



MOUNTAIN FARMING SYSTEMS

Discussion Paper Series

**THE ROLE OF AGRICULTURAL CREDIT
IN THE TRANSFORMATION OF THE HILLS
THE NEPALESE EXPERIENCE**

Shree Krishna Upadhyay and Shyam B. Khadka

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PREFACE

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ICIMOD reviews and field studies. The focused reviews and field studies conducted by the Mountain Farming Systems Division cover various aspects of agricultural development. Since early 1988, a series of 'state of the art' reviews of agricultural production systems were sponsored by ICIMOD in different countries of the HKH Region. The purpose of these studies and of the subsequent National Workshops in different countries was to understand some of the constraints and prospects of mountain area development. These exercises were also aimed at acquiring comparative perspectives of development approaches and strategies in different countries.

This paper was a part of this series of studies commissioned by ICIMOD, and was also presented at the Workshop on 'Nepalese Experiences in Mountain Agriculture: Strategies and Policy' organized by ICIMOD in November 1988. This paper gives an overview of the Nepalese experience in extension credit in the transformation of the hills.

Special Assistant to the Chairman.

Development Bank of Nepal (ADB/N) and Shyam B. Khadka is

Shree Krishna Upadhyay is Chairman cum General Manager of the Agricultural

MFS Series No. 17

Shyam B. Khadka

Shree Krishna Upadhyay

THE NEPALESE EXPERIENCE

THE ROLE OF AGRICULTURAL CREDIT IN THE TRANSFORMATION OF THE HILLS

PREFACE

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THE HISTORICAL PERSPECTIVE OF AGRICULTURAL CREDIT INSTITUTIONS

In the early 1950s, when the First Five Year Plan was initiated, Nepal severely lacked both a physical and institutional infrastructure. In the financial sector, it had only one commercial bank (Nepal Bank) which by 1955 had 8 branches - 1 in Kathmandu, 2 in the eastern *Terai*, 3 in the central *Terai*, and 1 in the western hills. In July 1957, the total deposits amounted to about Nepalese Rupees (NR) 35 million and the total assets about 44 million. Its credit facilities were concentrated on the trade and consumption sector and its contribution to the agricultural and rural sector was negligible.

Cooperative Societies

In this context, for the first time, cooperative societies, proposed under the Rapti Valley (Chitwan) Development Scheme, provided institutional credit to the farmers in Nepal. Initially these institutions were established under an executive order and later their operations were carried out under the Cooperative Department, established in 1954.

Further impetus in the expansion of cooperative societies came during the First Plan Period (1956-61) with a gradual extension of the cooperative movement in all parts of the country. The Plan targetted to organise and register 4,500 societies against which 378 cooperative societies with a total membership of 11,059 were established. The paid-up share capital reached NR 0.362 million and altogether NR 1.61 million was lent out by the Government to these societies. An important development during this period was the enactment of the Cooperative Societies' Act of 1959.

The Cooperative Bank

Later on, it was felt that a separate institution was necessary both for financing cooperative societies and for supervising them. Accordingly, the Cooperative Bank was established in the year 1963 under the Cooperative Bank Act of 1963.

The main objectives of this Bank were as follows :

- o to increase agricultural production by financing farmers through Cooperative Societies,
- o to grant loans to cooperative societies for the development of agro-trade and small agro-industries established in a cooperative way,
- o to grant loans to the societies for the marketing of agricultural products, and
- o to provide commercial banking facilities where such facilities were not available.

A board consisting of seven members, representing various ministries, Nepal Rastra Bank, and one person each from the Cooperative Societies and from among the private share-holders, was constituted as the supreme policy-making body of the Bank.

The authorised capital of the Bank was NR 5 million; 51 per cent provided by His Majesty's Government and the remaining 49 per cent by the cooperative societies and others.

By the end of the FY 1966/67, the Bank had opened 14 branch offices and had disbursed about NR 8 million through 900 loans. The major purposes for which loans were disbursed were agricultural production (crops, livestock, and irrigation), followed by marketing, warehousing, and resettlement programmes. During the same period, the Bank collected about NR 3.6 million and by mid-July 1967 the loans outstanding amounted to 4.6 million¹.

Village Committees

The Village Committees came into existence with the enactment of the Land Act, 1964 which was intended to not only put a ceiling on the size of land holdings and secure tenancy but also to mobilise savings compulsorily from the farmers. Under this compulsory savings scheme, land-owners were made to deposit a certain fixed amount in cash or in kind on the basis of the amount of land they cultivated. The collection of savings was to be conducted by the Ward Committees which were organised within the political framework of the *Panchayat* System. Within this framework, each Village *Panchayat* also served as a Village Committee under which the nine Ward Committees were organised. Each Ward Committee would have three members - one was the member representing the Ward on the Village *Panchayat* and the remaining two would be nominated by the District Land Reform Officer.

The Ward Committees were responsible for collecting the compulsory savings, repaying deposits, providing loans to the farmers, collecting loans, and handing over excess funds to the District Reform Offices. Ward Committees were allowed to provide loans to farmers for both production and consumption purposes. The interest rate to the depositors was fixed at 5 per cent whereas the Ward Committees were lending at an interest rate of 10 per cent to the farmers.

Land Reform Savings' Corporation

The Land Act came into force in 16 districts in 1964 and 25 more districts were brought under the programme in 1965. This placed an increased management responsibility on the District Land Reform Offices. The Land Reform Savings' Corporation was established in 1966 under the Corporation Act of 1966 to mitigate these problems. The basic objectives of the Corporation were :

- o to coordinate and supervise the savings collected from all over the country;
- o to finance farmers for the procurement of various inputs; and
- o to finance and invest in agro-trade and agro-industries.

The Corporation worked under a Board of Directors consisting of representatives from various Ministries and the Nepal Rastra Bank and two economists nominated by His Majesty's Government. The Minister for Land Reforms was the Ex-officio Chairman of the Board. Under the Board, a standing Loan and Investment Committee was formed to scrutinize the loan applications and investment projects and also to sanction loans. The General Manager was the Chief Executive of the Corporation.

1. See the Annual Reports of the Cooperative Bank

The Agricultural Development Bank

Under its charter, the Cooperative Bank was authorised to lend to cooperative societies only and so could not lend directly to individuals or corporate bodies. This scope was found to be too narrow and so an Agricultural Development Bank Ordinance was issued in 1967 and the Bank was established in 1968 as a successive institution to the Cooperative Bank. Later on, in 1973, the Land Reform Savings' Corporation was merged with ADB/N as it was thought to be duplicating the function, of ADB/N. Since then, ADB/N has acted as the sole financial institution specialising in agricultural and rural credit in Nepal.

Under the new Act, the Bank could provide loans directly to individuals, companies, cooperative societies, and any other type of institution engaged in agricultural development, agricultural trade and marketing, agro-based industries, and irrigation for short, medium, and long-term durations. The later amendments of the Act empowered the Bank to finance small farmers on a group liability basis and expanded its scope of financing to include cottage industries. The original Act and the amendments permit the Bank to raise funds from domestic as well as international agencies and also engage in commercial banking activities under the Commercial Banking Act.

A Board of Directors, constituted and appointed by the Government, is ADB/N's policy and decision-making body. The Board consists of seven members, including ADB/N's General Manager. Other members include representatives from the Ministries of Finance, Agriculture and Land Reforms, Nepal Rastra Bank, the cooperatives, and individuals. ADB/N started with a modest resource base of NR 12.6 million in 1968 - comprising of 7.4 million NR from share capital, 3.3 million NR from deposits, and 1.9 million from miscellaneous sources. There has been a tremendous change in the resource base in later years and, by mid-July 1988 the Bank had NR 290 million in share capital, NR 1805 million in disbursed credit, and NR 586 million in deposits².

Commercial Banks and the Priority Sector

Nepal Bank Limited, the first commercial bank in the country, was established in 1937 in the private sector, and was converted into a semi-governmental institution in stages. It was followed by the establishment of another commercial bank, as a full government-owned bank, in 1963. In the mid-eighties, three more commercial banks with the participation of foreign banks were established in Nepal. But, since their operation, until now, is limited in the Kathmandu Valley, their share in total institutional credit to agriculture is very limited.

The amount of loans and advances of the commercial banks increased sharply during the last 13 years. During the first two years of the Seventh Plan, the amount of loans and advances increased from NR 7.5 billion in mid-July 1985 to 10.7 billion in 1987, registering an annual increase of 20 per cent. The total volume of loans and advances was NR 1.3 billion in 1975. This shows that this amount has been increasing at an annual rate of 19 per cent between 1975 and 1987³.

2. See the Annual Reports of the Agricultural Development Bank.

3. HMG, Ministry of Finance, Economic Survey, 1986/87, pp 79-80.

Remarkable changes have also been taking place in the sectoral loan portfolio of the commercial banks. For example in 1975, 48 per cent and 45 per cent of the total disbursement were absorbed by general use and social purposes respectively, compared to five per cent by the industrial sector and the remaining two per cent by "others" and agriculture. In 1988, however, the share of industry reached a level of 29 per cent, commerce 34 per cent, general use and social purposes 28 per cent, and other purposes four per cent. This indicated that the commercial banks' investments' in production and developmental activities are gradually increasing, and their traditional role of lending for consumption purposes is declining. However, the share of the agricultural sector has remained low at about five per cent⁴, and thus the share of the rural sector in general has also remained low.

The share of the agricultural and rural sector has remained low not because of policy gaps. As early as 1974, Nepal Rastra Bank directed the commercial banks to invest at least five per cent of their total deposits in the "small sector," with the aim of increasing the flow of bank credit towards the development of small farmers, industries, and other weak sectors of the economy. Such credit then was known as "Small Sector Supervised Credit" and was renamed the "Priority Sector" in 1976. This programme could not generate enough enthusiasm on the part of commercial banks and they found a way out of this predicament when, in 1978, commercial banks' lending to ADB/N was considered as loans to the priority sector.

In October 1981, the "Priority Sector Credit Scheme" was revamped and renamed the "Intensive Banking Programme" (IBP). The programme stresses area development, financial viability, and constant supervision. Under this programme, special commercial banks' branches/sub-branches, in coordination with line agencies, provide credit facilities for the establishment or extension of priority sector activities within the banks' working area.

Under the IBP, loan approval decisions are to be based on the financial viability and technical feasibility of a project rather than on collateral. The programme is also geared to extend credit on a group guarantee basis to those unable to offer satisfactory collateral. It also aims to extend at least 60 per cent of all agricultural and service loans to low income groups⁵.

Though the commercial banks' outstanding loans to the priority sector increased from NR 12 million in 1976 to 174 million in 1983, this was far below the required target. In 1982, against a target of 10 per cent, the banks lent only three per cent of their deposits to the priority sector⁶. Later on, this ceiling was fixed at a minimum of eight per cent of the disbursable fund which in practice reached 5.1 per cent during the FY 1986/87⁷. This includes the investment under the IDA-financed Cottage and Small Scale Industry(CSI) Project.

4. Ibid, pp 79-80.

5. See Priority Sector Credit (Intensive Banking Programme) Manual, Nepal Rastra Bank, 1981.

6. IDS. *Financial Institution and Economic Development - The Pivotal Role of Nepal Rastra Bank*. Kathmandu, IDS, 1985.

7. HMG, Ministry of Finance, Economic Survey, 1987-88, pp 79-80.

THE STRUCTURE AND COMPOSITION OF AGRICULTURAL CREDIT

Because Nepal Rastra Bank - the central national bank, was established as late as 1956, not much is known about the extent of rural and agricultural indebtedness in Nepal in a time-series fashion. But because the banking institutions in Nepal are of recent creation, it can easily be inferred that non-institutional sources virtually supplied almost all of the agricultural and rural credit until the early 1960s.

The first agricultural credit survey was conducted by Nepal Rastra Bank during 1969-71. The survey work took two fiscal years 1969/70 and 1970/71. For this purpose, 32 districts were considered as accessible and as having a primary population. This excluded all the high hill districts in the north and so the survey result cannot be expected to represent them. These 32 districts had in total 2,006 *Panchayats* out of which 52 were selected on a stratified - random basis. In total, there were 35 Village *Panchayats* in the *Terai* and 17 in the hills, covering 22 districts in total. Agricultural households were defined as those households cultivating at least 0.05 ha of land. Sixty such households were selected from each of the 52 *Panchayats*. Thus, 3,120 households were covered by the survey⁸.

An agricultural credit review survey was conducted seven years later in 1978. The survey work was limited to a much smaller period of three months (March-June, 1978). For the purposes of survey, 39 districts were defined as accessible, out of which 14 (5 from the Hills and 9 from the *Terai*) were selected. From these 14 districts, 45 Village *Panchayats* were selected. Finally, 59 households from each *Panchayat*, totalling 2,655 households, were selected for interviewing⁹.

Profiles of Borrowers and Loans

The first survey showed that on aggregate about 38 per cent of the farm families borrowed for different purposes during the FY 1969/70. The proportion of borrowing farm families was slightly higher in the *Terai* (39%) compared to the hills. This situation changed significantly over a seven year period and over 51 per cent of the farm families reported borrowing during the FY 1967/77. The proportion of borrowing farm families was significantly higher in the *Terai* (52%) compared to the hills (42%).

Average borrowing at the aggregate level increased from NR 132 to 886 during the period, implying an over four-fold increase. The rate of increase was much higher for the *Terai* (415%) compared to the hills (180%). The average size in the later period was much higher in the *Terai* (NR 670) than in the hills (NR 380), although it was remarkably similar in the earlier period (Table 1).

The Purpose of the Borrowing

The survey result showed that for the FY 1969/70, the highest proportion (44%) of borrowing was accounted for by consumption expenditure, and this is true for both the hills (49%) and the *Terai* (42%). In contrast, the hills reported the lowest percentage of loans (4%) for farming and the *Terai* (6%) for other purposes (Table 2). This situation reversed in 1976/77, during which period about 45 per cent of the borrowing was accounted for by capital expenditure, including *inter alia*, the purchase of land, livestock, machinery, and investment in irrigation development followed by consumption expenditure (28%), farming (22%) and others (6%). In the hills, borrowing for farming increased significantly from less than four per cent to about 14 per cent and the pre-eminence of capital expenditure gained more importance (43%) compared to consumption expenditure (27%).

8. Nepal Rastra Bank. *Agricultural Credit Survey*. Nepal, Kathmandu: NRB, 1980.

9. Nepal Rastra Bank. *Agricultural Credit Review Survey*. Nepal, Kathmandu: NRB, 1980.

Table 1: The Proportion of Borrowing Farm Families and the Size of Average Borrowing

(Amount in NR)

	Proportion of Borrowing Farm Families (%)		Average Borrowing per Farm Family	
	1969/70	1967/77	1969/70	1976/77
Hills	37	42	136	380
Terai	39	52	130	670
Overall	38	51	132	586

Source : Agricultural Credit Review Survey, Nepal Rastra Bank, 1980.

Table 2: Proportion of Average Borrowing Per Farm Family by Purpose

(%)

Purpose	Overall		Hills		Terai	
	1969/70	1976/77	1969/70	1976/77	1969/70	1976/77
Farming Expenditure	18	22	4	14	25	24
Capital Expenditure	33	45	42	52	29	43
Consumption Expenditure	44	28	49	34	42	27
Others	5	5	6	1	4	6

Source : Agricultural Credit Review Survey, Nepal Rastra Bank, 1980.

Source of Borrowing

The average amount borrowed, per farm family, was NR 897 in the hills and NR 1,221 in the Terai in the FY 1967/68. The respective figures were NR 383 and NRs 504 for the FY 1969/70 (Table 3). Out of the average borrowing of NR 383 in the hills during 1969/70, NR 20 or a little over five per cent was covered by institutional sources, most of which through Village Committees (3.7%) and cooperative societies (1%). Among non-institutional or private sources which had a virtual monopoly during the period, village money-lenders accounted for most (46%), almost equalled by friends and relatives, followed by professional money-lenders and landlords (1% each), and others (0.8%).

A significant improvement took place in the seven years following the first survey. ADB/N, which did not extend financing to the hill farmers during the FY 1969/70, contributed almost 23 per cent to the average debt of NR 897 in the hills, in the FY 1976/77. Commercial banks contributed almost six per cent and the cooperative societies provided about five per cent. Altogether, over 33 per cent of the total average borrowing farm families was provided through institutional sources. Among private sources, village money-lenders led the supply with the contribution of 36 per cent, followed by friends and relatives (21%). Whereas the proportion of these two sources decreased the role of agricultural traders, borrowing from landlords and professional money-lenders increased significantly.

Table 3: Size and Proportion of Average Borrowing by Source

(Amount in NR)

Credit Agency	Hills				Terai			
	1969/70		1976/77		1969/79		1976/77	
	Amount	%	Amount	%	Amount	%	Amount	%
<u>Institutional</u>	20	5	297	33	264	52	532	44
Cooperatives and Sajhas	4	1	42	5	3	1	173	14
Ward/Village Committees	14	4	-	-	44	9	-	-
Agricultural Development Bank	-	-	203	23	19	4	237	22
Land Reform Saving Corporation	-	-	-	-	193	38	-	-
Commercial Banks	2	1	52	6	5	1	88	7
<u>Private</u>	363	95	600	67	240	48	689	56
Village money-lenders	176	46	327	36	123	24	245	20
Professional money-lenders	4	1	19	2	13	3	48	4
Landlords	4	1	25	3	26	5	30	2
Agricultural Traders	-	-	42	5	26	5	77	6
Friends and Relatives	176	46	187	21	9	270	22	
Others	3	1	-	-	5	1	19	2
Total :	383	100	897	100	504	100	1221	100

Source : Agricultural Credit Review Survey, Nepal Rastra Bank, 1980

In the *Terai*, institutional sources were already covering over half of the total average borrowing of NR 504 during the FY 1969/70. The LRSC contributed over 38 per cent, followed by Village Committees (9%), ADB/ (4%), and commercial banks (1%). In the following seven years the share of institutional credit went down, although the amount of credit provided more than doubled. ADB/N, during the FY 1976/77, when the LRSC was already merged with it, contributed only 22 per cent, followed by cooperative societies (14%), and commercial banks (7%). Among private sources the share of friends and relatives increased from nine to 22 per cent, whereas the share of village money-lenders decreased from 24 to 20 per cent. During this period, the overall share of private sources increased from 48 to 56 per cent and conversely the share of institutional sources decreased from 52 to 44 per cent in the *Terai*.

Extent and Issues of Indebtedness

About 65 per cent of the farm families in Nepal were found to be indebted during 1969/70. The proportion of indebted farm families was slightly higher in the hills (69%) compared to the *Terai* (63%). Seven years later the proportion of indebted farm families reduced slightly to 62 per cent and it was almost equal in the hills and the *Terai*. The average debt amount was much higher in the hills (NR 655) compared to the *Terai* (NR 304) during 1969/70, but, because of the high growth rate in the *Terai*, the situation reversed in the seven year period ending in the FY 1976/77. During this year, the average debt outstanding was reported to be NR 691 - 907 in the hills and NR 994 in the *Terai* (Table 4).

Table 4 : Proportion of Indebted Farm Families and the Size of Average Indebtedness.

	Proportion of Indebted Farm Families		Average Debt	
	%	%	NR	NR
	1969/70	1967/77	1969/70	1976/77
Hills	69	61	655	691
<i>Terai</i>	63	63	304	994
Overall	65	62	419	907

Source : Agricultural Credit Review Survey, Nepal Rastra Bank, 1980.

Source of Indebtedness

During 1969/70, when the average indebtedness per farm family amounted to NR 938 in the hills, institutional sources accounted for less than four per cent of the loans taken. Village money-lenders provided had the highest amount (45%), followed by friends and relatives (44%), and professional money-lenders (4%). Within 7 years the situation changed impressively and

institutional sources accounted for over 26 per cent of the total average debt. At the sub-aggregate level ADB/N contributed most (17%), followed by commercial banks (6%), and cooperative societies (4%). Among private sources the share of friends and relatives decreased to less than 19 per cent, but the share of agricultural traders increased by almost 6 times and crossed five per cent (Table 5).

Table 5: Average Outstanding Debt by Source

(Amount in NR)

Credit Agency	Hills				Terai			
	1969/70		1976/77		1969/79		1976/77	
	Amount	%	Amount	%	Amount	%	Amount	%
Institutional	33	4	301	26	270	45	748	45
Cooperatives and Sajhas	5	1	42	4	4	1	127	8
Ward/Village Committees	23	2	1	0	86	14	7	0
Agricultural Development Bank	-	-	194	17	19	3	514	31
Land Reform Saving Corporation	-	-	-	-	154	26	-	-
Commercial Banks	5	1	64	6	7	1	100	6
Private	905	96	854	74	334	55	904	55
Village money-lenders	425	45	495	43	161	27	323	20
Professional money-lenders	42	4	40	3	19	3	82	5
Landlords	5	1	41	4	29	5	30	2
Agricultural Traders	8	1	60	5	42	7	81	5
Friends and Relatives	419	45	218	19	77	13	368	22
Others	6	1	-	-	6	1	20	1
Total :	938	100	1155	100	604	100	1652	100

Source : Agricultural Credit Review Survey, Nepal Rastra Bank, 1980.

In the *Terai*, the contribution of institutional and non-institutional sources in the two time-frames remained stable at about 45 per cent from institutional sources and 55 per cent from non-institutional sources. However, significant changes could be noticed at the sub-aggregate level. During this period, the share of ADB/N increased from three to 31 per cent, whereas the share of Village Committees decreased from over 14 per cent to less than one per cent. Commercial banks reported impressive increases and these reached over six per cent. Among non-institutional sources, the village money-lenders' share dropped from 27 per cent to 20 per cent, but the share of friends and relatives increased from 13 per cent to 22 per cent. A significant drop in the share of landlords was also observed.

INSTITUTIONAL CREDIT DISBURSEMENT IN THE HILLS IN COMPARISON TO THE TERAI

This section of the paper presents an analysis of the credit operations of the formal credit institutions in Nepal. In doing so, it presents a comparative analysis of the supply of institutional credit in the hills, vis-a-vis the *Terai*, so that patterns of institutional credit operations in the hills, against the background of aggregate operations, can be discerned. As the absolute figures *per se* will be irrelevant for comparative analysis, credit operations are analysed vis-a-vis other resource bases such as population, physical area, cultivable land, number of *Panchayats* cereal grain production, and input supplies such as fertilizer sales. For sub-aggregation purposes, the whole kingdom has been divided into eleven regions - five Development Regions further sub-divided into the hills and the *Terai* with the exception of the Central Region where the hills have been sub-divided again into the Kathmandu Valley itself and areas outside the Kathmandu Valley.

Basic Physical and Demographic Characteristics of the Hills and the *Terai*

In terms of physical area, the hills cover over 109,000 ha or 77 per cent of the total land area. Region-wise, the Mid-western Hills cover the most territories and alone account for 23 per cent of the total physical area (Table 6). Going to the Central Plains or *Terai* we find that it accounts for seven per cent of the total physical area or almost one-third of the whole Nepalese *Terai*. The distribution of the cultivable land does not match the physical area. The hills in total has only a little over half of the cultivable hectares. The Mid-western Hills account for only seven per cent of the total cultivable land, whereas the Eastern *Terai* accounts for 16 per cent of the cultivable land while comprising only five per cent of the physical area.

The population distribution more or less, varies according to the distribution of cultivable land. The hills in total accounted for 56 per cent of the total population in 1981, but, as there is a lower growth rate in population in the hills - largely explained by internal migration - this proportion went down to 53 in 1987. With this trend, persisting small discrepancies noticed now in the distribution of cultivable land and population between the hills and the *Terai* will be eliminated altogether within a few years. Region-wise, the Central Hills as a whole support more population than its share of cultivable land can absorb. This is largely explained by the presence of the Kathmandu Valley. There is a significant difference in the Eastern Hills which supports about 10 per cent of the population with 14 per cent of the cultivable land. Other regions show a remarkably balanced distribution. As a result, the total number of persons to cultivable land remains balance. On an average, one hectare of cultivable land supports 5.2 persons in the hills and 43 persons in the *Terai*. This ratio is lower in the Eastern Hills (3.57) followed by the Far-western *Terai* (3.64).

Because of the difference in the productivity of land resources, cereal grain production does not match the cultivable land. Overall, the hills produced only 39 per cent of the total cereal grain production during 1981, and this compares poorly with the 51 per cent share in cultivable area and 56 per cent of the population during the same year. As a result, per capita food grain production in the hills was about 111 Kg as against 225 Kg in the *Terai*.

Region-wise, all sub-regions in the hills reported a lower proportion of cereal grains compared to their share of population or cultivable land. The worst situation is presented by the Far-western Hills which produced only three per cent of the grains to support six per cent of the population. This was followed by the Western Hills (10% against 14%) and Central Hills (12% against 17%). Food production per capita, thus, was the lowest in the Far-western Hills (73 Kg), followed by the Western Hills (106 Kg), and closely followed by the Mid-western Hills (107 Kg).

Table 6: Basic Physical and Demographic Characteristic of the Hills and Terai

Area	Physical Area 1981 (Km) ²	Cultivated Land 1981 (^{'000} ha)	Population 1987 (in ^{'000}) ³		Cereal Grain Production 1981 (in ^{'000} MT)
A. Development Regions					
Eastern					
Hills	28070	959.5	3704	4348	632
Terai	21000	445.6	1589	1683	219
Central					
Hills	7070	513.9	2115	266	413
Kath. Val.	27760	862.4	4916	5591	8044
Outside Vall	17700	384.1	2527	2785	284
Terai	760	71.9	767	868	87
Terai	16940	312.2	1762	1916	198
Western					
Hills	10060	478.3	2389	2807	520
Terai	27870	675.4	3136	3576	496
Terai	22540	418.9	2176	2388	231
Mid Western					
Hills	5330	256.5	959	1188	265
Terai	38650	413.1	1955	2256	304
Terai	32770	233.7	1283	1402	137
Far Western					
Hills	5880	179.4	672	854	167
Terai	19370	268.2	1312	1568	173
Terai	4330	116.4	242	594	108
B. Aggregate					
Hills	109410	1634.1	8463	9231	936
Terai	32670	1544.5	6560	8107	1473
Grand Total	142080	3178.6	15022	17339	2409

Source : Nepal Agricultural Sector Strategy Study. Vol 2, Appendix 1.8, HMG/ADB.

Expansion of the Banking Network

Because of the mountainous nature of the country and the primitive stage of development of the transportation network, the access or inaccess of rural people to institutional credit is largely explained by the existence or non-existence of a banking branch within the village or in the neighbouring village. No amount of budget allocation of credit resources, or simplification of the procedures, or fixation of minimum quotas for a particular area, would be effective in enhancing the access of rural people to institutional credit in the absence of an outlet for a cluster of hamlets. Without this the transaction cost will always be prohibitively high and small loans, characteristic of the Nepalese credit market, cannot support the costs.

Expansion of ADB/N Outlets

The Branch Network

Until July 1973, ADB/N had only 29 branches (Table 7). Out of these, nine were in the hills and 20 in the *Terai*. Later the total number of branches increased significantly and reached 72 by 1977, 142 by 1982, and 212 by 1987. The rate of increase was much higher for the hills, as it increased from nine to 134, compared to 20 - 78 in the *Terai*. This difference in growth rate increased the share of the hills in the total. In 1973, 69 per cent of ADB/N branches were in the *Terai* and 31 per cent in the Hills. Within the next 14 years, the situation changed dramatically and by July 1987, 63 per cent of the branches were in the hills compared to 37 per cent in the *Terai*. This compares favourably with the population of 1987, when 53 per cent of it was reported to be in the hills.

Region-wise, in 1987, the hills had a significantly higher proportion of ADB/N branches compared to the population in the hills in the Eastern, Central, and Western Development Regions. It at least matches the population in the Mid-western and Far-western Hills. One added feature of the ADB/N branch network is the absence of any bias in favour of the Kathmandu Valley.

Table 8 presents some of the ratios related to ADB/N branches. In 1981, one ADB/N branch in the aggregate covered 107 thousand people - about the same in the hills and the *Terai*, however, within the following six years, the population covered by each branch reduced sharply to 68 thousand in the hills and it stagnated somewhat in the *Terai*. This reduced the average population covered by one branch to 82 thousand. Similarly, the physical area covered by each branch reduced from 1,008 to 670 km² during this period. A significant reduction in the physical area was seen in the hills (816 km² from 1,368) but it remained almost double the *Terai* average of 419 km². The highest physical coverage of 2,048 km² was seen in the Mid-western Hills and the lowest (95 km²) in the Kathmandu Valley.

A much more balanced coverage in terms of Village *Panchayats* can be observed with an average coverage of 19 Village *Panchayats* per branch, and this is about the same in the hills and the *Terai*. Most regions report 15 to 20 Village *Panchayats* per branch with the exception of the Far-western *Terai* (9) and the Mid-western Hills (29).

Small Farmers' Development Programme

The number of sub-projects under the Small Farmers' Development Project (SFDP), which began with 2 pilot projects in 1975, reached 15 by July 1977. It reached 54 by 1982 and 298 by

1987. In 1977 only two, or 13 per cent of all projects, were in the hills which changed to 31, or 57 per cent, in 1982. The higher growth rate in the hills persisted in the following years and the hills accounted for 185 (62%) projects against 113 (38%) in the *Terai*. Region-wise the representation in the hills largely balances with the population distribution except in the Central Hills where 16 per cent of the population has 26 per cent of the projects.

Table 7: Field Office Network of the ADB/N

Area	Branch Network				SFDP Network		
	1973	1977	1982	1987	1977	1982	1987
A. Development Regions							
Eastern							
Hills	7	17	34	51	3	15	52
<i>Terai</i>	2	10	17	31	0	9	24
Central	9	19	46	68	8	17	125
Hills	3	12	23	39	2	10	77
Kathmandu Valley	1	3	6	10	0	2	12
Outside Valley	2	9	17	29	2	8	65
<i>Terai</i>	6	7	23	29	6	7	48
Western	7	17	29	49	2	12	56
Hills	3	12	19	35	0	6	39
<i>Terai</i>	4	5	10	14	2	6	17
Mid Western	4	12	19	24	1	9	41
Hills	1	9	13	16	0	6	26
<i>Terai</i>	3	3	6	8	1	3	15
Far Western	2	7	13	20	1	1	24
Hills	0	4	8	13	0	0	19
<i>Terai</i>	2	3	5	7	1	1	5
B. Aggregate							
Hills	9	47	80	134	2	31	185
<i>Terai</i>	20	25	61	78	13	23	113
Grand Total	29	72	141	212	15	54	298

Source: Office Files of ADB/N.

Table 8: Ratio of ADB/N Offices to Population, Physical Area, and Village Panchayat.

Area	Population/Branch		Physical Area/Branch		Number of Village Panchayats Pol/Branch	
	1981 No. of Persons (in '000)	1987	1981 (Km ²)	1987	1981 Number	1987
A. Development Regions						
Eastern	109	85	826	550	27	18
Hills	93	54	1235	667	30	17
Terai	124	133	416	354	23	20
Central	107	82	603	408	27	18
Hills	100	714	770	454	28	16
Kath. Val.	128	868	127	76	21	18
Outside Val.	104	661	996	584	30	18
Terai	104	968	437	347	26	21
Western	108	730	961	569	31	18
Hills	115	682	119	644	35	19
Terai	959	848	588	381	24	17
Mid Western	103	940	2034	1610	31	24
Hills	987	876	2521	2048	36	29
Terai	112	107	980	735	20	15
Far Western	101	784	1518	987	29	19
Hills	111	789	1925	1185	39	24
Terai	859	849	866	619	12	9
B. Aggregate						
Hills	106	689	1368	816	32	19
Terai	108	104	536	419	23	18
Grand Total	4538	10963	1008	670	28	19

Source: Office Files of ADB/N.

Expansion of the Commercial Banking Branches

The number of branches of the ADB/N in the Kingdom, increased from seven to 16 from 1950 to 1960. It increased five-fold within a decade and reached 80 by July 1970. Out of these 80, 45 were in the Terai, 20 in the hills outside Kathmandu, and 15 in the Kathmandu Valley.

Proportionately the hills, excluding the Valley, had only 25 per cent and the *Terai* had 56 per cent. The number of branches increased sharply in the following decade reaching 212 in 1977, 284 in 1982, and 206 in 1987 (Table 9). The growth rate remained higher for the hills, and the number had increased from 35 to 230 within this period as against 45 to 176 for the *Terai*. Even within the hills, the growth rate was higher for areas outside the Kathmandu Valley and so its share increased from 25 per cent in 1970 to 42 per cent in 1987. This compares with the 48 per cent share of the population inhabiting the hills outside the Kathmandu Valley. However, this discrepancy is explained more by the share of the Kathmandu Valley, which is 15 per cent compared to its share in the population of five per cent, rather than by the share of the *Terai* which is 43 per cent compared to its 47 per cent share in the population.

The Mid-western and Far-western Hill regions suffer also in terms of getting their share of commercial bank branches. The Mid-western Hills had only five per cent of these branches (against a population share of 6%) in 1987. As a result, population per branch remained higher in both regions compared to the aggregate. In the five years following 1981, the average population served by each branch decreased from 53 to 43 thousand and by 1987 it came down to 15 thousand for the Kathmandu Valley, 46 thousand for the *Terai*, and 49 thousand for the hills, excluding the Kathmandu Valley.

Credit Disbursement through Institutional Sources

By mid-July 1987, the total loans outstanding from ADB/N stood at about NR 2,225 million and those of commercial banks for the agricultural sector, under the IBP, at about NR 160 million. Cooperative societies also deal with agricultural credit but this is dependent upon the disbursement of ADB/N to them and follows the pattern of loans disbursed by ADB/N. Thus, this section analyses the credit operations of ADB/N and the commercial banks only.

Credit Disbursement through ADB/N

Total Disbursement

Aggregate Pattern: The total Credit disbursed by ADB/N was only NR 36 million during the FY 1972/73. After four years, in the FY 1976/77, the total credit disbursement reached to NR 226 million. Half of this amount went basically as working capital for fertilizer distribution to cooperative societies, 22 per cent for crop production, 16 per cent for farm mechanization/irrigation and nine per cent for livestock (Table 10). In the ensuing ten years, the volume of total loan disbursal increased by 168 per cent and reached 606 million during the FY 1986/87. The distribution of loans indicated that crop production accounted for a 30 per cent share followed by livestock (28%), agro-industry and marketing (25%), and farm mechanization and irrigation (mainly irrigation) (27%).

Share of the Hills in Total Disbursal: During 1972/73, the hills, excluding the Kathmandu Valley, accounted for only eight per cent of the total disbursal. In the following years, the situation improved in favour of the hills. The hills, excluding the Kathmandu Valley, accounted for 21 per cent of the total disbursement in the FY 1976/77, and 33 per cent during the FY 1986/87. Because the hills, excluding the Kathmandu Valley, accounted for 48 per cent of the population and 49 per cent of the cultivable land, those improvements do not seem to be adequate.

Table 9: Branch Network of Commercial Banks

Area	Total No. of Branches				Population/Branch	
	1970	1977	1982	1987	1981	1986
No. of Persons (in '000)						
A. Development Regions						
Eastern	18	58	74	100	50	43
Hills	4	16	25	38	64	44
Terai	14	42	49	62	43	43
Central	39	88	115	158	43	35
Hills	22	52	72	99	35	28
Kath. Val.	15	35	45	59	17	15
Outside Val.	7	17	27	40	65	48
Terai	12	34	49	79	64	48
Western	12	34	49	79	64	45
Hills	6	22	32	54	68	44
Terai	6	12	17	25	56	48
Mid Western	9	20	25	40	78	56
Hills	3	12	12	22	107	64
Terai	6	8	13	18	52	47
Far Western	2	12	21	29	62	54
Hills	0	7	9	17	99	57
Terai	2	5	12	12	35	50
B. Aggregate						
Hills	35	109	150	230	56	40
Terai	45	103	134	176	49	46
Grand Total	80	212	284	406	53	43

Source : Nepal Rastra Bank, Quarterly Economic Bulletin, November, 1987.

Note : The figures for each year were taken in mid-July, i.e. the end of the Nepalese fiscal year.

Table 10: Loan Disbursement by ADB/N - During the FY 1976/77

(in '000 Rs)

Area	Crop Production	Irrigation Farm - mechanisation	Livestock	Ag-Ind. Market & W-House	Horticulture- Tea	Total
A. Development Regions						
Eastern	10746	10924	3611	11578	5144	42003
Hills	2390	959	1920	1387	1549	8209
Terai	8356	9965	1691	10191	3590	33799
Central	26910	11060	9567	77673	385	125595
Hills	6676	1760	8413	61346	348	78543
Kath. Val.	3277	596	3933	54978	33	62817
Outside Val.	3399	1164	4480	6368	315	15726
Terai	20234	9300	1154	16327	37	47052
Western	7963	8213	4533	11514	1479	33702
Hills	3895	2277	4105	6472	1445	18194
Terai	4068	5936	428	5042	34	15508
Mid Western	2595	3492	1443	4056	493	12079
Hills	582	502	1801	757	493	3635
Terai	2013	2990	142	3299	0	8444
Far Western	1749	3069	859	6262	386	12325
Hills	522	556	600	606	370	2654
Terai	1227	2513	259	5656	16	9671
B. Aggregate						
Hills	14065	6054	16339	70568	4205	111231
Terai	35898	30704	3674	40515	3682	114473
Grand Total	49963	36758	20013	111083	7887	225704

Source : Office files of ADB/N.

If we look at the FY 1986/87 and the disbursements in various sub-regions, inequitable imbalances in the population and credit distribution can be seen in the Far-western Hills (6% of the population getting 2% of the credit) and the Mid-western Hills (8% against 3%). The most favourable distribution is to be seen in the Central *Terai* (16% of the population getting 24 % of the credit), followed by the Eastern Hills (7% getting 10%). No significant favour can be seen for the Kathmandu Valley in that year.

Activities Financed in the Hills: The Livestock sector in general, has consumed relatively more credit in the hills. Out of the total disbursement for livestock, the hills (excluding the Kathmandu Valley) received as much as 62 per cent during the FY 1986/87, but dropped and stabilised to about 40 per cent afterwards. Crop production has typically consumed about 25 per cent and irrigation and farm mechanization about 15 per cent. The share in total horticultural loans is fluctuating and during the FY 1986/87 it was reported to be 50 per cent.

Out of the total disbursement of NR 199 million in the hills (excluding the Kathmandu Valley) during the FY 1986/87, 68 million (34%) went for livestock, 53 million (27%) for agro-industry and marketing, 49 million (25%) for crop production, and 14 million (7%) each for farm mechanization/irrigation and horticulture (Table 11).

On a per capita basis, ADB/N credit increased from NR 14 in 1981 to 35 in 1987. For the FY 1986/87, it was reported to be NR 41 for the Kathmandu Valley, 24 in the hills outside the Valley, and NR 46 in the *Terai*. On a regional basis, the lowest (NP 12) was for the Mid-western Hills, followed by the Far-western Hills (NR 14). A similar pattern can also be seen in credit disbursement per cultivable hectare (Table 12).

Disbursement through SFDP.

Aggregate Pattern and Share of the Hills: During the FY 1981/82, NR 12 million was disbursed through the SFDP. Out of this amount NR five million or 42 per cent was for the hills. Loan disbursements were nil for the Far-western Hills and very limited for the Mid-western Hills (Table 13). The total disbursement through SFDP rose substantially and reached almost 100 million during the FY 1986/87 (Table 14). The share of the hills increased during this period and reached 48 per cent of the total. Substantial improvements in disbursement were achieved for the Mid-western and Far-western Hills; their disbursements reported to be six and three per cent of the total disbursement respectively. The Central *Terai* was still leading during the year with a 20 per cent share and the Eastern *Terai* followed with a 15 per cent share (Table 15).

Activities Financed: Out of the total disbursements through SFDP, 40 per cent went for livestock followed by crop production (24%), farm mechanization/irrigation (18%), agro-industry and marketing (15%), and horticulture (3%). A slightly higher proportion for livestock (45%) and horticulture (15%) and a reduced proportion for farm mechanization/irrigation (11%) is seen in the hills outside the Kathmandu Valley.

Loan Operations of the Commercial Banks

Total Credit Operations. The total loans outstanding from commercial banks stood at 3.9 billion in July 1981, and this increased to 8.2 billion in April 1986. Out of the total credit, the *Terai* accounted for 43 per cent in 1981, and this decreased to 30 per cent in April 1986. Thus, the hills in total accounted for 57 and 62 per cent of the total credit supplied by the commercial banks (Table 15) in 1981 and 1986, respectively.

Note: The figures for each year were taken in mid-July, i.e. the end of the Nepalese fiscal year.

Table 11: Loan Disbursement by ADB/N During the FY 1986/87

(Amount in 000 Rs.)

Area	Crop Production	Irrigation Farm Mech.	Livestock	Ag-Ind. Market & W-House.	Horticult- ure-Tea	Total
A. Development Regions						
Eastern	51216	20679	35153	30005	7459	144512
Hills	15609	3738	11573	7152	3205	41277
Terai	35607	16941	23580	22853	4254	103235
Central	68628	33993	69627	61909	5710	239867
Hills	16884	4045	39817	29946	4623	95315
Kath. Val.	1817	728	18584	14479	95	35703
Outside						
Val.	15067	3317	21233	15467	4528	59612
Terai	51744	29948	29810	31963	1087	144552
Western	40878	17739	34442	36226	5001	134286
Hills	12851	4050	24068	22275	4368	67612
Terai	28027	13689	10374	13951	633	66674
Mid Western	8667	20059	20387	15640	6879	47656
Hills	2608	1792	7626	4248	927	17237
Terai	6059	18267	12761	11356	5952	30419
Far Western	13440	10097	7405	7175	1585	39708
Hills	3202	1245	3728	4028	1250	13453
Terai	10244	8852	3677	3142	335	26255
B. Aggregate						
Hills	51154	14870	86812	67685	14373	234894
Terai	131681	87697	80202	83270	12261	371135
Grand Total	182835	102567	167014	150955	26634	606029

Source : Office files of ADB/N.

Table 12 : Ratio of ADB/N Credit to Population and Cultivable Land

(In Rupees)

Area	Credit/Capita		Credit/Cultivable Hectare	
	1981	1987	1981	1987
A. Development Regions				
Eastern	11	33	42	151
Hills	8	25	28	93
Terai	13	39	54	201
Central	25	43	140	278
Hills	21	34	135	248
Kathmandu Valley	33	41	347	497
Outside Valley	15	31	86	191
Terai	29	52	144	302
Western	11	38	53	199
Hills	8	28	39	161
Terai	20	56	75	260
Mid Western	6	21	27	115
Hills	3	12	18	74
Terai	10	36	38	170
Far Western	5	25	25	148
Hills	2	14	13	89
Terai	11	44	40	226
B. Aggregate				
Hills	10	25	53	144
Terai	19	46	83	240
Grand Total	14	35	67	191

Source : Office files of ADB/N

Table 13 : Loan Disbursements through, SFDP - FY 1981/82
(Amount in '000 Rs.)

Area	Crop Production	Irrigation Farm Mech.	Livestock	Ag-Ind. Market & W-House.	Horticulture-Tea	Total
A. Development Regions						
Eastern	705	801	1279	300	59	3144
Hills	170	191	580	71	8	1026
Terai	535	610	693	229	51	2118
Central	753	857	2344	274	129	4357
Hills	482	320	1485	174	121	2582
Kath. Val.	71	6	94	19	0	190
Outside Val.	411	314	1391	155	121	2392
Terai	271	537	859	100	8	1775
Western	396	760	1876	642	63	3737
Hills	99	79	644	256	42	1120
Terai	297	681	1232	386	21	2617
Mid Western	120	475	448	55	22	1120
Hills	46	144	273	25	18	506
Terai	74	331	175	30	4	614
Far Western	13	47	48	1	0	109
Hills	0	0	0	0	0	0
Terai	13	47	48	1	0	109
B. Aggregate						
Hills	797	734	2988	526	189	5234
Terai	1190	2206	3007	746	84	7233
Grand Total	1987	2940	5995	1272	273	1246

Source : Office files of ADB/N

Table 14 : Loan Disbursements through SFDP - FY 1986/87

(Amount in 000 Rs.)

Area	Crop Production	Irrigation Farm Mech.	Livestock	Ag-Ind. Market & W-House	Horticulture-Tea	Total
A. Development Regions						
Eastern	5744	4091	7558	2348	486	20227
Hills	1585	803	2348	776	198	5710
Terai	4195	803	2348	776	198	5710
Central	9905	6557	16297	6810	1300	40869
Hills	5501	1845	9853	3329	916	2144
Kath. Val.	171	33	1516	166	33	1919
Outside Val.	5330	1812	8337	3163	883	19525
Terai	4404	4712	6444	3481	384	19425
Western	4524	2860	8835	3886	891	20996
Hills	1517	891	6009	2605	661	11683
Terai	3007	1969	2825	1281	230	9313
Mid Western	2592	3379	4730	1482	444	12627
Hills	862	905	2771	920	284	5742
Terai	1730	2474	1959	562	160	6885
Far Western	711	970	1868	694	251	4494
Hills	407	449	1037	545	231	2669
Terai	304	521	831	149	20	1825
B. Aggregate						
Hills	9872	4893	22018	8175	2290	47248
Terai	13604	12964	17270	7045	1082	51965
Grand Total	23476	17857	39288	15200	3372	99213

Source : Office files of ADB/N

Table 15: Total and Sectoral Credit Supplied by the Commercial Banks

Area	Total Credit		Total Private Sector Outstanding Credit		Total Agricultural Sector Outst. Credit	
	July-81	April-86	July-81	April-86	July-81	April-86
A. Development Regions						
Eastern	826	1620	22136	93890	8320	19227
Hills	59	129	2524	20315	1124	9493
Terai	767	1492	19612	73575	7196	9734
Central	2532	5512	117671	301169	48508	112949
Hills	1972	4493	91754	256529	41014	104675
Kathmandu Valley	1855	3923	81333	225060	36882	95972
Outside Valley	118	570	10421	81469	4182	8703
Terai	560	1019	25917	44640	7494	9274
Western	259	624	13260	104333	3202	10297
Hills	158	362	7813	49157	1745	5188
Terai	102	262	5447	55176	1457	5109
Mid Western	156	199	8060	18405	6359	6232
Hills	23	53	1248	4983	523	1743
Terai	133	146	6812	13422	5836	5109
Far Western	163	271	5013	10783	940	3800
Hills	12	31	1898	3047	415	1191
Terai	151	240	3115	7736	525	2699
B. Aggregate						
Hills	2224	5068	105237	334031	44821	122200
Terai	1712	3158	60903	194549	22508	30305
Grand Total	3935	8226	166140	528580	67329	152505

Source: Nepal Rastra Bank, Commercial Banking Statistics, November, 1987.

But since a highly disproportionate amount of credit was consumed by the Kathmandu Valley (47 and 48% in 1981 and 1986, respectively), the hills outside the Kathmandu Valley accounted for only nine and 14 per cent of the total credit outstanding in 1981 and 1987, respectively. This has to be compared with this area's share in population of 51 and 48 per cent. Region-wise, the shares of the Far-western and the Mid-western Hills were negligible in all types of credit. In total credit, even a relatively more developed area such as the Eastern Hills had a negligible share. As a result, credit per capita remained low in these regions at NR 32 in the Far-western Hills, NR 38 in the Mid-western Hills, and NR 76 in the Eastern Hills. Credit was the highest for the Kathmandu Valley with NR 4,518 and the lowest for the hills outside the Kathmandu Valley (NR 137).

Priority and Agricultural Sector Credit. Out of the total credit outstanding, commercial banks reported 334 million as outstanding for the priority sector and 122 million for the agricultural sector in April 1986. Out of this amount the hills outside the Kathmandu Valley accounted for only 21 per cent in priority sector credit and 17 per cent in agricultural sector credit. Kathmandu Valley accounted for 43 and 63 per cent and the *Terai* accounted for 37 and 20 per cent in the priority and agricultural sectors respectively. On a per capita basis, the credit for the priority and agricultural sectors was negligible in all areas outside the Kathmandu Valley.

Credit-Deposit Ratio. Ironically, the hills in general generated more deposits than the credit they received. As a result, the credit/deposit ratio in the hills stood at only 70 per cent in April 1986, down from 79 per cent in 1981. The ratio for these years stood at 145 and 134 per cent in the *Terai* - implying absorption of more credit than the generation of deposits. This ratio was lowest for the Far-western Hills (45%) and the Mid-western Hills (60%) in 1986 (Table 16).

Overall Pattern and Factors of Institutional Credit Operations in the Hills

Overall Pattern

The overall pattern of loans disbursed through ADB/N in the hills over time has been as follows.

- o ADB/N has substantially expanded its branches and the SFDP network in the hills during the last 15 years - more so in the last five years. This has helped to enhance the accessibility of the population in the hills to ADB/N credit outlets.
- o The share in the total disbursement of the hills has remained low compared either to its share in the population or to cultivable land. An increasing share of the hills in the total disbursement has, however, been a persistent trend.
- o The hills have a higher share in the disbursements for livestock loans and a lower share for irrigation.

The overall pattern of the loan operations of the two State-owned commercial banks has been as follows.

- o The share of credit, either for the agricultural or the priority sector, which are activities suitable for rural areas, has been very limited compared to the total credit operations of the commercial banks.

Table 16: Credit Available from Commercial Banks (1981 and 1986) on a Per Capita Basis (Deposit and Sectorwise).

Area	Credit Capita		Credit/Deposit		Priority Sector Credit/Capita		Agricultural Sector Credit/Capita	
	NR 1981	NR 1986	1981	1986	1981	1986	1981	1986
A. Development Regions								
Eastern	223	373	164	167	6	22	2	4
Hills	37	76	62	79	2	12	1	6
Terai	362	560	187	185	9	28	3	4
Central	515	986	91	76	24	54	10	20
Hills	780	1613	83	70	36	92	16	38
Kathmandu Valley	2419	4518	84	64	106	259	48	111
Outside Valley	67	297	77	203	6	16	3	3
Terai	234	363	133	126	11	16	3	3
Western	83	175	67	67	4	29	1	3
Hills	72	152	69	67	4	21	1	2
Terai	106	220	64	67	6	46	2	4
Mid Western	80	88	86	60	4	8	3	3
Hills	18	38	40	60	1	4	0	1
Terai	197	171	108	59	10	16	9	5
Far Western	124	173	141	150	4	7	1	2
Hills	13	32	28	45	2	3	0	1
Terai	356	404	208	214	7	13	1	5
B. Aggregate								
Hills	263	549	70	79	12	36	5	13
Terai	261	390	145	134	9	24	3	4
Grand Total	262	474	99	85	11	30	4	9

Source: Nepal Rastra Bank, Commercial Banking Statistics, November, 1987.

- o The hills, excluding the Kathmandu Valley, has a very limited share in the total debt for either the priority or agricultural sector. It has been concentrated disproportionately in the Kathmandu Valley.
- o The hills, in general, have a lower share in the total credit compared to their contribution to total deposits. Thus, the flow of capital from the Hills to the *Terai* has been a general trend over time.

A number of factors, both internal and external to the banking institution, explain the lower share of the hills in institutional credit. Among internal factors, the financial viability of credit operations in the hills is most important. The cost of maintaining personnel in the hills is higher due to various types of allowances related to the remoteness of the area. Similarly, the cost of mobilization, incurred as travelling and daily allowances, is also higher. In contrast, the average loan size and the volume of business are smaller. As a result, many branches in the hills are a financial drain. As an example, all the 28 ADB/N branches, losing chronically in the last three years, beginning in 1985/86, are in the hills and most of them are located in the higher regions.

Branches in the hills also entail a higher cost of supervision and pose difficulties in providing support in terms of logistics. They are inaccessible from the capital city during several months of the year and staff deployment is almost always a problem.

Among factors external to the institution, the lack of income generating activities appropriate for the hills is the most serious problem. Limited infrastructural development hinders both the input supply and output marketing services. For example, out of the total irrigated area of 198,000 ha, until the end of the Fifth Plan (1975-1980), less than 18,000 ha were in the hills. The Seventh Plan targeted an increase in irrigation facilities of 236,000 additional hectares, but only about 24 per cent of these were to be in the hills¹⁰. This situation severely restricts the adoption of irrigation-biased improved technologies and in turn the working capital loans for crop production.

The hills are in a disadvantageous position, not only in institutional credit but also in receiving other production inputs. As an example, the fertilizer sales' pattern in the Kingdom (Table 17) indicated that during the FY 1976/77, the hills, excluding the Kathmandu Valley, accounted for 5,000 MT or about 13 per cent of the total fertiliser sales. Within the next 10 years, this had increased impressively and reached 24,000 MT during 1985/86. However, its share in the total is only about 24 per cent. This has to be compared with its share of 49 per cent in the cultivable area.

This situation is again rooted in the limited level of transportation facilities in the hills, where most of the transportation is done either by human beings or by mules. This results in a prohibitively high cost of transportation. It not only affects the provision of modern inputs but also the marketing of output. Thus, any grand-scale development programmes in the hills are out of the question.

10.HMG, National Planning Commission, *Sataun Yojana* (Seventh Plan), pp 406-413.

Table 17 : Fertiliser Sales of the Agricultural Inputs' Corporation

Area	Fertiliser Sales			
	Absolute Sales		Relative Share	
	1976/77	1985/86	1976/77	1985/86
	M. TON		PER CENT	
A. Development Regions				
Eastern	4186	14508	11	14
Hills	776	2220	2	2
Terai	3410	12288	9	12
Central	26086	62985	69	62
Hills	16622	30852	44	30
Kath. Val.	14412	14984	38	15
Outside. Val.	2210	15868	6	16
Terai	9464	32133	25	31
Western	5472	18099	14	18
Hills	1680	4701	4	5
Terai	3792	13398	10	13
Mid Western	1261	4305	3	4
Hills	197	923	1	1
Terai	1063	3382	3	3
Far Western	837	2210	2	2
Hills	146	726	0	1
Terai	691	1484	2	1
B. Aggregate				
HILLS	19422	39422	51	39
TERAI	18421	62685	49	61
Grand Total	37842	102107	100	100

INNOVATIVE PROGRAMMES INTRODUCED BY ADB/N IN THE HILLS

Lack of a proportionate share for the hills of the total institutional credit raises the question of social justice. However, it goes even beyond this and also implies that the hills, in general, lack sufficient opportunities for initiating additional income generating activities. This, in turn, raises the question of whether the hills, under the circumstances, are a sustainable proposition. More specifically we can ask, "will the resource base of the hills sustain the burden of the current population and its inevitable growth in the coming years?" And even if it can sustain this, can we expect a substantial improvement in the quality of life in the foreseeable future?

These are difficult questions to answer and involve a lot of 'if' and 'buts'. One such 'ifs' pertains to the possibility of introducing changes in technology in a number of areas. These technological changes encompass a large number of fields including agricultural, engineering, and organization and management science. In this section, we shall first try to explore the areas where ADB/N is seeking such changes.

Irrigation Development

The foregoing analysis showed that the hills produced less food compared to its share of population. As a result, 37 districts in the hills in the FY 1986/87 were found to be deficit in food¹¹. This deficit is partly met by the provision of subsidised food through Nepal Food Corporation, but most of it is not met at all. This situation will worsen if impressive gains are not achieved on the production front. The Government's capability to provide subsidised food in the hills is severely limited due to the prohibitively high transportation costs. Secondly, without improvements in food production the purchasing capacity of the hills' population will deteriorate further and their effective demands will be unfavourably affected.

Lack of proper irrigation facilities has been a principal limiting factor in the adoption of improved farming practices in the hills. This factor again can be traced to a number of other factors. Although Nepal boasts of large and perennial river systems, they can be harnessed only in narrow river valleys, and the hill slopes are mostly dry in the non-monsoon seasons. Secondly, most of the irrigation schemes are bound to be on a small-scale and thus, are not suitable for applying the lengthy and manpower-intensive procedures of public sector irrigation development programmes.

ADB/N has been testing and multiplying a number of schemes designed to overcome these shortcomings. In hardware technology, it has been pilot-testing lift-irrigation systems that are suitable for areas in river valleys that cannot be irrigated through the gravity-flow system. Known as *tars* in Nepal, they are located 10 to 50 meters above the river basins and so require a substantial lift. The current approach is to generate power locally through water turbines and use it for lifting the water. The initial results are encouraging and this technology will eventually be applied in suitable areas.

As stated, water availability is limited on the hill ridges and slopes. To tackle this problem the Bank pilot-tested a 'sprinkler' irrigation technology during the FY 1987/88, and found it to be effective. As a result, large-scale application of this technology has been initiated.

11.HMG, DFAMS, *Nepal Adhirajya Ko Upbhogya Khadyanna Bibaran* (Edible Food Supply in Nepal, 1986/87), Kathmandu, 1987.

10.HMG, National Planning Commission, *Seventh Five Year Plan*, pp 406-413.

The most innovative of the changes that the ADB/N has tested successfully is in the field of organizational technology. ADB/N, under the Small Farmers' Development Programme, organised the would-be beneficiaries into groups which in turn formed, among themselves, a construction committee. This committee takes charge of the construction activities of the project together with the advisory engineering service made available by ADB/N. Once the construction activity is completed, the committee is converted into a water user's group which is responsible for repairs and maintenance. At this stage, ADB/N, on a selective basis, provides technical services for launching agro-forestry and crop development programmes.

Under this methodology, over 31,000 ha of land has been brought under irrigation in the last five years. Out of a total of 31 schemes, 16 were in the hills and 15 in the *Terai*. However, because the hills have much lower coverage per scheme, over 80 per cent of the irrigated area is in the *Terai*. Even more projects are under construction now - eight of which are in the hills (Table 18). A gradual increase in the share of the hills, in total area irrigated, is the future policy goal of the ADB/N.

Development of Alternative Energy Sources

Environmental degradation has been a continuing feature in Nepal over the last two decades. It is more acute in the hills, although a systematic adverse effect in the *Terai* is inevitable in the long run. The immediate cause of environmental degradation is the need for bringing more land under cultivation to feed the growing population. But, perhaps more importantly, it can be traced to the need for energy for household consumption. In Nepal, about 76 per cent of the total energy consumed is in the form of fuelwood¹², and this puts tremendous pressure on forest resources. In areas where forest resources have depleted substantially, dung, an important source of organic manure in Nepal, is dried and used as fuel. This in turn has affected food production and the sustainability of the agricultural system.

The basic strategy of the ADB/N is to propagate the use of biogas plants and water turbines in suitable areas. Technically, biogas is found to be popular in the *Terai*, low-lying hill valleys, and the lower slopes or river basins in the hills. By the end of 1987/88 over 3,000 biogas plants had been installed throughout the Kingdom. Over three-fourths of the plants had been installed in the hills and a little over 20 per cent of them in the hills outside the Kathmandu Valley. The Eastern *Terai* had the largest share (25%) followed by the Central *Terai* (24%).

The use of water turbines has been propagated more as a device for generating mechanical power to run food processing equipment such as hullers, mills, or expellers. Most of them are in the range of 10 to 25 kw and a significant proportion of them generate electricity for local consumption. By the FY 1987/88 521, a number of water turbines had been installed; four per cent of these are in the hills. The Western Hills top the list with a 38 per cent share and the Central Hills follow with a 22 per cent share (Table 19). These turbines are the only source of energy of a commercial quality which does not depend upon imported carbon fuels.

12. HMG, Water and Energy Commission Secretariat, Energy Sector Synopsis Report, 1985-86, Kathmandu.

Table 18 : Community Irrigation Schemes Launched by ADB/N (Until FY 1987/88)

Area	Completed Projects			Ongoing Projects		
	No.	Ha	% of Total	No.	Ha	% of Total
A. Development Regions						
Eastern	4	629	20	2	383	38
Hills	0	0	0	0	0	0
Terai	4	629	20	2	383	38
Central	19	1434	46	6	491	48
Hills	14	529	17	5	91	9
Kath. Val.	0	0	0	0	0	0
Outside Val.	14	529	17	5	91	9
Terai	5	905	29	1	400	39
Western	2	225	7	2	43	4
Hills	1	13	0	2	43	4
Terai	1	212	7	0	0	0
Mid Western	6	846	27	1	100	10
Hills	1	25	1	100	10	10
Terai	5	821	26	0	0	0
Far Western	0	0	0	0	0	0
Hills	0	0	0	0	0	0
Terai	0	0	0	0	0	0
B. Aggregate						
Hills	16	567	18	8	234	23
Terai	15	2567	82	3	783	77
Grand Total	31	3134	100	11	1017	100

Source : Office files of ADB/N.

Table 19 : Alternate Energy Schemes Developed by ADB/N (Until FY 1987/88)

Area	Biogas Plants		Water Turbine Schemes	
	Absolute	Relative	Absolute	Relative
A. Development Regions				
Eastern	802	26	65	12
Hills	51	2	63	12
Terai	751	25	2	0
Central	847	28	120	23
Hills	116	4	113	22
Kath. Val.	42	1	12	2
Outside Val.	74	2	101	19
Terai	731	24	7	1
Western	1056	35	208	40
Hills	487	16	199	38
Terai	569	19	9	2
Mid Western	264	9	96	18
Hills	13	0	83	16
Terai	251	8	13	2
Far Western	60	2	32	6
Hills	10	0	31	6
Terai	50	2	1	0
B. Aggregate				
Hills	677	22	489	94
Terai	2352	78	32	6
Grand Total	3029	100	521	100

Source : Office files of ADB/N.

RECOMMENDED CREDIT POLICY FOR THE NEPALESE HILLS

Credit Programming and Technology

One of the fundamental questions raised in relation to agricultural and rural credit is whether the activities to be financed by the credit should be programmed by the credit institutions or not? A related question is should the credit institutions limit themselves to financial mediation and forget technology dissemination or adoption? One study done in Columbia suggests that there is no close relationship between the amount loaned for different seasonal crops and the area planted or the production of these crops¹³. The argument centres around the term 'fungibility' which implies that credit borrowers devote their own resources to areas other than the designated activities which otherwise could have been devoted to these designated activities.

The argument for simple "financial intermediation", through an agricultural credit institution, is basically inspired by the concept of a "functional specialization" for the credit institutions. It also reflects the self-interests of the credit institutions as it limits the scope of the credit operation and significantly reduces the overhead costs.

The arguments in favour of limiting the scope of credit operations may have empirical validity in certain contexts and theoretical rigour for argument's sake. But these facts should not overwhelm the credit policy for the Nepalese Hills. Credit programming, in terms of activities' finances, is a meaningful exercise, especially when activities selected match both the ecological and immediate economic considerations. It puts some burden of supervision, on the part of the credit institution, but it pays off in terms of the physical creation of capital for income-generating activities. In the absence of effective credit programming and supervision, it might be possible that the institutional credit finances the gradual migration of the population from the hills to the *Terai*. Similarly, emphasis on the transfer of appropriate technology along with the flow of credit has some distinct advantages. Firstly, as we have seen, credit institutions have a fairly widespread representation in the hills and so add significantly to the other line agency outlets. Secondly, not all income-generating activities enjoy government extension services. Examples in Nepal include energy development, food processing, etc. Thus, credit institutions, in some cases, are bound to disseminate appropriate technology for the development of a particular sector.

In sum, institutional agricultural credit should be tied to the selection and dissemination of appropriate technology and the availability of critical inputs. Credit institutions should not hesitate to intervene in the selective process for technology adaptation and dissemination and provision of critical inputs. This policy has always distinguished ADB/N from most of the other financial institutions. Selective intervention through ADB/N takes various forms. It procures critical inputs from international markets, maintains appropriate technology research and dissemination centres, operates training centres to impart skills to the farmers, and retains a farmers communications' group. Its rank of credit officers is filled by agricultural graduates and its engineering services are expanding.

A typical settlement in the rural areas in the hills starts at 600-900 m.a.s.l. and may go up to 2,600 - 3,300 m. In other words, altitudinal variation is high in the Nepalese Hills. As a result, micro-climatic zones abound. Its implications are many. Firstly, any grand-scale product

13. Vogel, Robert C. and Larson, Donald W. "Illusion and Reality in Allocating Agricultural Credit : The Example of Columbia", in Adams, Dale W. et al. (eds), *Undermining Rural Development with Cheap Credit*. , Boulder and London: Westview Press 1984.

specialization is ruled out, but at the same time, this allows for the potential of exchanging products within the village. This latter situation becomes attractive in the context of the primitive state of development of transportation facilities. Thus, financing should be made available for diverse economic activities in the hills, so as to match them with climatic variation. Where transportation facilities are available and a specific micro-climatic zone is bigger (such as a long stretch of river valley), financing may be made available for specific products.

Institutional and Policy Aspects

Provision of Community Level Services

Agricultural credit operations in some hill areas suffer from lack of general awareness of the local population. This may require a provision for adult literacy programmes. Similarly, the community assets may have depleted extensively and may not have the capacity to support some economic activities. For example, if forest resources have depleted extensively, livestock raising may not be sustainable. In other cases, income-generating activities may be expanded only with the participation of the community as a whole; as in the case of the development of irrigation schemes.

Our experience in the SFDP has shown that these activities are not costly, and are often within the reach of the local population, although they are hindered by the lack of organization at the community level. Creation of a well-structured group often generates the capability of undertaking these activities with limited external support. This support for organizing farmers into groups, with the objective of building their 'receiving mechanism' is, of course, outside the purview of conventional banking practices. However, if credit operations are to be made successful, especially in depressed areas, this intervention becomes a must.

Incorporation of the Savings' Mobilization Programme

Rural financial projects in low income countries have continued to stress loans for agriculture while neglecting 'saving mobilization' in rural areas¹⁴. The assumption behind the policy is that the poor are incapable of generating savings. While it might be true that the poor in rural areas may not have deposit accounts in the banks, nevertheless, they save. Their savings are mostly in the form of tin-roofs for their houses, increased numbers of livestock or an increased number of metal utensils in the house with a re-sale value. This may even be in the form of gold or silver ornaments.

Empirical evidence from the SFDP operation shows that small farmers have a strong tendency to save. No survey has yet been conducted to assess the savings in the form of real assets, but savings in monetary form reached NR 6 million under the SFDP. This amount has the tendency to have high growth rate. It has also been seen that women are more inclined to save than men.

14. Vogel, Robert C., "Saving Mobilization : The Forgotten Half of Rural Finance", in Adams, Dale w. et al., Ibid, pp 248-265.

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Director: Dr. E.F. Tacke

Deputy Director: Dr. R.P. Yadav

International Centre for Integrated Mountain Development

G.P.O. Box 3226, Kathmandu, Nepal

Telex : 2439 ICIMOD NP

Cable : ICIMOD NEPAL

Telephone : (977-1) 525313

Fax : (977-1) 524509