# HILLEY GEWOG NINTH PLAN (2002-2007)



SARPANG DZONGKHAG ROYAL GOVERNMENT OF BHUTAN

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#### 1. CURRENT SITUATION

Hilley gewog is one of the biggest gewogs of the dzongkhag in terms of area and it comprises of 10 villages with 307 households. The forest coverage of the gewog is about 80% of the total geographical area (*LUPP Data*) of the gewog. The total arable area of the gewog is about 1881 acres and of which only about 8% of it are cultivated at present.

The gewog has about 292 acres of wetland, 987.6 acres of dry land and 586 acres of tsheri land.

Besides growing cereal crops like rice, maize, millet, etc., the farmers of the gewog grow orange as the main source of cash income. Orange occupies an area of about 204 acres, which is about 11% of the total arable land. The current annual cereal (Paddy, Maize, Barley, Millet and Buckwheat) production is about 1543.167 metric tones (RNR Census 2000).

In general, every household owns cattle, few Jersey and mostly local breeds to meet their need for dairy products and meat. Besides, farmers rear sheep and goat. Any surplus produce the people are able to make could be easily sold in Sarpang market to buy other necessities.

The gewog has following service centers and facilies: five RWS schemes, 6 sanitation facilities, One High School, One Primary School, One Auction Yard, 12.5 Km of irrigation channel and four suspension bridges.

Interconnectivity within the gewog is only through mule tracks. The gewog would need telecommunication and rural electrification facilities during the plan period.

# 2. SUMMARY OF GEWOG PLAN OUTLAY

#	Program/Activity	Outlay	Remarks
1.	Agriculture	1.191	
2.	Livestock	0.084	
3.	Education	0.700	
4.	Health	1.014	
5.	Roads	2.925	
6.	Gewog Administration	1.465	
	Total	7.379	_

# 3. GEWOG DEVELOPMENT PROGRAMMES

# **Agriculture Programmes**

Paddy Improvement Program

The agriculture in Hilley is rice based, but the production of rice through use of local varieties is only 653.008 metric tones with an average yield of 859 Kg/Acre that hardly meet the requirement of the farmers in general. Under this improvement program, new varieties like IR-64, BR-153, Bajo-Kaap and Bajo-Maap that are released by the RNRRCs would be tried and promoted to increase production level to 800 metric tones by the end of ninth plan.

To support the above improvement programs, extension intervention activities include two demonstrations, imparting of training on improved technologies to 40 households and one on-farm trial. Moreover, crop cuts and survey on seasonal production would be carried out to assess the production level involving all stakeholders.

#### Maize Improvement Programme

New varieties like Yangtsipa and Suwan would be promoted in the gewog as these varieties have not been promoted. The present level of production of local maize is only 158.741 metric tones with average yield of 221 Kg/Acre. Under this improvement program, the above new varieties that have been released by the RNRRCs would be tried and promoted to increase production level to 300 metric tones by the end of ninth plan.

To support the above improvement programs, extension intervention activities include two demonstrations, imparting of training on improved technologies to 60 households and one on-farm trial. Moreover, crop cuts and survey on seasonal production would be carried out to assess the production level involving all stakeholders.

# Wheat Improvement Programme

New varieties like Sonalika would be promoted in the gewog since it was not promoted earlier. The present level of production of wheat is only 1.875 metric tones with average yield of 80 Kg/Acre. Under this improvement program, the above new variety that have been released by the RNRRCs would be tried and promoted to increase production level to 10 metric tones by the end of ninth plan.

To support the above improvement programs, extension intervention activities include 1 demonstration, imparting of training on improved technologies to 20 households and one on-farm trial. Moreover, crop cuts and survey on seasonal production would be carried out to assess the production level involving all stakeholders.

#### Oil Seed Improvement Programme

Oil seed production in Hilley is very minimal where the farmers mostly buy from the market for their domestic consumption. Hence, there is a need to explore and promote oil crops cultivation to meet their requirement at household level. Therefore, under its improvement program, new varieties like M-27 that are released by the RNR-RCs would be tried and promoted in the ninth plan to increase production level.

To support the above improvement programs, extension intervention activities to be carried out include two demonstrations, imparting of training on improved technologies to 50 households and one on-farm trial. Moreover, crop cuts and survey on seasonal production would be carried out to assess the production level involving all stakeholders.

#### Millet Improvement Programme

Farmers preferably grow Finger millet (locally called as Kodo) as an important millet crop basically for preparation for local wines. The present level of production of local millet is only 73.043 metric tones with average yield of 198 Kg/Acre. With this production level, the farmers are just self-sufficient in millet. So, to bring about further improvement in production to about 100 metric tones, improved varieties released by the RNR-RCs would be tried and promoted.

To support the above improvement programs, extension intervention activities include two demonstrations, imparting of training on improved technologies to 20 households and one on-farm trial. Moreover, crop cuts and survey on seasonal production would be carried out to assess the production level involving all stakeholders.

# Horticulture Crops Promotion

Increasing the purchasing power of the farmers has become very important aspect of socio-economic development of the rural population. Horticulture development is one of the programmes that could help in increasing cash income of the farmers. However, the farmers of the gewog do not have adequate accessibility in terms of knowledge and skills on horticulture. Therefore, during ninth plan, horticulture crops like orange seedlings, cardamom, potato and ginger rhizome would be supplied to the potential farmers supplemented by training on new packages, establishment of demonstration plots and on-farm trial on ginger rhizome at field. Crop cuts and seasonal production survey would be continued to set a baseline for future planning and monitoring.

# Marketing Support

With respect to marketing support to the farmers, one number community based farmers' cooperative society would be formed. The main aim is to streamline the sale and disposal of marketable farm produces to the nearest market or to other agencies. The dzongkhag would monitor and keep necessary records on the sale of produces and it would also initiate the cooperative formation and impart necessary training to the members

#### Private Nursery Establishment

Hilley gewog has the potential to establish mandarin nursery, as the venture on these horticulture crops has now become a lucrative business for the farmers. Moreover, consumption of oranges is very high throughout the country. Establishment of such nurseries would not only help the farmers to sustain local supply to the farmers both within and outside the gewogs and dzongkhag but also generate cash income to the operators. Hence, establishment of one nursery at Noonpani village has been proposed. For this establishment, the dzongkhag would initially support the operators with supply of locally adaptable varieties and provide technical guidance through training on nursery management practices.

#### Mushroom Production

Paddy straw at lower altitude and Shitaki mushroom production at higher altitude like Rateypani and Muga has been identified as a new venture for the farmers. Farmers would be trained on new packages using the locally available materials like paddy straw and 10 Kg Paddy Mushroom spawn and 20 Kg Shitaki Spawn supplied by the dzongkhag to 30 households locally identified by the extension agent and Gup. Four outstanding mushroom growers would be sent on study tour to National Mushroom Center and RNRRCs for enhancing their knowledge and skills. Thus, this would enable the farmers to generate cash income and increase their nutritional intake level.

#### Apiculture Program

Apiculture has been identified as one of the sources for cash income generation for the farmers. Ten households would be identified and supplied with materials for the first time and imparted with training and sent on study tour to RNR-RCs. Apiculture on *Apis cerena indica* would be explored with proper management practices.

# Construction of Two Kilometers of Irrigation Channel

The aim of the program is to have assured irrigation facilities round the year basically for wet land cultivation to increase the productivity and production of rice with further expansion of wet land cultivation.

Hence, the public of the gewog proposed for the construction of a two kilometers irrigation channel at Kuwapani tapping the source from Gurungkhola in the ninth plan. This irrigation channel would benefit a total of 70 households having catchments area of 70 acres of wetland and 68.29 acres of dry land. Also, this irrigation channel would benefit the nearby villages like Thoemba (14 Hhs with 9.93 acres) for kitchen gardening and livestock purposes.

Further, through such assured irrigation facilities there is a scope to increase the production area and yield level from the present level of 185.541 metric tones with 1026 Kg/Acre yield to 1200 Kg/Acre yield. Thereafter, the beneficiary public through formation of Water User Association, following national irrigation policy, would look after the said irrigation channel.

For this, a sum of Nu.0.500 million is provisioned. Further, future maintenance and minor repair works called as put right activities, would be carried out by the community with a technical guidance from the dzongkhag.

#### Assistance to Small Farmers

The main aim of the program is to assist farmers in generating cash income. For the above activity, seeds like sunflower, banana suckers; asparagus and papaya seedlings would be supplied to the farmers of the villages identified by the extension agents.

#### Farm Mechanization

As per the demand from the farmers, farm machineries and other tools and implements would be supplied on cash payment as indicated in the budget estimate. Training and study tour to AMC on farm mechanization to 5 households would be given.

#### Training on Reduction of Post Harvest Losses

Lack of training on reduction of post harvest losses has become a major impediment in the gewog in general in addition to the loss already incurred during pre-harvest time. So, in order to reduce such unwarranted losses from pests and diseases' infestation and infection, the public expressed the need to have them imparted with training on new technologies and skills. Hence, farmers from 20 Households would be trained on better storage methods after carrying out trials and survey on post harvest loses.

#### Plant Protection Programme

Presently, the gewog do not have any commission agent and the farmers have difficulty in availing timely supply of chemicals from the dzongkhag. So, streamlining of timely deposit of money and supply of chemicals to the farmers has become an important element both for the gewog and dzongkahg. At gewog level, farmers' organization on plant protection would be formed. The objective is to have them organized and coordinate in procuring plant protection chemicals through the Dozngkahg Agriculture Officer. A jointly operated bank account would be opened where they will withdraw the money as and when required for the procurement. The extension agent in the gewog will monitor and keep strong vigilance on judicious utilization of the chemicals. Moreover, farmers training on Integrated Pest Management would be given to the farmers in order to reduce dependence on chemicals.

#### Soil Fertility Development

Under Soil Fertility Development Program, Dhiancha seeds as a green manure fertilizer would be promoted to by imparting proper training to the farmers. Moreover, training on organic farming would be given to them.

# Soil Conservation

In the soil erosion prone areas of the villages, 40000 numbers of vetiver grass slips would be supplied to the farmers initially, where the farmers shall multiply and grow in the soil erosion areas. This would also prevent the fertile soil especially in the sloppy areas being washed away by heavy rain during the monsoon season. Growing vetiver grasses in the sloppy areas can make help formation of contour bunds. For this, farmers training with on the spot demonstration would be given initially.

# **Livestock Programmes**

# Establishment of Piggery Backyard Units

Piggery farming in the gewog is not a new enterprise, yet the public expressed their need to have improved piglets as substitutes to their existing local breeds. Moreover, the gewog has a very low population of pigs numbering around 171 (RNR Census 2000) including both local and improved pigs. Hence, in order to further increase the population of pigs to enhance income generation and increase in nutritional uptake level, establishment of more piggery backyard units initially to about 13 households has been proposed by the public. Such initiation of backyard units would not only help the farmers to generate cash income and improve their nutritional intake level but also enjoy its advantage in terms of availing bio-manure for their agricultural farming purposes, which is ecofriendly. The modality for establishment of such backyard would be through extension intervention where the Livestock Sector on cash payment basis would supply the piglets.

Under this program, 20 households would be imparted with training on piggery husbandry and management and out of which, 3 outstanding farmers identified by extension agent would be sent on study to various Research centers, Center Farms and other dzongkhags.

#### Establishment of Dairy Backyard Units

The gewog has a local cattle population of 2508 and 60 improved breeds. Hence, in order to further increase the population of improved breeds to enhance income generation and increase in nutritional uptake level, establishment of more dairy backyard units on improved ones initially by about 20 households has been proposed by the public. Such initiation of backyard units would not only help the farmers to generate cash income and improve their nutritional intake level but also enjoy its advantage in terms of availing bio-manure for their agricultural farming purposes, which is ecofriendly. The modality for establishment of such backyard would be through extension intervention where the Livestock Sector on cash payment basis would supply the improved Jersey cows. Under this program, 30 households would be imparted with training on dairy husbandry and management and out of which, 4 outstanding farmers locally identified by extension agent would be sent on study to various Research centers, Center Farms and other dzongkhags.

#### Establishment of Poultry Backyard Units

In order to further increase the population of improved breeds of poultry to help enhance income generation and increase in nutritional uptake level, establishment of more poultry backyard units on improved breeds initially by about 17 households has been proposed by the public. Such initiation of backyard units would not only help the farmers to generate cash income and improve their nutritional intake level but also enjoy its advantage in terms of availing bio-manure for their agricultural farming purposes, which is eco-friendly. The modality for establishment of such backyard would be through extension intervention where the Livestock Sector on cash payment basis would supply the improved poultry birds.

Under this program, 17 households would be imparted with training on dairy husbandry and management and out of which, 3 outstanding farmers locally identified by extension agent would be sent on study to various Research centers, Center Farms and other dzongkhags.

# Cattle Breed Improvement Program

The gewog do not have either pure Jersey or Jersey-X bulls for cross breeding with their local cattle. In order to bring about increased improved cattle population, the farmers have proposed for supply of one pure Jersey bull. This would enable the farmers to have enough dairy products for their livelihood through progenies born of high production capacity. To encourage the farmers further, progeny born allowances to the owners would be awarded with a sum of Nu.50/progeny as an incentive. For this, a sum of Nu.0.014 million is provisioned in the ninth plan.

#### Feed and Fodder Development

Although the forest cover of Hilley gewog is over 80%, there is need to develop pasture for maintaining adequate supply of fodder for cattle round the year. The dzongkhag would supply 2857 numbers of fast growing fodder tree species to the farmers. Moreover, the farmers would be trained on urea treatment of paddy straw as a supplementary fodder during the winter months.

#### **Education Programmes**

Establishment of a Community School

Hilley has 307 households where the children of the gewog attend school at Sarpang Primary School and High School that is about two to three hours walk. Moreover, most of the villages are located at a remote place from Dzongkhag. Hence, to mitigate the problems faced by the growing population of school going children, one community school would be established basically to provide primary education within the gewog.

In order to achieve the above aim, a community school at Laring would be built, which would accommodate an estimated number of 361 students encompassing all the children from 10 villages within a radius of two to three hours walking distance. A resource center at Sarpangtar would be established to monitor and look after resources management. For this, a sum of Nu.0.700 million is provisioned for construction of 3 classrooms and head teacher's quarters and purchase of furniture.

#### **Health Programmes**

#### Construction of One ORC

In order to cater basic primary health care to the public of Rateypani village comprising of 103 households with a population of 778, one ORC construction is being proposed. Presently the basic health care to the villages is extended from Sarpangtar Hospital. For this, a sum of Nu.0.110 million is provisioned.

# Construction of Seven RWSSs

In order to cater clean drinking water supply to the public of the gewog, seven RWSSs constructions are proposed at Jogidangra, Gangatey, Muga, Bisty, Belkhola-A, Belkhola-B & Changay that would serve 100 households. The details are presented below:

#	Village	Length	Source	Beneficiary	Tap Posts	Remarks
		(Km)		(hhs)	(Nos)	
1	Jogidara	4	Danganakhola	15	3	
2	Gangatay	4	Muakholchi	22	10	
3	Bisty	4	Bistysir	18	8	
4	Muga	3	Juleykholchi	7	4	
5	Changay	2	Devikholchi	10	4	
6	Belkhola-A	3	Dobhikhola	5	2	
7	Belkhola-B	2.5	Dargaykholchi	5	2	
	Total	22.5		82	33	

Hence, a sum of Nu.0.660 million is provisioned for the purpose.

# Rehabilitation of Two RWSSs

The present RWS scheme constructed earlier need to be rehabilitated in order to have adequate and safe drinking water supply to the public of Kuwapani village. The details are as under:

#	Village	Length (Km)	Source	Beneficiary (Hhs)	Existing Posts(Nos)		Maintenance Required on	Remarks
1	Kuwapani	2	Kami- kholchi	25	10	10	Intake tank & Additional by Posts	Washed away flood and inadequate
	Total	2		25	10	10		

Hence, a sum of Nu.0.224 million is proposed for the rehabilitation works.

# Maintenance of 25 Km Mule Tracks

The aim of the program is to have safe and easily accessible mule track facilities for the far-flung and remote areas of the gewog which do not have access to farm-feeder road network. Hence, during the ninth plan period, the public of Hilley gewog has proposed for the maintenance of 15-Km mule track from Laring to Muga and 10 Km mule track from Laring to Getechu village, which is far flung from the commercial area.

A sum of Nu.0.075 million is provisioned for the above activity during ninth plan.

#### **Roads Programmes**

Construction of Three Suspension Bridges

Transportation and communication facilities are essential in the rural areas and the public of the gewog continue to depend on foot trails and mule tracks. Thus, in the ninth plan, the public of Hilley has placed high priority for the construction of suspension bridges. This would greatly help our farmers to have free movements within and outside the gewogs especially during the peak monsoon seasons without having to remain cut off from rest of the gewogs.

The implementation of the program would be done as per the following schedule:

- First Year: Survey, design, preparation of estimate and tender documents
- Second Year: Steel fabrication and procurement of other construction materials
- Third Year: Execution of the construction works by Dzongkhag and joint inspection

The gewog has proposed for the construction of three new suspension bridges during planned period based on the request made by the public. For this, a sum of Nu.2.850 million is provisioned for the construction of three bridges in the following locations of Hilley gewog.

Laringkhola (Appro. 50mtrs.)

The location of the bridge is about two kilometers from the National High way and will ease and shorten the walking distance for the public of Laring, Nonpani and Moga with a total population of 1,000 people.

Balukhop (Appro. 70 mtrs.)

This bridge is about 15-20 Kms from the road head. It will benefit the public of Sarpangshir, Gangaty and Kharpani. It even benefits the public of Sarpangtar as their orange orchads fall in that locality.

Bistykhola (span- 50mtrs.)

This is a valley where the river flows perennially and is located at Bisty village under Senghe gewog. It is approximately 25 Kms away from the National Highway. This river flows in the deep gorges where it swells in the monsoon season thereby making difficult for the public of Senghe to cross. Since it is the main mule track connecting to Bisty village, there is a need to construct a bridge to solve problems faced by the public, as the river is not fordable during the monsoon. In general, the bridge would benefit a total of 425 households in Hilley gewog.

# **Gewog Administration And Management**

Construction of Gup's Office

The need to strengthen gewog administration has become crucial programme in keeping with the process of decentralization. With the clear-cut bifurcation of the goeg and Dzongkhag programs in the ninth plan as a separate entity, gewog level administration system need to be strengthened further. The program activities that are to be implemented in the gewog have to be transparent and accountable to all the concerned. In doing so, it's mandatory that the Gup should maintain proper records and files and pass on to the successors. Proper filing and records keeping in a manner workable to local institutions at par with Dzongkhag system is a felt necessity, as most of the programs in the ninth plan are decentralized to the gewog institutions.

Hence, the public of Hilley gewog requested for construction of Gup's office in the ninth plan that would be carried out by themselves with technical support and guidance from the Dzongkhag.

In order to strengthen and supplement the gewog administration, the following stationery and office equipment are provisioned:

- Construction of Office (Nu. 0.300 million)
- Stationery (Nu. 0.050 million)
- Office furniture (Nu. 0.040 Million)
- Electricity (0.015 million)
- Equipment like Type Writers (Both English and Dzongkha) (Nu.0.040 million)
- Telephone Installation (0.150 million)
- Establishment Cost -For Gup, Mangmi and Dungyig's salary (Nu.0.870 million)

A sum total of Nu.1.465 million is provisioned for construction and establishment of Gup's office in Hilley gewog.

# 5. BUDGET ESTIMATES

#	Program/Activity	Unit	Target	Unit	Bud	get	Total	Remarks
				Cost		Cap		
				(Nu)		•		
1	Rice Improvement							
	Promotion	Kg	1660	18		0.030	0.030	
	Farmers Training	Hhs	40	150		0.006	0.006	
	On-farm trial	Nos	1	1000		0.001	0.001	
	Demonstration	Nos	2	5000		0.010	0.010	
	Crop cut	Nos	15					
	Survey on production	Nos	5					
	Sub Total				0.000	0.047	0.047	
2	Maize Improvement							
	Promotion	Kg	1000	14.5		0.015	0.015	
	Farmers Training	Hhs	60	150		0.009	0.009	
	On-farm trial	Nos	1	1000		0.001	0.001	
	Demonstration	Nos	2	5000		0.010	0.010	
	Crop cut	Nos	15					
	Survey on production	Nos	5					
	Sub Total				0.000	0.035	0.035	
3	Wheat Promotion							
	Promotion	Kg	2500	16		0.040	0.040	
	Farmers Training	Hhs	20	150		0.003	0.003	
	On-farm trial	Nos	1	1000		0.001	0.001	
	Demonstration	Nos	2	5000		0.010	0.010	
	Crop cut	Nos	15					
	Survey on production	Nos	5					
	Sub total	4			0.000	0.054	0.054	
4	Mustard Improvement							
	Promotion	Kg	700	37.5		0.026	0.026	
	Farmers Training	Hhs	50	150		0.008	0.008	
	On-farm trial	Nos	1	1000		0.001	0.001	
	Demonstration	Nos	2	5000		0.010	0.010	
	Crop cut	Nos	15					
	Survey on production	Nos	5		0.000	0.647	0.01-	
┝ <u></u>	Sub Total				0.000	0.045	0.045	
5	Millet Improvement			ا ـ ا		0.00	0.00	
	Promotion	Kg	400	14.5		0.006	0.006	
	Farmers Training	Hhs	20	150	l	0.003	0.003	
	On-farm trial	Nos	1	1000	l	0.001	0.001	
	Demonstration	Nos	2	5000		0.010	0.010	
	Crop cut	Nos	15					
Ш	Survey on production	Nos	5					

	Sub Total				0.000	0.020	0.020	
6	<b>Horticulture Promotion</b>							
	Supply of Mandarin Seedlings	Nos	1300	16		0.021	0.021	
	Supply of Ginger Rhizomes	Nos	500	25		0.013	0.013	
	Supply of Cardamom	Slips	8000	2		0.016	0.016	
	Supply of Potato	Kg	1300	10		0.013	0.013	
	Farmers Training	Hhs	60	150		0.009	0.009	
	On Farm Trial	Nos	2	1000		0.002	0.002	
	Demonstration	Nos	2	5000		0.010	0.010	
	Crop Cut	Nos	15					
	Survey on Production	Nos	5					
	Sub Total				0.000	0.083	0.083	
7	Marketing Support							
	Formation of Cooperative society	Nos	1	5000		0.005	0.005	
	Farmers Training	Hhs	40	150		0.006	0.006	
	Sub total				0.000	0.011	0.011	
8	Private Nursery							
	Mandarin	Nos	5	2000		0.010	0.010	
	Training	Nos	5	150		0.001	0.001	
	Sub total				0.000	0.011	0.011	
9	<b>Mushroom Production</b>							
	Supply of Shikati spawn	Kgs	20	100		0.002	0.002	
	Supply of paddy straw spawn		10	90		0.001	0.001	
	Supply of Billets for shitaki		3000	10		0.030	0.030	
	Farmers Training	Hhs	30	150		0.005	0.005	
	Study Tour	Hhs	4	5000		0.020	0.020	
	Sub Total				0.000	0.057	0.057	
10	Apiculture							
	Supply of materials	Nos	10	500		0.005	0.005	
	Training	Hhs	10	150		0.002	0.002	
	Study tour	Hhs	5	5000	0.000	0.025	0.025	
11	Sub total	77		200000	0.000	0.032	0.032	
11	Constr of irrigation channel	Km	2	300000	0.000	0.600	0.600	
12	Sub total Assistance to small farmers				0.000	0.600	0.600	
12	Supply of sunflower seeds	V.c.	200	20		0.004	0.004	
		Kgs					0.004	
	Supply of Asparagus	Slips	1500	4		0.006	0.006	
	Supply of banana Suckers	Nos	2000	11		0.022	0.022	
	Supply of Papaya Seedlings	Nos	1000	13	0.000	0.013	0.013	
12	Sub Total  Form Machanization				0.000	0.045	0.045	
13		Nos	2					
	Supply of rice Huller	Nos	2					
	Supply of corn Flake Machine	Nos	1					
	Supply of Paddy Thresher	Nos	10					

	Supply of gator machine	Nos	10					
Н	Supply of Knap Sack sprayer	Nos	10					
	Supply of Improved Plough	Nos	15					
	Supply of secateurs	Nos	50					
	Supply of tools and implements	Sets	50					
	Farmers Training	Hhs	5	150		0.001	0.001	
	Study tour	Hhs	5	5000		0.025	0.025	
	Sub Total				0.000	0.026	0.026	
14	Post Harvest							
	Farmers Training	Hhs	50	150		0.008	0.008	
	Trial on Storage Methods	Nos	1	1000		0.001	0.001	
	Survey on Storage Loses	Nos.	5	1000		0.005	0.005	
	Sub Total				0.000	0.014	0.014	
15								
	Farmers organization	Nos	1	5000		0.005	0.005	
	IPM Training	Hhs	25	150		0.004	0.004	
	Sub Total				0.000	0.009	0.009	
16	Soil Fertility							
	Promotion of Dhiancha	Kgs	1500	20		0.030	0.030	
	Organic farming Training	Hhs	30	150		0.005	0.005	
	Sub Total				0.000	0.035	0.035	
17	Soil conservation							
	Supply of Vetiver Grass	Slips	40000	1		0.040	0.040	
	Farmers Training	Hhs	200	150		0.030	0.030	
10	Sub Total				0.000	0.070	0.070	
18	Estb of more Piggery backyard							
	Backyard unit	Nos	13	150		0.002	0.000	
	Farmers Training	Hhs	20	150		0.003	0.003	
	Study Tour	Hhs	3	5000	0.000	0.015	0.015	
10	Sub Total				0.000	0.018	0.018	
19	Estb of more Dairy backyard	N.	20					
	Backyard unit	Nos	20	150		0.005	0.005	
	Farmers Training	Hhs	30	150		0.005	0.005	
$\vdash\vdash\vdash$	Study Tour Sub Total	Hhs	4	5000	0.000	0.020 <b>0.025</b>	0.020 <b>0.025</b>	
20	Estb of more Poultry backyard				0.000	0.025	0.025	
40	Backyard unit	Nos	17					
	Farmers Training	Hhs	17	150		0.003	0.003	
	Study Tour	Hhs	3	5000		0.003	0.003	
$\vdash\vdash$	Sub Total	11118		5000	0.000	0.013	0.013	
21					0.000	0.010	0.010	
41	Supply of Jersey Bull	Nos	1	12000		0.012	0.012	
	Progeny Born Allowances	Nu.	35	12000		0.012	0.012	
$\vdash\vdash$	Sub Total	INU.	33		0.000	0.012	0.012	
Ш	Sub I Utai	l			0.000	0.014	0.014	

22	Feed and Fodder development							
	Purchase of Urea	Kgs	100	5.5		0.001	0.001	
	Supply of FTS	Nos	2857	4		0.011	0.011	
	Sub Total				0.000	0.012	0.012	
23	<b>Establishment of Community</b>							
	School							
	Const of School & Quarter	Nos	1	500000		0.500	0.500	
	Purchase of Furniture	Sets	1	200000		0.200	0.200	
	Sub Total				0.000	0.700	0.700	
24	<b>Construction of ORC</b>	Nos	1	110000		0.110	0.110	
	Sub Total				0.000	0.110	0.110	
25	<b>Construction of RWSS</b>	Nos	5	132000		0.660	0.660	
	Sub Total				0.000	0.660	0.660	
26	Rehabilitation of RWSS	Nos	2	122000		0.244	0.244	
	Sub Total				0.000	0.244	0.244	
27	Maintenance of Mule track	Km	25	3000		0.075	0.075	
	Sub total				0.000	0.075	0.075	
28	<b>Constr of Suspension Bridge</b>	Nos	3	950000		2.850	2.850	
	Sub Total				0.000	2.850	2.850	
29	Constr & estb. of Gup Office							
	Construction of Office	Nos	1	300000		0.300	0.300	
	Purchase of Furniture	Sets	1	40000		0.040	0.040	
	Electricity	Nos	1	15000	0.015		0.015	
	Purchase of Stationery	Sets	1	50000	0.050		0.050	
	Office Equipment	Sets	1	40000	0.040		0.040	
	Telephone	Nos	1	150000	0.150		0.150	
	Establishment cost	Nos	3	290000	0.870		0.870	
	Sub Total				1.125	0.340	1.465	
	Grand Total				1.125	6.254	7.379	

# 6. PLAN IMPLEMENTATION, MONITORING AND EVALUATION

The GYT Chathrim 2002 delineates specific roles and responsibilities to all functionaries involved in development administration and management in the Gewog. It is, however, deemed necessary to underscore some essential processes that must be observed in executing the above roles and responsibilities.

The financial powers and authority of the Gewog Administration for the implementation of the planned activities are also enshrined in the GYT Chathrim 2002.

# Plan Implementation

The Gup, GYT *Tshopas* and the community as a whole will take on full accountability and ownership of gewog development activities. The clear delineation of implementation time frames, responsibilities and contributions from the community should be developed for the effective implementation of gewog activities.

# Annual and Quarterly Plans

Based on the Five-Year Plan, the Gup will prepare Annual Plans and Budgets (AP&B) in consultation with the gewog sectoral staff and submit it to GYT. After the GYT discusses and approves the Draft AP&B, it will be put up for approval to the DYT.

Once the DYT approves the AP&B, the GYT will develop a Quarterly Work Plan and Budget in consultation with the sectoral staffs and other functionaries in the gewog such as Mangmi, Chimi and Tshogpas. The implementation of the Quarterly Work Plan will be the responsibility of the Gup and the Tshogpas with technical support from the staff of the concerned sectors.

Based on the Quarterly Work Plan, the concerned sectoral staff responsible for the implementation of any planned activity will elaborate a detailed implementation plan and budget for approval and budget release by the Gup. Copy of this plan will be sent for information to the concerned sectoral heads and relevant agencies. Upon completion of the activity, the responsible person will submit a report to the Gup and the concerned sectoral heads and relevant agencies.

# Monitoring And Evaluation

# Monitoring

The GYT in the Gewog will be responsible for progress and performance monitoring of the planned activities. The GYT should convene monthly meetings with technical staff and other responsible persons for implementation to review the progress in the implementation of every activity and to take timely corrective actions when required. The Gewog will seek technical back-up services from the Dzongkhag Administration when necessary.

Based on the received reports and monthly meetings the Gup will submit a quarterly report to the Dzongkhag administration. Technical reports from the different sectors will be attached to the Gup's quarterly report.

The Gup will verify the travel claims of all sectoral personnel in the gewog so that the performance of the Gewog staff can be monitored.

#### Evaluation

To assess the impact and benefit of development programs and projects in the Gewogs, the Government will launch periodic evaluation missions in coordination with the Dzongkhag Administration.