#### FORESTRY CREDIT IN NEPAL

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# 1. General Background

Nepal occupies a total area of 147,181 sq.km. with three broad ecological regions, i.e., the Mountains (15 percent), the Hills (68 percent) and the low flat land of Terai (17 percent). The country has a total population of 19 million with an annual growth rate of 2.08 percent. Of the total population, 91 percent lives in rural areas. The country's annual per capita income of US \$180 is one of the lowest in the world, and the growth in real terms has barely matched the population growth rate. Over 49 percent of the population is living below the poverty line.

Agriculture is the mainstay of the economy contributing around 55 per cent of the GDP while non-agricultural sector, comprising mainly the services sector including tourism and manufacturing sector, contributes the rest of the GDP. Agriculture sector alone absorbs 81 percent of the total labor force. The agriculture system is primitive and mainly rainfed. The national average cultivable landholding is just over 0.40 hectare while over 50 percent of the households have less than 0.18 hectare of cultivable land. The man-land ratio with respect to cultivable land (7 persons per hectare) is one of the highest in the world.

So far agricultural production has failed to keep pace with the population growth due to low productivity and average yields have gone down due, among others, to extension of cultivation practices into marginal land resulting in the wide depletion of the forest cover both in the Hills and the Terai. The food-deficit in the Hills and Mountains has also led to large out-migration to the Terai plain and deforestation has taken place at a rate that exceeds natural supply. Afforestation programs, on the other hand, are too little to maintain a balance between demand and supply.

Livestock is an indispensable part of the Nepalese agricultural system providing fuel, fertilizer, and draft power but animal productivity is extremely low compared to other developing countries while livestock population, as a proportion of total arable land, is one of the highest in the world. Livestock raising is maintained mainly by exploiting the common forest resources, leading to a situation of fodder crisis and forest degradation on a wide scale.

There is thus a heavy pressure on forest for fuelwood, timber, and other forest products. Forest areas have gone down by 2.1 percent annually between 1964/65 and 1978/79 leading to a total loss of 3.8 million hectares in a period of 14 years. A further 2.2 million hectares of forest land is estimated to have degraded between 1979 and 1985. Only 37.8 percent of the total land area is

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<sup>1</sup> The Eighth Plan Document, National Planning Commission, HMG/Nepal, Mid-July 1992.

Economic Policies for Sustainable Development in Nepal, Chapter 8, Forestry and Sustainable Development, ICIMOD, May 1990.

estimated to be under forest cover now. As a result, a complex balance between crop, animal husbandry, and forestry is on the verge of breaking down. The extinction of a large wildlife population, large scale soil erosion, landslides, and siltation in the plains leading to devastating floods in rainy season are the basic on-site and off-site externalities of depleted forest cover and cultivation practices encroaching the forest areas.

Table 1. Prospective Supply and Demand without the Master Plan

DIE NEW LEWING		1985-86	1990-91	2000-01	2010-11
Fuelwood	Supply	9.2	9.7	12.1	15.5
(million tonnes)	Demand	11.3	12.6	15.2	16.9
	Balance	-2.1	-2.9	-3.1	-1.4
Timber	Supply	0.9	1.0	1.4	2.2
(million cubic	Demand	1.1	1.5	2.5	3.3
meters)	Balance	-0.2	-0.5	-1.1	-1.1
Fodder	Supply	6.6	6.7	7.4	8.3
(million tonnes)	Demand	6.1	6.4	7.2	8.5
	Balance	+0.5	+0.3	+0.2	-0.2
Forest areas which will b	e				
degraded to meet defici	t				
('000 hectares counting					
from 1985)		25.9	158.8	741.3	1464.6

Source: Master Plan for the Forestry Sector Nepal, Dec.1988.

The above table indicates that a huge area of the forest land, i.e., 741.3 thousand hectares in 2000-01 and 1464.6 thousand hectares in 2010-11, will be degraded if immediate measures are not undertaken to restore the balance between the demand for and supply of forest products.

Afforestation program on a wide scale does, therefore, seem to be the only viable solution to meet this gap to forestall energy crisis and also to meet the incremental demand for fodder, timber, and other forest products for the growing population.

Against this background, the first part of this paper deals with the forestry policies and strategies of the government as well as current provisions of bank credit for forestry sector, while in the second part, attempts have been made to outline a broad strategy to integrate credit package in the forestry sector programs.

# 2. Review of the Forestry Policies and Strategies

The government has evolved new forestry policies and strategies to meet the growing needs for various forest products including fuelwood, fodder, and timber to restore the ecological balance

through various afforestation programs and watershed management as well as to make economic use of the forest resources.

## 2.1 Forestry Sector Master Plan

A long-term master plan for the forestry sector has been prepared in 1988 which outlines various programs in forestry sector over the next 25 years. The Master Plan has identified primary and supportive development programs to implement the forestry sector policy. Primary development programs include (a) development and management of forest resources through community and private forestry programs, (b) development and management of national forest, complementing community and private forestry, (c) improvement in the supply of medicinal and aromatic plants, (d) prevention of land degradation through soil conservation and watershed management, and (e) conservation of the eco-system and genetic resources. The supportive development programs include (a) developing appropriate policy and legal framework to facilitate people's participation in forestry activities, (b) undertaking institutional reform for effective program implementation, (c) developing efficient human resources for implementing forestry development programs, (d) forestry research and extension, and (e) institutionalizing monitoring and evaluation system to undertake program implementation in an effective manner.

The Master Plan envisages an increase in fuelwood production from 7.3 million tonnes in 1985/86, 10.8 million tonnes in 2000-01 and 16.3 million tonnes in 2010-11. Similarly, timber production will increase from 0.88 million M3 in 1985/86 to 1.64 million M3 in 2000-01 and to 3.48 million M3 in 2010-11. Fodder production from forest land and tree farm will increase from 14.6 million tonnes of fresh matter in 1985-86 to 18.2 million tonnes in 2000-01 and to 24.3 million tonnes in 2010-11.

The cost of all the programs combined is about \$1.7 billion at the 1988 constant prices. The investment plan calls for the government, private sector, and external assistance to share the cost almost equally which could be observed from the following table.

Table 2. Financial requirements of the Forestry Sector during 1989-2010

		89-90	90-95	95-00	00-05	05-10	Total	%
Total Cost in U.S.\$		41.5	285.5	383.6	459.5	571.9	1742.0	100.0
program:	Community and private forestry	13.0	102.8	160.5	227.4	307.5	811.2	46.6
	National and leasehold forestry	4.5	38.2	69.5	103.4	136.8	352.4	20.2
	Wood-based industries development	4.7	27.0	18.0	16.9	16.2	82.8	4.8
	Med.and arom, plants and minor forest products development	1.4	19.7	35.7	11.3	12.0	80.1	4.6
	Conservation of ecosystems and genetic resources	5.4	28.5	28.1	27.5	26.9	116.4	6.7
	Soil conservation and watershed management	6.8	36.4	36.8	38.5	38.1	156.6	9.0

		89-90	90-95	95-00	00-05	05-10	Total	%
	Policy, legal, and inst. reform	0.2	0.7	0.7	0.6	0.6	2.8	0.2
	Human resources development	2.3	16.4	21.2	20.8	22.0	82.7	4.7
	Forestry research and extension	2.1	9.6	8.0	9.0	7.9	36.6	2.1
	Resource information and planning	0.9	4.4	3.3	3.2	3.1	14.9	0.9
	Monitoring and evaluation	0.2	1.8	1.8	0.9	0.8	5.5	0.3
Breakdown by	HMGN	16.2	95.9	127.9	163.2	196.1	599.3	34.4
source:	Private sector	3.3	50.3	107	180.9	275.2	616.7	35.4
	External assistance	22	139.3	148.7	115.4	100.6	526.0	30.2

Source: Master Plan for the Forestry Sector Nepal, Dec., 1988.

The above table calls for a private sector investment of 35.4 percent (U.S.\$616.7 million) of the total outlay which indicates a tremendous scope for the involvement of the banking sector in the forestry program.

#### 2.2 Forestry Policy

In line with the Master Plan, the government has come up with a new Forestry Policy which acknowledges the deficiencies of the previous polices including the negative implications of Forest Nationalization Act of 1957 and inability of the government to control and manage the forest resources. The current Eighth Plan (1992-97) also emphasizes the need to develop forestry resources of the country keeping in view the sectoral linkages and complimentaries between agriculture, forestry and animal husbandry, and has allocated a sum of Rs.5.37 billion for the forestry sector programs.

The new policy acknowledges the importance of community responsibility to preserve the forest area and use it gainfully to meet the daily needs of the people. It proposes the phased handing over of all accessible hill forest to local communities through community forestry and leasehold forestry. It also states that if the availability of forest land exceeds the needs of the local communities, the excess will be allocated for forest management in the following priority sequence: people living below the poverty line, small farmers, and forest-based industries. Legal arrangements have also been made to protect the ownership right and interest of tree growers for sale and distribution of forestry products.

The government has also promulgamated the Forest Act 1993 which will come into effect as soon as new rules for fulfilling the various objectives of the Act are notified in the Gazette.

#### 2.3 Classification of the Forest

The new policy classifies all forests into five major categories for management and conservation purposes.

All forests except those designated otherwise have been termed national forest. Forests entrusted to village development committees and to users' groups are classified as community forests while forest raised and managed on private lands are termed as private forests. Leasehold forests are defined as those being leased by central or local agencies of the government or private owners to individuals, cooperatives or other commercial firms and institutions. Forest belonging to religious institutions under the Guthi Act is termed as Religious forest.

#### 2.4 Community Forestry

The community forestry program aims at devolving authority and control over forest resources to user groups. The main focus is on meeting the fuelwood and fodder requirements of local communities.

The Forest Act 1993 has made explicit provisions relating to community forests and states that the government may hand over any part of national forest to users' group in the form of community forest in the prescribed manner entitling the users' group to develop, conserve, use, and manage such forests as well as sell and distribute the forest products by independently fixing their price. The Act also provides for explicit provisions to encourage community forestry as much as possible and recognizes users' group as an autonomous and corporate body with perpetual succession which may sue or be sued like an individual.

#### 2.5 Leasehold Forestry

Leasehold forestry provides exclusive rights for the targeted groups whether they be individuals, institutions or a group of poor families. Leasehold forestry has also been designed as a special mechanism to benefit people below the poverty line unlike community forestry which is managed by heterogenous groups of people where the concept of "equal access to forest resources" is constrained specially for poor families by the dominance of rural elites in forest management and operation.

The leasehold forestry under the Forest Act 1993 could be undertaken to produce raw materials required by industries based on forest products, plant trees, and increase the production of forest products for sale or distribution, develop tourism or operate agro-forestry schemes in a manner conducive to the conservation and development of forests. Any corporate body, industry or community established under current law could take up leasehold forestry projects and may even appeal to the Appellate court if decision taken by the government is not satisfactory to the leaseholder.

The Eighth Plan aims at constituting at least 5,000 users' groups who will manage 252,000 hectares of forest areas under leasehold and community forestry and it is estimated that 25,000 households will be involved in such activities.

#### 2.6 Private Sector Involvement

Private sector has been encouraged to establish forests on private and leased lands and, for this purpose, the policy states that the parastatal agencies will compete with the private sector on equal footing, paying economic prices for forest products.

The Forest Act 1993 provides exclusive rights to the owners of private forests to develop, manage, sell, and distribute the forest products with pricing autonomy. Any individual or institution desirous of undertaking private forestry may apply to the government for such registration and the government shall issue prescribed certificates to such entrepreneurs.

Strategies to promote private sector involvement in forestry development, inter alia, include reduced land tax on private land used for plantations, financial support to private nurseries and plantations, dissemination of information, extension and training facilities to private entrepreneurs, freeing internal trade and transport of forest products from all restrictions, etc. The Plan also outlines training and credit facilities to promote forestry-based industries in privates sector and other measures airfied at reducing dependency on government forests.

#### 2.7 Institutional Mechanism

The Ministry of Forest and Soil Conservation is the prime agency for implementing forestry programs. It has four departments overseeing various forestry development programs (a) Department of Forests, (b) Department of Forestry Resource, (c) Department of Soil Conservation and Watershed Management, and (d) Department of National Parks and Wild Life Management.

The Department of Forest covers all 75 districts of the country with a large number of local units at the Village Development Committee level which is termed as Range offices and Forest units while the Department of Soil Conservation and Watershed Management operates more on a project basis in priority areas. On the other hand, Department of National Parks and Wildlife Management is entrusted with the management and conservation of 18 wildlife parks in the country.

There are a couple of parastatal agencies involved in utilizing forestry products. A number of them, at present, are either reorganized, amalgamated or dissolved.

# 3. Credit Package for Forestry Sector

#### 3.1 Rationale for Forestry Credit

A substantial involvement of banks and financial institutions in Forestry sector stems from the fact that leasehold and private forestry cannot be undertaken in a significant scale with the meager financial resources of rural people whose capacity to save and invest for long period is highly doubtful. Further, the government policy to provide exclusive right to the people through community and leasehold forestry as well as private forestry cannot be materialized without huge investment which needs to be managed commercially and profitably. In fact, forestry credit could provide an excellent framework for transfering resource base to rural people given that the security, liquidity, and yield of financial investments could be reasonably assured.

Rationale for banking sector involvement in forestry activities is also based on the fact that forestry activities, if properly planned and implemented, could provide a stable source of income to majority of rural households as their production from small and fragmented landholding does not suffice them in terms of meeting food and other daily needs. Therefore, forestry credit could effectively contribute to the poverty alleviation objective of the government as well. It is also indispensable to maintain a sustainable relationship between growing human needs and environmental compulsions and also to save the remaining forest areas from rapid degradation.

From the view point of the borrowers, forestry credit programs could be effective if such credit programs could at least be as rewarding as growing other crops and also offer people an income stream to sustain their livelihood till the time the plantations mature and start generating steady flow of income. People interested in forestry would relocate their land when they feel that better alternatives are offered.

All these require that the government agencies and banks and financial institutions design a well coordinated program which encourages farmers to grow more trees on their farmland and homesteads in a profitable manner.

#### 3.2 Current Provisions of Bank Credit for Forestry-related Activities

Banking sector, especially the Agricultural Development Bank/Nepal (ADB/N), has recently started to participate in externally-funded projects such as the U.S.\$12.8 million IFAD - funded Hills Leasehold Forestry and Forage Development Projects. However, actual credit exposure is yet to begin under the program. ADB/N's lending in the forestry sector is also directed to a lesser extent through Small Farmers Development Program (SFDP) although information on the total quantum of credit exposure is not available.

The credit manual of the (ADB/N), also contains some provisions for forestry credit, especially for nursery establishment, and tree plantation for private sector. These arrangements are collateral-based financing except under SFDP which is based on group guarantee mechanism. Provisions of forestry credit are made along the norms of horticulture financing and there are provisions for reevaluation of private forestry projects for further financing, after two years of plantation if the need so arises. Credit for fuelwood, tick wood, and other plantation can be provided for up to 20 years with a grace period of eight years.

Commercial banks' involvement could also be secured in forestry credit activities through their rural Intensive Banking Program (IBP) branches as also providing commercial credit to individuals and institutions willing to undertake large scale forestry projects either in leased land or private holding. So far only a handful of bank-financed forestry projects could be traced and banking sector credit in forestry sector is virtually insignificant.

Institutions involved in forestry programs do not have coordination with banks for provision of credit facilities to individuals, user groups or other institutions involved in forestry activities which is one reason for almost no credit exposure in forestry sector. The banks are not well aware of various forestry programs nor attempts have been made to open dialogue with banks and secure their involvement in forestry financing in a meaningful scale.

District agencies are not generally supportive of private and leasehold forestry and private individuals often find it too difficult to dispose their forest products due to a number of administrative constraints, a situation which does not encourage financial involvement from the banking sector.

Therefore, forestry activities have to be redesigned to allow them to interact with market forces. In other words, "there is a need to establish the indisputable right of private interest (farm and industrial) to own, manage, and exploit for use or sale of forest products without vitiating interference by public authorities". <sup>3</sup>

# 3.3 Areas for Financing

In general, banks and financial institutions can provide credit facilities in the following activities depending upon the program coordination with various line agencies involved in program implementation:

- (a) Nursery establishment and input supplies,
- (b) Development of degraded forest lands,
- (c) Plantation of fuelwood trees, herbal farming, and other commercial varieties in community land, leasehold and private forest area,
- (d) On-farm and off-farm fodder development,
- (e) Terrace improvements,
- (f) Production of fuel efficient stoves, and
- (g) Livestock raising.

The banks and financial institutions can also finance both fixed and working capital needs on a sustained basis. Banks cannot, however, move in isolation in an area where they have little exposure.

#### 3.4 Financing Pre-requisites

Financing community forestry, leasehold forestry and private forestry could be facilitated if certain pre-requisites are created. At present, these pre-requisites are largely absent. As a result, the banking policy toward the forestry sector is largely missing the required vision and strategy. Broadly, these prerequisites may be explained as under:

Report of the Forestry Private Sector Study, USAID, Nov. 1986.

#### 3.4.1 Community Forestry/Leasehold Forestry

- (a) Community forestry managed by users' groups could be organized as cooperative entities and could mobilize their own internal resources at least to meet part of the total cost in order to be eligible for bank financing. This would make users' groups cohesive and induce them to maintain proper accounting and other non-financial records which could be regularly inspected and supervized. It should also encourage resource mobilization in the form of share participation and gradually create standard norms and practices from the banking viewpoint. Leasehold forestry could also be taken in similar way especially when such leasehold forestry projects are run by homogenous groups of people; for example, the poor and landless farmers. The users' groups should be provided with management and technical support from non-governmental organizations and government agencies to enable them to make proper utilisation of external resource.
- (b) The government should guarantee producers' rights and lien on standing tree crops and allow sale and distribution of forest products without much hassle to enable them to operate in a business-like fashion. This will enable the banks and financial institutions to recover their dues on time and claim lien on the standing tree crops in case of default. Rules governing the implementation of the Forest Act 1993 should not contravene the spirit of the Act and should be transparent enough to discourage the bureaucracy from excessive control and regulations. For example, the government could uplift the restriction completely in wood varieties which are grown mainly on farm land and homesteads and which are not commonly found in natural condition such as mango tree wood, sissoo, jamun, etc.

In similar ways, the government could grant full freedom to sell and distribute any varieties of tree on the basis of annual yield of the users' group managed and private forestry projects. This could substantially increase bank credit if the scale of plantation could produce commercially viable amount of wood products annually.

- (c) The government should evolve some sort of credit guarantee mechanism to secure bank loans as the banks cannot dispose community and leasehold forestry land in the event of loan default by the communities because the ultimate ownership of the land belongs to the government.
- (d) The government could evolve insurance mechanism, especially fire insurance, to protect the interest of both the banks and users' groups in the event of loss of forest due to fire and other natural hazards.

#### 3.4.2 Private Sector Participation

Private sector participation in forestry activity, in the present context, does seem to be a viable alternative and could substantially increase the supply of forest products and also restore ecological balance if sufficient incentive packages could be offered.

Leasehold forestry is considered to be an appropriate mechanism to provide private sector access to forestry credit, whether it be undertaken by individuals, groups of disadvantaged people, or private industrial undertakings and institutions. Credit and technical support, however, needs to be provided in a coordinated manner as in the case of other types of forestry projects.

Financing forestry projects on privately owned land could be done through usual banking procedures if technical and extension support were coattailed and the administrative delays and restrictions on sale and movements of woods and other products were kept at the minimum level.

Private sector initiatives could further be pushed ahead by involving them in activities such as production of fuel-efficient stoves and other allied activities which also require integration of research findings with production technology for successful credit exposure.

### 3.4.3 Other Alternatives

Development banks like NIDC (Nepal Industrial Development Corporation) and ADB/N could be encouraged to finance forest based industries not only for their manufacturing operations but also to produce necessary forest-based raw materials on leasehold lands so that these industries would not suffer from raw material shortages. Lessons in this regard could be learnt from Indian experience where a number of paper, pulp, and match manufacturing units depend to a large extent on their own source of raw materials. Mention in this regard could be made of WIMCO experiment in which the manufacturers encourage plantation of various forest products with a minimum floor price guarantee. Similarly, in Nepal, the Butwol Plywood Factory sells poplus clone (Lahare pipal) and guarantees to buy the product from the farmers as per agreement.

The government could also think in terms of establishing specialized institutions such as forestry bank which could undertake forestry development programs in close coordination with livestock and agricultural development strategy of the government. They could use small and marginal farmers as well as landless peasants to enhance their income level. For example, the government could allot plots of land to landless farmers for seedling production and buy back at predetermined prices. Similarly, all nurseries could be established in the private sector whose produce could be sold to the government agencies and private individuals and institutions. These activities could substantially increase the flow of credit in the forestry sector.

Development banks and finance companies could also explore ways and means to inject credit facilities to private entrepreneurs and institutions eager to undertake forestry development in private lands. They could even finance land purchase and other development cost depending upon mutual arrangements with the borrowers.

Mechanism could be developed to channel bank financing to apex level institutions like Agro-forestry Research and Extension Agency to finance their activities in such a way that they could charge their services to the ultimate users and pay back to the banks within a predefined time-frame.

The banks could also finance municipalities to create greenery belt in urban fallow lands in which case the municipalities could pay back the bank credit from their revenue budget in a time-bound manner. With larger resource base, the municipalities do not have to depend on plantation income alone to pay back the bank credit. However, they could charge entry fees in such greenery belt to recover the development cost in the long run.

#### 3.5 External Support for Banks

At present, arrangements to provide bank credit in forestry sector are rudimentary and the banks have financed forestry projects in a handful of cases only. The present state of affairs could be effectively changed if necessary support as mentioned below is forthcoming to strengthen the credit delivery mechanism.

- (a) External assistance is needed to develop necessary infrastructure and credit delivery mechanism in the banking sector as banks cannot bear large amount of expenses from short term depositors' money for an activity which has a long gestation period. Such external assistance could be in the form of training and human resource development, creation of physical facilities, developing appropriate monitoring and evaluation system, and providing seed capital for various innovative schemes.
- (b) The banks should be provided with soft loan facilities with sufficient spread as they may possibly finance forestry credit at lower interest rates. Higher cost of depositors' money does not allow the banks to take recourse to long term financing at lower rates from the viewpoint of prudential banking standards.

In the absence of soft loan facilities with sufficient spread, the government will have to provide interest subsidy to the user groups, private and institutional bodies undertaking forestry activities to enable the bank and financial institutions to charge market rates of interest.

Lower interest burden on user groups or private and institutional bodies in the initial stage is desirable even to motivate people in forestry activities so that they ultimately find forestry projects profitable.

## 4. Coordination Mechanism

A well-coordinated program between the government agencies and banks and financial institutions is indispensable to make the program effective. The coordination mechanism at the

national, regional, and local levels needs to be worked out depending upon the nature, size, and volume of forestry credit project. In general, credit, technical services, extension support, and other back-up facilities would have to be integrated at each level to create enabling conditions for large scale forestry financing.

The forestry department and allied agencies should work out the economics of tree plantation, fuelwood, and fodder development for different ecological regions of the country at different scale of activities. Such calculations should also take into consideration the successful varieties of trees for different ecological regions and those which could help conserve the ecosystem as well.

It is also necessary that the economics of tree cultivation and fodder development also take into account different inter-cropping patterns so that farmers would have a steady flow of income to sustain their livelihood till the time it takes to mature the trees. In particular, inter-cropping pattern could be developed with various tree varieties not affecting crop yield significantly.

These schemes should be widely disseminated to the banks and people at large in order to motivate the general public toward forestry activities. The banks should be regularly informed about the economics of cost and return of different varieties in different ecological zones and also priority areas where such schemes could be implemented in a coordinated manner. Such an approach will induce adequate credit exposure in forestry sector and also convince the banks about the security and liquidity of their financial exposure.

#### 5. Conclusions

The above mentioned strategy would work only when the government deals effectively with the problem of policy uncertainties and distrust which is deeply rooted in the general psychology of the people and also creates a supportive bureaucracy which in the past did not usually "support private and leasehold forestry because this would reduce their authority and control over forest resources".<sup>4</sup>

Community Forest in Nepal, Michael B. Wallace, USAID/GTZ/FORD/WINROCK Project, 1987.

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