkhag
- iii. A sum of **Nu. 7.000 million** is calculated and proposed for the construction of Sipsu-Biru irrigation scheme under Sipsu Geog in Samtse Dzongkhag.
- iv. A sum of **Nu. 4.000 million** is calculated and proposed for the Construction of Lower Gatia irrigation scheme under Chargarey Geog in Samtse Dzongkhag.
- v. A sum of **Nu. 10.000 million** is calculated and proposed for the construction of Paanch Khola irrigation scheme under Umling Geog in Sarpang Dzongkhag.

- vi. A sum of **Nu. 10.000 million** is calculated and proposed for the construction of Maogon irrigation scheme under Dovan Geog in Sarpang Dzongkhag.

#### Renovation

- i. A sum of **Nu. 2.750 million** is calculated and proposed for the renovation of Gyensa irrigation scheme under Teop Geog in Punakha Dzongkhag.
- ii. A sum of **Nu. 4.000 million** is calculated and proposed for the renovation of Gorgan irrigation scheme under Menbee Geog in Lhuentse Dzongkhag.
- iii. A sum of **Nu. 4.000 million** is calculated and proposed for the renovation of Khamdar/Serchu irrigation scheme under Menbee Geog in Lhuentse Dzongkhag.
- iv. A sum of **Nu. 7.000 million** is calculated and proposed for the renovation of Buyang irrigation scheme under Khamdang Geog in T/yangtse Dzongkhag.

#### **51.08 Exp. On Structure – Others – Nu. 6.000 million**

A sum of **Nu. 6.000 million** is calculated and proposed for construction of water harvesting reservoirs in Wangdue, Samtse, Sarpang, S/Jongkhar, Punakha dzongkhags.

ENGINEERING DIVISION, DoA, MoAF  
 BUDGET PROPOSAL FOR THE FINANCIAL YEAR 2010-2011

Sub Prog. Code	Activity Project Code	Fin. Item Code	Object of Code	TITLE	Nu. in million			
					Current	Appropriations Capital	Lending	Repayment
				<b>RGoB Financing</b>				
		1.01		Pay & Allowances	4.637			
		11.01		Travel - In-Country	1.863			
		12.01		Utilities: Telephone, Telex, Fax, E-mail, Internet	0.036			
		12.02		Utilities: Telegram, Wireless Transmission & Postage	0.050			
		12.03		Utilities: Electricity, Water & Sewerage Charges	0.056			
		14.01		S & M - Office Supplies, Printing, Publications	0.224			
		14.06		S & M - Uniforms, Extension kits, Linens	0.201			
		14.07		S & M - Text Books, Library books	0.240			
		15.01		Maintenance of Properties - Buildings	0.100			
		15.05		Maintenance of Properties - Equipment	0.160			
		15.07		Maintenance of Properties - Computers	0.032			
		17.01		Op. Exp. - Advertising	0.120			
		17.08		Op. Exp. - Others	0.489			
		24.03		Contributions - Provident Fund	0.410			
		45.02		Training - Others		0.200		
<b>Total</b>					<b>8.618</b>	<b>0.200</b>		

*afe*



Form IA: Schedule of Pay, GPF and Leave Encashment  
 Name of Agency: Engg. Division, DoA, MoAF

Sl No	Name & Designation	Position Level	Basic Pay										X VI+VII+IX Total annual Pay increment & LE (incl uding allowances)
			I B/ Pay Monthly	II=(Ix12) Basic Pay Annual	III Monthly increment	IV=(IIIx6) Annual Increment	VI Total Personnel annual Allow.	V Monthly Allow.	VI Annual Allowances B/ Pay annual, Annual Incre	VII II+IV Annual Incre	VIII VII*11% Annual Provident Fund	IX Leave Encashment	
I Regular													
1	Chief Engineer	P1A	25610.00	307320.00	510.00	3060.00	3794.00	45528.00	310380.00	34141.80	25610.00	381518.00	
2	Tenzin, Ex. Engineer	P2A	25320.00	303840.00	450.00	2700.00	3351.00	40212.00	306540.00	33719.40	25320.00	372072.00	
3	Karma Tsethar, Ex. Engineer	P2A	24870.00	298440.00	450.00	2700.00	3351.00	40212.00	301140.00	33125.40	24870.00	366222.00	
4	Tshering, Ex. Engineer	P2A	22620.00	271440.00	450.00	2700.00	3351.00	40212.00	274140.00	30155.40	22620.00	336972.00	
5	D.S.Tamang, Dy. Ex. Engineer	P3A	25805.00	309660.00	395.00	2370.00	2938.00	35256.00	312030.00	34323.30	25805.00	373091.00	
6	Gyembo Tenzin, Dy. Ex. Eng	P3A	21410.00	256920.00	395.00	2370.00	2938.00	35256.00	259290.00	28521.90	21410.00	315956.00	
7	Keizang Tenzin, Engineer	P4A	19080.00	228960.00	355.00	2130.00	2616.00	31392.00	231090.00	25419.90	19080.00	281562.00	
8	Nima Dorji, Engineer	P4A	18725.00	224700.00	355.00	2130.00	2616.00	31392.00	226830.00	24951.30	18725.00	276947.00	
9	Ugyen Dkpa, Engineer	P5A	18812.00	225744.00	290.00	1740.00	2142.00	25704.00	227484.00	25023.24	18812.00	272000.00	
10	Nedrup Tshewang, AE-II	S1A	15690.00	188280.00	265.00	1590.00	1971.00	23652.00	189870.00	20885.70	15690.00	229212.00	
11	Kinga Yeshi, AE-II	S1A	14895.00	178740.00	265.00	1590.00	1971.00	23652.00	180330.00	19836.30	10655.00	214637.00	
12	Karma Gyalshen, AE-II	S1A	14630.00	175560.00	265.00	1590.00	1971.00	23652.00	177150.00	19486.50	14630.00	215432.00	
13	Dorji Tshering, JE	S2A	13495.00	161940.00	240.00	1440.00	1786.00	21432.00	163380.00	17971.80	13495.00	198307.00	
14	Kuenzang Chhoden, JE	S2A	13495.00	161940.00	240.00	1440.00	1786.00	21432.00	163380.00	17971.80	13495.00	198307.00	
15	Kali Maya Moktan, D/Person	S3A	13435.00	161220.00	220.00	1320.00	1632.00	19584.00	162540.00	17879.40	13435.00	195559.00	
16	Basundara Giri, O/ Secretary	S5A	11565.00	138780.00	180.00	1080.00	1340.00	16080.00	139860.00	15384.60	11565.00	167505.00	
17	Phurba Wangdi, Driver	O3A	8195.00	98340.00	145.00	870.00	1085.00	13020.00	99210.00	10913.10	8195.00	120425.00	
18	Tshering Wangdi, Peon	GSC-I	8415.00	100980.00	130.00	780.00	958.00	11496.00	101760.00	0.00	8415.00	121671.00	
<b>Sub-Total - 1</b>				<b>3792804.00</b>		<b>33600.00</b>		<b>499164.00</b>	<b>3826404.00</b>	<b>409710.84</b>	<b>311827.00</b>	<b>4637395.00</b>	
2 Regular Expatriates													
3 On Contract													
4 On Deputation													
<b>Grand Total = 1+2+3+4</b>				<b>3792804.00</b>		<b>33600.00</b>	<b>0.00</b>	<b>499164.00</b>	<b>3826404.00</b>	<b>409710.84</b>	<b>311827.00</b>	<b>4637395.00</b>	

Note 1: Provident Fund excludes for GSC, Contract and ESP employees

Form 1: Summary of Pay and Allowances  
 Name of Agency: Engineering Division, DoA, MoAF  
 Summary of Pay and Allowances, FY - 2011-2012

Category of Personnel	I No. of Staff	II Total Annual pay, Increment & LE	III Total Annual Allowances	IV=II+III Annual Pay and Allowances	V Total Annual Provident Fund	VI=IV+V Total Annual Pay Allowances and Provident Fund
A Personnel Emoluments						
1 Regular	18	4138231.00	499164.00	4637395.00	409710.84	5047105.84
2 Regular Expatriates	-	-	-	-	-	-
3 On Contracts	-	-	-	-	-	-
4 On Deputation	-	-	-	-	-	-
Sub- Total A						
B Other Personnel Emoluments						
1 Volunteers	-	-	-	-	-	-
2 Lumpsum/ESP	-	-	-	-	-	-
Sub-Total B	-	-	-	-	-	-
Grand Total A+B						5047105.84

Thus, a budget of Nu. 4.637 million is proposed as per pay and allowances for the fiscal year 2011-12

Form IV: Travel - Incountry  
 Name of Agency: Engineering Division, DoA, MoAF

1a Total DA

Grade	Rate (Nu)	No. of Employees	No. of Days	Total (Nu) in a year
4 - 8	500.00	9.00	100.00	450000.00
9 - 14	300.00	7.00	100.00	210000.00
15 and below	150.00	2.00	100.00	30000.00
<b>Total</b>				<b>690000.00</b>

1b Travelling Allowances (Mileages)

Grade	Rate(Nu)	No. of Kilometres	No. of Employees	Total (Nu) in a year
1 - 8	14.00	750.00	9.00	94500.00
9 - 12	4.00	750.00	7.00	21000.00
<b>Total</b>				<b>115500.00</b>

1c Travelling Allowances (Porter & Pony)

Grade	Porter Rate (Nu)	Riding pony, Rate(Nu)	No. of Employees	No. of days	Total (Nu) in a year
4 - 8	2.00	150.00	9.00	50.00	54000.00
9 - 14	1.00	150.00	7.00	50.00	21000.00
15 and below	1.00	150.00	2.00	50.00	6000.00
<b>Total</b>					<b>81000.00</b>

1d Leave Travel Concession

Sl.No	Name & Designation	Basic Pay	LTC per annum
1	Chief Engineer	25610.00	15000.00
2	Tenzin, Ex. Engineer	25320.00	15000.00
3	Karma Tsethar, Ex. Engineer	24870.00	15000.00
4	Tshering, Ex. Engineer	22620.00	15000.00
5	D.S.Tamang, Dy. Ex. Engineer	25805.00	15000.00
6	Gyembo Tenzin, Dy. Ex. Eng	21410.00	15000.00
7	Keizang Tenzin, Engineer	19080.00	15000.00
8	Nima Dorji, Engineer	18725.00	15000.00
9	Ugyen Dukpa, Engineer	18812.00	15000.00
10	Nedrup Tshewang, AE-II	15690.00	15000.00
11	Kinga Yeshe, AE-II	14895.00	14895.00
12	Karma Gyaltsen, AE-II	14630.00	14630.00
13	Dorji Tshering, JE	13495.00	13495.00
14	Kuenzang Chhoden, JE	13495.00	13495.00
15	Kali Maya Moktan, D/Person	13435.00	13435.00
16	Basundara Giri, O/ Secretary	11565.00	11565.00
17	Phurba Wangdi, Driver	8195.00	8195.00
17	Tshering Wangdi, Peon	8415.00	8415.00
<b>1abcd</b>	<b>Travel Budget</b>		<b>248125.00</b>

Sl. No.	Total DA	Total Mileage	Total Porter/Pony	LTC	Total TA/DA
1	0.690	0.115	0.810	0.248	1.863

A sum of **Nu. 1.863 million** is proposed to meet the TA/DA and Leave Travel Concession for the employees of Engg. Division.

Form VI: Utilities - Telephones, Telex, Fax, Internet  
 Name of Agency: Engineering Division, DoA, MoAF

Sl.No. Telephone/Fax allotted to	I Rate(Nu)	II No. of lines	III No. of months	IV Lyonpo's Residenti Total in a year	V=(I+II+III)
1 Direct lines, 329122	1000.00	1.00	12.00	-	12000.00
2 Direct lines 336927	1000.00	1.00	12.00	-	12000.00
3 Direct lines 335356	1000.00	1.00	12.00	-	12000.00
				<b>Total</b>	<b>36000.00</b>

A sum of **Nu. 0.036million** is proposed to meet the charges imposed on telephones, Fax, Telex, Internet etc.

Form VII: Utilities - Electricity, Water, Sewerages  
 Name of Agency: Engineering Division, DoA, MoAF

Sl.No	I Actual expendt. of the past year	II No. of employees in the past year	III=I/II Average expdt. of the past year	IV No. of employees	V Lyonpo's residential charges	VI=IIxIV+V Total in a year
1	50000.00	16.00	3125.00	18.00	-	56250.00
					<b>Total</b>	<b>56250.00</b>

A sum of **Nu. 0.056million** is proposed to meet the charges on power consumed.

Form XI: S & M - Office Supplies, Printing & Public  
 Name of Agency: Engineering Division, DoA, MoAF

Sl.No.	I	II	III = I X II
	Rate (Nu)	No. of Employees Grade 1 to 15	Total in a year
1	5000.00	18.00	90000.00
		<b>Total - A</b>	<b>90000.00</b>

- 1 HP LaserJet Print Cartridges 11A - Q6511A - 2 Nos. @ Nu.5000/= Nu. 10000.00
  - 2 HP LaserJet Print Cartridges 96A - C4096A - 4 Nos. @ Nu.4500/= Nu. 18000.00
  - 3 HP LaserJet Print Cartridges 53A - Q7553A - 6 Nos. @ Nu.4500/= Nu.27000.00
  - 4 Toner Konica 7115/7113 - 2 Nos.@Nu.6000/= Nu.12000.00
  - 5 Panasonic fax.machine Ex-FP 343 rolled paper - 5 nos.@Nu.6000/-Nu.30000.00
  - 6 Measurement book printing - 20 Nos.@Nu.150/= Nu.3000.00
  - 7 Measuring tape - 30metres - 10Nos.@Nu.350/- Nu.3500.00
  - 8 NIP Modules - 100copies@Nu.100/- Nu.10000.00
  - 9 Stock Register - 10Nos.@Nu.250/- Nu.2500.00
  - 10 Scientific Calculators - 15Nos.@1200/- Nu.18000.00
- Total - B**  
**Nu.134000.00**

**Grand Total A+B = Nu.224000.00**

A sum of **Nu. 0.224million** is proposed to meet the expenses for the office supplies.

Form XVI: S & M - Uniforms, Extension Kits, Linens  
 Name of Agency: Engineering Division, DoA, MoAF

SI No	Name of Items	I Quantity	II Rate (Nu)	III No. of Staff	IV=IxII Total in a year
1	Ruck sack	18.00	2000.00	18.00	36000.00
2	Sleeping mats	18.00	1500.00	18.00	27000.00
3	Mountain Boots	18.00	2000.00	18.00	36000.00
4	Rain Gear	18.00	1500.00	18.00	27000.00
5	2 to 3 men tents	5.00	15000.00	Pooling	75000.00
<b>Total</b>					<b>201000.00</b>

A sum of **Nu. 0.201million** is proposed to meet the expenses for procurement of Extension kits.



Form XIX: Maintenance of Property - Buildings  
 Name of Agency: Engineering Division, DoA, MoAF

SI.No.	I Estimated cost (Nu)	II No. of Buildings	III=IxII Total in a Year
1	50000.00	2.00	100000.00
<b>Total</b>			<b>100000.00</b>

A sum of **Nu.0.100million** is proposed for the maintenance of the office buildings

No. of buildings = 2 Nos.

**a) Block 1**

Area occupied by this building = 141.68 Sq.m

Type of maintenance

- a) Changing of windows shutters along with glass panes.
- b) Internal wall distempering and changing of Ceilling and painting.
- c) 80% changing of wooden flooring along with flooring joist.

**a) Block 2**

Area occupied by this building = 65.32 Sq.m

Type of maintenance

- a) Changing of windows shutters along with glass panes.
- b) Internal wall distempering and changing of Ceilling and painting.
- c) 90% changing of wooden flooring along with flooring joist.

Form XXV: Maintenance of Property - Computers  
 Name of Agency: Engineering Division, DoA, MoAF

SI.No.	I Rate (Nu)	II No. of Computers	III=IxII Total in a Year
1	2000.00	16.00	32000.00
<b>Total</b>			<b>32000.00</b>

A sum of **Nu. 0.032 million** is proposed for the maintenance of Computers

Form XXIX: Op. Exp. - Incountry Workshops & Seminar  
 Name of Agency: Engineering Division, DoA, MoAF

Sl.No	Name of participants	I DA Rate/day	II Working lunch & Refreshment Rate/day	III No. of days per occasion	IV No. of occasions in a year	(I+II)xIIIxIV Total
1	Irrigation and Farm Road Workshops in consultation with regional and international partners like the IWMI, FAO, Jain irrigation and the local partners (engineers and agriculture staff) both from the Dzongkhags and HQ.Engineers; 10 Dzongkhag and 5 HQ engineers	15x500=Nu.7500.00	15x500=Nu.7500.00	6	2	180000.00
2	Journey travel by participants- lumpsum 4 days	15x500x4days=Nu.30000.00			2	60000.00
3	Mileage for the participants	Lumpsum	14x300kmx45participants			189000.00
4	Resource person free	Nu.5000x6x2=Nu.60000.00				60000.00
<b>Total =</b>						<b>489000.00</b>

Therefore, a sum of **Nu:0.489 million** is proposed to meet the expenses for the Workshops and Seminar for the year 2011-2012

**Engineering Division  
Department of Agriculture  
Ministry of Agriculture & Forest**

**Recurrent Budget  
Write-Up 2011-2012**

**1.01 Personnel Emoluments/Pay & Allowances = Nu. 4.637 m.**

The Engineering Division has 18 regular staff. Therefore, a total of **Nu. 4.637 million** is required to cover the payment for their annual basic salary, and one-month annual Leave Encashment and allowances. The detailed budget **Form – IA and Form - I** worksheet is enclosed.

**11.01 Travel (in country) = Nu.1.863 million**

The Engineering Division has three sections viz. Irrigation, Building Construction and Farm Road with 17 technical staff working under these sections. These staff often has to travel across the country to monitor construction activities like farm roads, power tiller tracks, RNR civil construction works for central agencies and irrigation channels in the field. They also have to travel frequently to various parts of the country to survey the farm roads and irrigation channels. Therefore, **Nu. 1.863 million** has been work out for the travel budget including LTC for the 2011-12 fiscal year, as per the **Form - IV** attached.

**12.01 Utilities: Telephones, Telex, fax, Internet = Nu.0.110 m.**

To cover rental and call charges for the direct telephones lines Nos.329122, 336927 and Tele-fax. No.335471 and other 10 Nos. intercom phones, **Nu. 0.036 million** is proposed under this head as per the **Form – VI** for the 2011-12 fiscal year.

**12.02 Utilities: Telegram, Wireless Transmission & Postage = Nu.0.050 m.**

A sum of **Nu. 0.050 million** is proposed under this head to cover the postages and bank charges for the 2011-12 fiscal year.

**12.03 Utilities: Electricity, Water & Sewerages = Nu.0.056 m**

A sum of **Nu. 0.050million** is proposed under this head for the fiscal year 2011-2012 as per **Form – VII attached**

**14.01 S & M – Office Supplies, Printing = Nu.0.224 m**

A sum of **Nu. 0.224 million** is proposed under this head to meet the expenses for procurement of office supplies as calculated in **Form – XI** attached for the fiscal year 2011-2012 for the Engineering Division

**14.06 S & M – Uniforms, Extension Kits = Nu. 0.201 m**

The Engineering Division is responsible for providing engineering services to all central agencies under Ministry of Agriculture in their infrastructure development projects. The engineering staff has to often travel to remote and rugged places for monitoring and survey of farm roads, power tiller tracks, area survey, irrigation channels alignment survey, land conversion studies etc. For these activities the staff requires 2-3 men tents, sleeping bags, sleeping mats, rucksacks, rain coats and mountain boots. This is calculated as per **Form – XVI attached** and **Nu. 0.201 million** is proposed under this head.

**14.07 S & M – Text Books, Library Books, Stationeries & Sports items = Nu. 0.240 million**

To cover the expenses for the procurement of engineering reference books on Survey & Design for farm roads, irrigation channels, estimation books, engineering hand books and journals, IS Codes for steel and timber structures, topographical maps for 20 Dzongkhags, measurement books, etc. a sum of **Nu. 0.240 million** is proposed for the fiscal year 2011-2012.

**15.01 Maintenance of Property – Buildings = Nu. 0.100 million**

The existing two office buildings are above 40 years old and require regular maintenance. Wall plastering in many of the rooms are peeling off and sub-surface water under building has weakened the floors. There is a need to change AC/Ply wood ceilings and broken glasses, wooden flooring as well as wooden joist in flooring, wooden panel shutters and to repair roof leakages. Therefore, a sum of **Nu. 0.100 million** is proposed for the fiscal year 2011-2012 as per attached **Form – XIX**.

**15.05 Maintenance of Property - Equipments= Nu. 0.160 million**

The following office equipments are use by the Engineering Division since 8<sup>th</sup> and 9<sup>th</sup> Plan period. Most of these equipments are out of order and needs annual maintenance.

1	Leveling Instrument (Dumpy level)	-	08 Set. (2 sets needs to be repaired)
2	Survey Instrument (Total Station)	-	01 Set (Required urgent repair)
3	Photocopier	-	02 Nos. (Annual maintenance)
4	Fax (335471)	-	01 No. (Annual maintenance)
5	Digital camera	-	01 No. ((Annual maintenance)
6	Over Head Projector	-	01 No. (Annual maintenance)

In order to repair survey instrument like **Total Station**, the agents are not available in the Country. As such, these equipments have to be sent outside for repair.

a) Dumpy Level	- 2 Nos. @Nu.10000/-	Nu. 20, 000.00
b) Total Station instrument	- 1 No. @Nu.80000/-	Nu. 80, 000.00
c) Photocopier	- 2 Nos. @Nu.10000/-	Nu. 20, 000.00
d) Fax machine	- 1No. @Nu.5000/-	Nu. 5, 000.00
e) Digital Camera	- 3 Nos. @Nu.5000/-	Nu. 15, 000.00
f) Over Head projector	- 1 No. @Nu.20000/-	Nu. 20, 000.00
	<b>Total</b>	<b><u>Nu.160,000.00</u></b>

These instruments needs urgent repair as they are often used by the Engineering staff in carrying out the activities. Therefore, a sum of **Nu. 0.160 million** is proposed for the fiscal year 2011-2012.

**15.07 Maintenance of Property - Computers= Nu. 0.032 million**

The Engineering Division has 16 sets of Computers. These computers often breakdown and needs regular maintenance. Therefore, a sum of **Nu. 0.032 million** is proposed under this head to cover the maintenance cost for the fiscal year 2011-2012.

**17.01 Op. Exp. – Advertising = Nu. 0.120 million**

To cover the expenses for circulars, notification and announcement of works in newspaper, radio and TV, a sum of **Nu. 0.120 million** is proposed under this head.

**17.08 Op. Exp. - Others (Workshop & Seminar) = Nu.0.489 million.**

To cover expenses for the in-country meetings and workshops on Irrigation and Farm Road in consultation with regional and international partners like the IWMI, FAO, Jain irrigation and the local partners (engineers and agriculture staff) both from the Dzongkhags and HQ, a sum of **Nu. 0.489 million** is proposed for the fiscal year 2011-2012 as per **Form XXIX attached**.

**24.03 Contribution – Provident Fund = Nu. 0.410 million**

To cover the provident fund for the engineering staff under the Division a sum of **Nu. 0.410 million** is workout for the fiscal year 2011-2012.

**Engineering Division  
Department of Agriculture  
Ministry of Agriculture & Forests**

**Capital Budget  
Write-Up 2011-2012**

**45.02 Training – Others = Nu. 0.200million**

The training for Water User Association members in the Dzongkhags related to irrigation schemes has become very important for the Department considering that most of the WUAs has become inactive and non-functioning. Therefore, a sum of **Nu. 0.200 million** is proposed under this head for training the WUAs members across the Country to revive its members and make it more active and functioning.

The members will be made to understand on the importance and functions of associations. They will be trained on the post construction stage of the irrigations schemes, routine maintenance and annual maintenance parts, etc.

## 2. Summary of the Projects

SI #	Project title	Funding Agency	Implementing Agency	Total Budget (Amount in million)	Spill over/new to 10th plan (Nu. Million)	Status	Start date	End date
<b>Department of Agriculture</b>								
1	Decentralized Rural Development Project (DRDP)	World Bank	Dzgs/Geogs	US\$ 7.000	164.134	On-going	Jan-2005	Dec-2010
2	MSP (Medium Sized Project for SLMP)	GEF/UNDP	NSSC/DoA	USD 0.515	17.481	On-going	2007	Jun-2010
3	Agriculture Sector Support Project	EU	DoA	Euro 4.434	216.733	On-going	Jul-2007	2011
4	IMPBA (Improving mandarin prod. in Bhutan & Australia through the implementation of on-farm best mgt. Practices)	ACIAR (Australia)	Horti Division	Aus \$ 0.766	4.913	On-going	Apr-2007	Jun-2011
5	Sustainable Land Management Project	GEF/WB	NSSC/DoA	US\$ 7.660	283.411	On-going	Mar-2006	2012
6	IMECRARB (Improvement of machinery & Equipment for construction of Rural Agri Road in the Kingdom of Bhutan – II Phase)	Japanese Grant	CMU/DoA	Yen 521.900	260.950	On-going	Jul-2008	Jun-2013
7	Machinery Support to Farm Road Construction	JICA	CMU	Yen 597.000	298.500	Pipeline	Mar 2011	Mar 2014
8	SFM (Strengthening Farm Mechanization) (USD 2.5m is TA)	Japan-KR II	AMC/DoA	US\$ 2.500	In kind	On-going	Feb-2008	Feb-2011
9	NTPF Use Projects under SDS	SDS	NMC	Nu.15.859	5.286	On-going	Feb-2008	Jun-2010



SI #	Project title	Funding Agency	Implementing Agency	Total Budget (Amount in million)	Spill over/new to 10th plan (Nu. Million)	Status	Start date	End date
10	Mushroom Promotion and Marketing Phase I	SDS	NMC	Nu. 0.830	0.830	Completed	Feb-2008	Jun-2009
11	Mushroom Promotion and Marketing Phase II	SDS	NMC	Nu.1.500	1.500	Pipeline	Oct-2009	Jun-2010
12	Enhancing Adaptive Capacity to Climate Change (Agriculture component)	Danida	DoA	Nu. 5.100	5.100	On-going	July 2009	June 2010
13	Food Security through Improved Home Garden	UNDP	Horti Division	USD 0.242	10.880	On-going	Jan-2010	Jun-2011
14	Food Security through Improved Home Gardens	UNDP	DoA/Horti	USD 0.220	9.900	Completed	Jan-2009	Jun-2010
15	Citrus Nursery Structure to support rehabilitation	UNDP	Horti Division	Clubbed with Home Garden		On-going	Jan-2010	Jun-2011
16	Input Supply to vulnerable population under Initiative for Soaring Food Prices (ISFP)	FAO	DoA	USD 0.500	22.500	Completed	Jul-2008	Dec-2009
17	Supply of Farm Machineryes KR II (Utilization Plan IV)	Japan	AMC/DoA	Nu.73.106	73.106	60.196 ongoing, 12.91 pipeline	Jul-2008	Jun-2013
18	Construction of Farm Roads – KR II Utilization Plan IV	Japan	DoA	Nu. 57.200	57.200	On-going	Jul-2008	Jun-2012
19	Horticulture support through KR II Utilization Plan IV	Japan	DoA	Nu. 47.6 00	47.6	On-going	Jun 2008	July 2013

SI #	Project title	Funding Agency	Implementing Agency	Total Budget (Amount in million)	Spill over/new to 10th plan (Nu. Million)	Status	Start date	End date
20	SAARC Pulse Breeding Project	GoI	RC Bajo	Nu.0.116	0.116	On-going	2008	2011
21	ARESPLM (Agri. Res. & Ext. support project for Lhuenise & Mongar)	Japan	CoRRB / RC Wengkhar	In kind		Completed	2004	2009
22	Horticulture Research & Development	Japan	RC Wengkhar	In kind		On-going	Jan-2010	Dec-2012
23	Shifting Cultivation	ICIMOD/IDRC	RC Wengkhar	USD 0.050	2.250	On-going	Jun-2009	May-2012
24	*Community Seed Bank/Food Security	UNDP	RC Wengkhar	USD0.020	0.900	On-going	Jul-2009	Jun-2011
25	Improving livelihood through knowledge & partnership & value chain of bee products & services in the Himalayas	ICIMOD	RC Jakar	USD 0.012	0.540	On-going	Jun-2009	May-2012
26	Organic production and Utilization of Medicinal, Aromatic and Natural Dye Plants (MADP) phase II	FAO	Horti Division, DoA	USD 0.046	2.074	Ongoing	Jan, 2010	Dec, 2010
	<b>Total for Agriculture</b>				<b>1485.904</b>			

<b>Department of Livestock</b>									
SI #	Project title	Funding Agency	Implementing Agency	Total Budget (Amount in million)	Spill over/new to 10th plan (Nu. Million)	Status	Start date	End date	
27	Support to Livestock Sector in Bhutan (SLSB)	EU	DoL	Euro 4.600	22.948	Ongoing	2006	2013	
28	Strengthening of Livestock Development Initiatives in Bhutan (SLDI)	GoI	DoL	Nu. 624.852	399.794	Ongoing	Mar-2008	Jun-13	
29	Regional Rangeland Project III (LoA:1 &2)	ICIMOD	DoL/WMD	USD 0.0393	1.770	LoA 1 Completed LoA 2 ongoing	Jul-2007	Dec-2009	
30	Establishment of a national strategy for promotion and preservation of specific quality products: the case of yak products	FAO/FM PP	DoL	USD 0.060	2.700	Ongoing	Jul-2009	March 2010	
31	Risk Based Strategies for the control of emerging strains of Foot and Mouth Disease (FMD) virus in Bhutan.	FAO/TC P	DoL	USD 0.354	15.939	Pipeline	Oct 2009	Dec 2010	
32	National Influenza Preparedness & Response Project (in collaboration with MoH)	World Bank	DoL	USD 0.871	39.216	On-going	Jul-2008	Nov-2010	
	<b>Total for Livestock</b>				<b>482.367</b>				

<b>Department of Forest &amp; Park Services</b>									
SI #	Project title	Funding Agency	Implementing Agency	Total Budget (Amount in million)	Spill over/new to 10th plan (Nu. Million)	Status	Start date	End date	
33	PFMP-II ( <i>Participatory forest mgt. Project</i> )	Helvetas/ SDC	SFD	CHF 3.230	111.76	On-going	Jul-2007	Jun-2012	
34	*Strengthening Monitoring Assessment & Reporting on Sustainable Forest	FAO	FRDD	USD 0.011	0.360	On-going	2008	2010	
35	*Sustainable Forest Mgt. Forest Policy Development	FAO/FM PP	FRDD	USD 0.040	1.800	On-going	Jun-2009	Jul-2010	
36	*Sustainable Forest Management Forest Policy Development	FAO/FM PP	DoF	USD 0.040	1.800	On-going	Nov 2007	Aug 2009	
37	Plantation along Wangchuk Basin	DGPC/D HI	SFD	Nu. 22.750	22.750	Ongoing	Jul-2008	Jun-2013	
38	Conservation & Protection of local Tsenden	BT FEC	SFD	Nu. 12.250	12.250	Ongoing	Jul-2009	Jun-2012	
39	Enhancing Adaptive Capacity to Climate Change (Forestry component)	Danida	WMD	Nu. 1.700	1.700	Pipeline	Jan-2010	Jun- 2010	
40	Reducing Forest Fire through Volunteerism	UNDP/G EF/SGP	FPU D	USD 0.041	1.869	On-going	Aug-2009	Jun-2011	
41	Enabling Bio-diversity Conservations in Toorsa Strict Nature Reserve	WWF	NCD	Nu. 2.980	2.980	On-going	Jan-2009	Jan-2011	
42	Enabling Bio-diversity Conservation in Phibsoo Wildlife	WWF	NCD	Nu. 17.448	17.448	On-going	Jan-2009	Mar-2011	

SI #	Sanctuary	Project title	Funding Agency	Implementing Agency	Total Budget (Amount in million)	Spill over/new to 10th plan (Nu. Million)	Status	Start date	End date
43	Bhutan Biological Corridor Framework for the Kingdom of Bhutan	WWF	NCD	Nu.4.056	4.056	Ongoing	May-2009	Aug-2010	
44	Operationalization of Toorsa Biological Corridor	ICIMOD	NCD	Nu.1.054	1.054	On-going	Jul-2009	Dec-2010	
45	Development of Sustainable Energy for Rangelands (DESER II)	ICIMOD	WMD	Euro 0.711 (.022 for Bhutan)	1.496	On-going	2009	2011	
46	Anti-poaching Program in Bhutan Phase III	WWF	NCD	Nu. 1.925	1.925	Completed	Jul-2008	Dec-2009	
47	Anti-poaching Program in Bhutan Phase IV	WWF	FPUJ	Nu. 1.608	1.608	On-going	Mar 2010	June 2011	
48	Conservation of Asiatic Elephant in Bhutan	WWF	NCD	Nu. 1.753	1.753	On-going	Jul-2009	Jun-2010	
49	Systemization & Analysis of contributions of the National Parks & Biological Reserves to the Economical & Social Development	SDS	NCD	USD 0.272	12.227	On-going	Nov-2008	Jun-2010	
50	Implementation of Human Wildlife Conflict Management Strategy	UNDP	NCD	USD 0.153	6.885	On-going	Jan-2009	Jun-2010	
51	*Sound and Light Fencing	BT FEC	NCD	Nu.0.300	0.300	Completed	Jul-2009	Dec-2009	

SI #	Project title	Funding Agency	RD/DoF	Total Budget (Amount in million)	Spill over/new plan to 10th plan (Nu. Million)	Status	Start date	End date
52	Development of Botanical Park at Dochula Zone	Netherlands		Nu.4.000	3.700	Completed	May-2008	Jun-2009
53	Wangchuck Centennial Park (WCP)	BT FEC	WCP	Nu.13.500	13.500	Ongoing	Jul-2009	Jun-2012
54	Support to UWICE	DANIDA MacArthur	UWICE UWICE	Nu. 30.000 USD 1.500	23.617 63.756	On-going On-going	Jan-2006 Oct-2004	Dec-2010 Dec-2013
55	*Eco-tourism & ICDP component with UWICE	BT FEC Paul Getty	UWICE UWICE	USD 0.300 USD 8.100	8.024 363.000	On-going On-going	2006 2007	2013 Indefinite
56	Developing a National Eco-tourism Framework	WWF	UWICE/T NP	USD 10.000	30.572	On-going	Jul-2007	Dec-2009
57	MPHP (Medicinal plants & herbal products in the Eastern Himalayas)	WWF/C E	UWICE/T NP	USD 0.115	5.175	On-going		
58	GG-CCB (Going for gold-Cordyceps conservation in Bhutan)	CFC/FA O and ICIMOD CABI Bioscience, UK under Darwin	RC Yusipang RC Yusipang	USD 0.467 Nu.6.167	21.019 1.379	On-going completed	Apr-2008 2006	2012 Jun-09
59	Tree-Ring Research and Capacity Building	CU, USA	RC Yusipang & RC Jakar	USD0. 045	1.561	On-going	2007	2012

60	Forest Research & Development Partnership (FORED)	Austria	RC.Jakar	Euro 0.446	30.367	On-going	Jan-2009	Dec-2011
SI #	Project title	Funding Agency	Implementing Agency	Total Budget (Amount in million)	Spill over/new to 10th plan (Nu. Million)	Status	Start date	End date
61	Enabling Bio-diversity Conservation in Royal Manas National Park	WWF	RMNP	Nu. 10.000	10.000	On-going	Jan-2010	Jun-2010
62	Sustainable Community Based Tourism Development in Tshachhu Phu & Chubu Tshachu	BTFEC	NCD	USD 0.100	4.500	Ongoing	2010	2012
	<b>Total for Forest</b>				<b>786.191</b>			

<b>Council for RNR Research of Bhutan (CoRRB)</b>									
SI #	Project title	Funding Agency	Implementing Agency	Total Budget (Amount in million)	Spill over/new to 10th plan (Nu. Million)	Status	Start date	End date	
63	School Agriculture Program	WFP/FAO	SAP	Nu. 0.900	0.900	Completed	Jun-2009	Dec-2009	
64	Focused village rural Development	KOICA	SAP	Nu. 7.110	7.110	On-going	Jun-2009	Jun-2010	
	<b>Total for CoRRB</b>				<b>8.010</b>				
	<b>Information &amp; Communication Service (ICS)</b>								
65	Development of local capacities on environmental friendly agricultural technologies	PSC/Net herlands	ICS	USD 0.270	12.150	On-going	Sept 2008	Aug 2010	
	<b>Total for ICS</b>				<b>12.150</b>				
	<b>BAFRA</b>								
66	Support to BAFRA from DoL GoI Project	GoI	BAFRA	Nu 40.750	24.300	Ongoing	Mar-2008	Jun-2013	
67	National Influenza Preparedness & Response Project	World Bank	BAFRA	USD 0.173	7.809	Ongoing	2007	2010	
68	Strengthening Bio-security in the Kingdom of Bhutan	FAO/FMPP	BAFRA	USD 0.097	4.370	Ongoing	Jun-2009	Mar 2010	
69	Bio-Safety Framework	GEF	BAFRA	USD 0.869	39.105	Pipeline	Feb-2010	Feb-2014	
	<b>Total for BAFRA</b>				<b>75.584</b>				

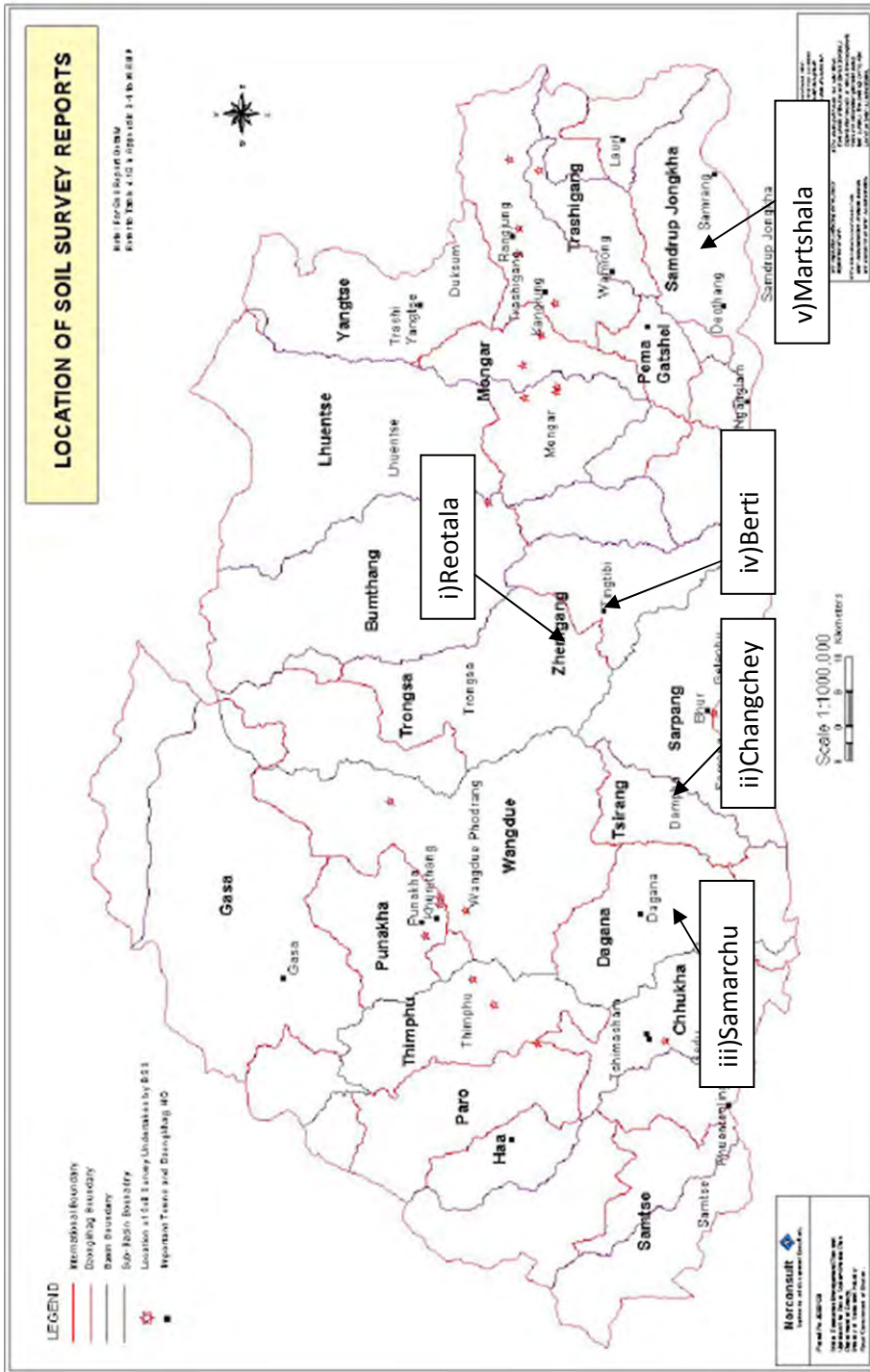


<b>National Biodiversity Center</b>									
SI #	Project title	Funding Agency	Implementing Agency	Total Budget (Amount in million)	Spill over/new to 10th plan (Nu. Million)	Status	Start date	End date	
70	ILCCP ( <i>Integrated Livestock &amp; Crop conservation project</i> )	GEF/UN DP	NBC	Nu. 42.000	33.000	Ongoing	2007	2011	
71	BUCAP ( <i>Bio-diversity use &amp; Conservation in Asia Pacific</i> )	Norway	NBC	Nu. 15.120	14.000	Ongoing	2006	Dec-09	
72	Bio-prospecting Phase I	BTFEC	NBC	Nu. 15.000	15.000	On-going	Jul-2009	Jun-2012	
73	Regional Collaboration for the Conservation and Sustainable use of PGR in Asia	FAO/TC P	NBC	USD 0.024	1.100	On-going	2009	2011	
74	National Biodiversity Information Management System Project	SDS	NBC	USD 0.096	3.600	Ongoing	Aug-2007	Jun-2010	
	<b>Total for NBC</b>				<b>66.700</b>				
	<b>Department of Agriculture Marketing and Cooperatives (DAMC)</b>								
75	Strengthening of Agriculture Marketing System in Bhutan	GoI	AMS	Nu. 65.500	65.500	On-going	Jul-2008	Jun-2012	
	<b>Total for DAMC</b>				<b>65.000</b>				
	<b>Rural Development Training Center (RDTC)</b>								
76	Support to RDTC	Helvetas	RDTC	CHF 0.476	20.966	On-going	Jul-2008	2011	
	<b>Total for RDTC</b>				<b>20.966</b>				

SI #	Project title	Funding Agency	Implementing Agency	Total Budget (Amount in million)	Spill over/new to 10th plan (Nu. Million)	Status	Start date	End date
	<b>Policy &amp; Planning Division (PPD)</b>							
77	Decentralized Natural Resource Management Component (DNRMC)	DANIDA	PPD	Nu. 132.000	71.100	Ongoing	2004	Jun-09
78	AFPRCSP ( <i>Agri. Food policy Res. &amp; Capacity Strengthening Project</i> )	SDC/IFP RI	PPD	Nu. 19.766	16.331	Ongoing	2006	2009
79	Strategy for Delineation of protected Agriculture Land for Food Security in Bhutan (PAL Project)	Finnish govt/IFAD	PPD	USD 0.150	7.200	Ongoing	Feb-2009	Dec-2010
80	Enhancing Rural Income & Livelihood through sustainable Agricultural Development and Micro-enterprise in Bhutan	UNDP/UNEP (PEI, PTF)	PPD	Nu. 5.000	5.000	On-going	2009	Jul-10
81	Strengthening RGOB capacities for Food Security and Nutrition	FAO/FMPP	PPD/DoF/DoA	USD 0.169	7.605	Ongoing	Jun-2009	Mar 2010
	<b>Total for PPD</b>				<b>107.236</b>			

<b>Area Development Projects (ADPs)</b>									
SI #	Project title	Funding Agency	Implementing Agency	Total Budget (Amount in million)	Spill over/new to 10th plan (Nu. Million)	Status	Start date	End date	
82	Agriculture Marketing and Enterprise Promotion Program (AMEPP)	IFAD/SNV	6 eastern Dz.	Nu. 662.231	295.668	Ongoing	Jul-2006	Jun-2011	
83	Rural Livelihood Project (RLP)	Helvetas/SDC	4 East central Dzongkha gs	Nu. 94.600	94.600	Ongoing	Jul-2008	Jun-2011	
84	Market Access and Growth Intensification Project (MAGIP)	IFAD	6 eastern Dzongkha gs	Nu. 273.000	273.000	Pipeline	2011	2015	
<b>Total for ADPs</b>					<b>663.268</b>				
<b>Total On-going</b>					<b>3091.213</b>				
<b>Total Pipeline</b>					<b>642.654</b>				
<b>Total Completed</b>					<b>39.509</b>				
<b>Grand Total</b>					<b>3773.376</b>				

Note: \* - does not have detail profile information in the ToC.



**Annexure V: Farm Road Bridges constructed through MoAF Budget**

Questionnaire on Technical Cooperation Project for Farm Roads Bridge Design and Construction  
Detailed Planning Survey Mission

Directions:

- Our questionnaire is made up of three parts, 1) Questions to Gross National Happiness Commission, 2) Questions to Ministry of Agriculture and Forests, and 3)  Questions to Ministry of Works and Human Settlement (Department of Roads)
- Please kindly provide your answers to the column provided on the right side. Please specify papers, documents and other information sources in the column of "Reference", which include replies to the questions
- Please answer as many questions as possible and return them back in both hard and soft copy to the Mission on February 28<sup>th</sup> or earlier. For the remaining part, we would like to confirm through discussions in Thimphu.

Part I: Questions to Gross National Happiness Commission			
No.	Questions	Reference	Answers
1-1	<p><b>RGOB's policy on farm road bridge</b></p> <p>We understand that design and implementation (tendering, construction supervision) of farm road bridges have been handled by DOR or Dzonkhags (DE under DOR). On the other hand, RGOB has requested for a technical cooperation for capacity development of MOAF staffs to Japan.</p> <ul style="list-style-type: none"> <li>- Under the RGOB's policy and/or strategy, which will be the responsible organization for the farm road bridge development?</li> <li>- If you have legal basis for the above, please specify it.</li> </ul>		
1-2	<p><b>Budget Allocation and Disbursement (if necessary, please check with MOF)</b></p> <ul style="list-style-type: none"> <li>- Under present situation, which ministry request for budgeting for the farm road bridges, MOAF or MOWHR?</li> <li>- If MOAF gets the budget for the farm road bridges and request for technical support to DOR, how the necessary costs for DOR's services are provided? (from MOAF or directly from MOF)</li> </ul>		

\* Pedestrian bridges → Suspension Bridge Section, RISD, DDES, MOWTS

Part3: Questions to Department of Road, Ministry of Works and Human Settlement		Reference	Answers
No.	Questions		
3-3	<p><u>Procurement</u> Please give general information on procurement</p> <p>In general, from where do you procure materials for road bridges (super structure of <del>suspension</del>/<del>suspended</del>/bailey bridges), cement, re-bars, etc.?</p> <p>Please specify required time for procurement of the above items.</p> <p>How long does it take to get price quotation of the above items?</p> <p>Please specify standard process of contract bidding of consultants for detailed design and construction supervision. (with necessary time for each process)</p> <p>Please specify standard process of contract bidding of construction works. (with necessary time for each process)</p> <p>If processes of bidding differ by size of contracts, please specify them</p> <p>Please provide information on the contractors and consultants (domestic, foreign) which have experiences of design and/or construction of farm road bridges contracted out by MOAF</p>	<p>② Bailey bridge parts superstructure from India. Cement &amp; re-bars from Bhutan.</p> <p>③ → Bailey bridge parts → 5 to 6 months excl. tendering 30 days min.</p> <p>④ → Min. 30 days for sale of bid docs &amp; min. 1 month for opening of bids, evaluation &amp; award of contract.</p> <p>⑤ RGOB Proc. Rules &amp; Regulations, PRR 2009, MOF same as ②</p> <p>⑥ CDB website: www.cdb.gov.bt for list of consultants &amp; different class of contractors.</p>	
3-4	<p><u>Experience on Farm Road Bridges</u></p> <p>(1) Please provide list of farm road bridges constructed under MOAF / DOR budgets or management. (name of bridge, location, type, length, financial source (RGOB/donor), completion year or current status, etc.)</p> <p>(2) How has DOR utilized and/or revised "the Guideline for Design of Light-Load Bridge" which was prepared by JICA's Development Study, "The Study on Agriculture and Farm Road Development in the Lhuntse And Mongar Districts in the Kingdom of Bhutan" (2003) ?</p>	<p>① Surveyed - 49+15 = 64 Designed - 33+3 = 36 BB parts ordered - 36; Received - ?? Constructed - ??</p> <p>② DOR, BD has not utilized and/or revised the "Guideline for Design of light-load bridge".</p>	

Ref.  
SBD Goods  
Std RFP for  
SBD Goods  
Proc. of  
Consulting Services  
SBD Works

Engg. Division  
DOA.

\* Before a bridge is constructed:

- ① Survey of the bridge site (topographical)
- ② Fixing the bridge span & configuration for BB.
- ③ Design of the sub-structures - abutments & wing walls
- ④ Working out the Bill of Quantities; ~~Cost estimate~~, Rate analysis & Cost estimate; Tech Specs
- ⑤ Preparation of the Bidding doc which includes docs in ④
- ⑥ Administrative approval & financial sanction
- ⑦ Invitation for Bids
- ⑧ Receipt of bids, opening, evaluation & award of contract
- ⑨ Tendering for Proc. of BB parts following PRR 2009 → SBD for Proc. of Goods.
- ⑩ Opening, evaluation of bids from BB parts suppliers

Part 3: Questions to Department of Road, Ministry of Works and Human Settlement

No.	Questions	Reference	Answers
3-5	<p><u>Experience on Farm Road Bridges</u></p> <p>(1) Please provide following information on guidelines of bridges which have been utilized by DOR</p> <ul style="list-style-type: none"> <li>- Title of the guidelines</li> <li>- Target type of bridges (super structure, sub structure)</li> <li>- Year of publication</li> <li>- Organization which published the guidelines</li> </ul>		<p>→ <u>Bailey bridges on farm roads. (super-str)</u></p>

- Specs for Road & Bridge Works published by SACCA, MONTHS

General Remarks

- ① Planning to Implementation cycle needs to be established & followed → 3yr cycle.
  - 1st year: Planning, Survey, design, cost estimate, Adm. Approval & FS.
  - 2nd year: @ Tendering & Proc. of materials - BB parts
  - ② Tendering for Works, Evaluation & Award of works → contractor starts the works
  - 3rd year: @ Completion of ~~sub~~ sub-structure works & launching of the super structure - BB

- Bailey bridge specs (Super-Str)
- Width of Carriage way - 3.277m (single lane)
- Loading class - IRC Class 24R
- Decking system - steel deck.
- Sub-structures
- RCC Abutments & wing walls
- Grade of Concrete: M25 / ~~M20~~
- Re-bars: HYSD Fe415 / Fe 500
- Cement: OPC 43 grade / slag Cement

Part2: Questions to Ministry of Agriculture and Forests			
No.	Questions	Reference	Answers
2-9	<p><b>Procurement</b></p> <p>Please give general information on procurement</p> <ul style="list-style-type: none"> <li>- From where do you procure materials for farm road bridges (super structure, cement, re-bars, etc.)?</li> <li>- If you procure a set of material from certain country, do you procure the assembly engineers at the same time?</li> <li>- If you do not procure a kind of assembly engineers, which organization construct/set up the bridges?</li> <li>- Please specify required time for procurement of the above items.</li> <li>- How long does it take to get price quotation of the above items?</li> <li>- Please specify standard process of contract bidding of consultants for detailed design and construction supervision. (with necessary time for each process)</li> <li>- Please specify standard process of contract bidding of construction works. (with necessary time for each process)</li> <li>- If processes of bidding differ by size of contracts, please specify them</li> <li>- Please provide information on the contractors and consultants (domestic, foreign) which have experiences of design and/or construction of farm road bridges contracted out by MOAF.</li> </ul>		
2-10	<p><b>Input by JICA</b></p> <p>Please specify inputs from JICA which you expect (beside experts)</p> <ol style="list-style-type: none"> <li>(1) Equipment and Material</li> <li>(2) Facilities</li> <li>(3) Others</li> </ol>		

5/8

Part2: Questions to Ministry of Agriculture and Forests			
No.	Questions	Reference	Answers
2-11	<p><b>Undertaking of RGOB</b></p> <ol style="list-style-type: none"> <li>(1) Is it possible to assign full-time counterpart personnel to each expert? (at least two engineers)</li> <li>(2) Please check the items which you can provide for the Project <ul style="list-style-type: none"> <li>- Office space in Thimphu (for experts and counterparts)</li> <li>- Office utilities (desks, telephone, furniture, electricity, water supply, others _____)</li> </ul> </li> </ol>		

Part3: Questions to Department of Road, Ministry of Works and Human Settlement			
No.	Questions	Reference	Answers
3-1	<p><b>Organization Chart</b></p> <p>Please provide the latest organization chart of DOR/MOWHS</p>		www.mowhs.gov.bt
3-2	<p><b>Organization for Farm Road Bridge (Current Situation)</b></p> <ol style="list-style-type: none"> <li>(1) Please specify the department / section which are responsible for the (farm) road bridges.</li> <li>(2) Please specify the current number of technical staffs who are in charge of farm road bridges.</li> <li>(3) Out of the above, how many staffs are working exclusively for the farm road bridges</li> </ol>		<p>→ Bridge Division, DoR</p> <p>→ 8 Nos</p> <p>→ 8 Nos</p>

6/8



Part3: Questions to Department of Road, Ministry of Works and Human Settlement			
No.	Questions	Reference	Answers
3-3	<p><b>Procurement</b></p> <p>Please give general information on procurement</p> <ul style="list-style-type: none"> <li>- In general, from where do you procure materials for road bridges (super structure of suspension/suspended/bailey bridges), cement, re-bars, etc.)?</li> <li>- Please specify required time for procurement of the above items.</li> <li>- How long does it take to get price quotation of the above items?</li> <li>- Please specify standard process of contract bidding of consultants for detailed design and construction supervision. (with necessary time for each process)</li> <li>- Please specify standard process of contract bidding of construction works. (with necessary time for each process)</li> <li>- If processes of bidding differ by size of contracts, please specify them</li> <li>- Please provide information on the contractors and consultants (domestic, foreign) which have experiences of design and/or construction of farm road bridges contracted out by MOAF.</li> </ul>		
3-4	<p><b>Experience on Farm Road Bridges</b></p> <p>(1) Please provide list of farm road bridges constructed under MOAF / DOR budgets or management. (name of bridge, location, type, length, financial source (RGOB/donor), completion year or current status, etc.)</p> <p>(2) How has DOR utilized and/or revised "the Guideline for Design of Light-Load Bridge" which was prepared by JICA's Development Study, "The Study on Agriculture and Farm Road Development in the Lhuntse And Mongar Districts in the Kingdom of Bhutan" (2003) ?</p>		

7/8

Part3: Questions to Department of Road, Ministry of Works and Human Settlement			
No.	Questions	Reference	Answers
3-5	<p><b>Experience on Farm Road Bridges</b></p> <p>(1) Please provide following information on guidelines of bridges which have been utilized by DOR</p> <ul style="list-style-type: none"> <li>- Title of the guidelines</li> <li>- Target type of bridges (super structure, sub structure)</li> <li>- Year of publication</li> <li>- Organization which published the guidelines</li> </ul>		

8/8

