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Interim Report
Part I & II.

LOCAL LEVEL PLANNING AND RELATED TRAINING PROGRAMS IN RAPTI ZONE

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F O R E W O R D

This "Local Level Planning and Related Training" project has been a pioneering venture in decentralized local level planning for Nepal. The USAID sponsored Rapti Integrated Rural Development Project is the largest and only IRD project which covers one whole Zone including five districts. A draft of the Decentralization Rules have been prepared. After approval of these Rules the procedures of decentralized local level planning will be considerably strengthened both at the Village Panchayat level and the District Panchayat level. Hence in many ways, this project which USAID and LCRC have undertaken can be viewed as an experiment project which would prepare and test the methods of planning and training materials which may be useful for other IRD projects and the rest of the districts in the nation.

The process of decentralization was started over two decades ago with the advent of the Panchayat system in Nepal. The six Five Year Plans have gradually provided infrastructures for development, improved agricultural inputs, raised the standards of education and health and generally ameliorated living conditions in the entire kingdom. The Decentralization Act of 2039 B.S. was the next logical step to strengthen this process of decentralization of power and delegation of authority to local level institutions and to district and sub-district officials. This project was undertaken to train local level personnel in methods of planning from below and reverse the trend of top down planning.

However, if local level planning and implementation is to becom a reality a number of key inputs are needed: First, the new organizational structure needs to be specified, infrastructure and staffing provided. Second, locally elected leaders and district and sub-district level officials need to be trained in planning and implementation procedures. Third, training manuals guidelines and other reading materials need to be prepared, formats need to be standardized and procedures simplified in order that planning from below can become realistic. Fourth, financial budget ceilings need to be disaggregated to district and village panchayat level by each sectoral line ministry. And finally, integration or convergence of inter-sectoral planning and implementation at district, service centre/Ilaka and village panchayat levels, will need to emerge by trial and error and better methods of co-ordination and streamlining of procedures evelved.

Although Rome was not built in one day, a beginning must be made. The work done under the project needs to be circulated among the line ministries to get their re-actions. Integrated rural development will need the close collaboration and technical inputs from all sectoral line ministries and also the elected leaders at the local level. I hope that this report will be of use to the different line agencies as a case study in methods of micro-regional planning and training, experiences of which can be applied to other IRD projects.

Mukti Prasad Kafle,
Secretary,
Ministry of Panchayat
& Local Development.

Preface and Acknowledgments

This project was undertaken by the Language, Culture, Training and Research Centre (LCRC) in August 1983 and was scheduled to be completed by March 1984. The project was undertaken with the anticipation that the Rules governing the Decentralization Act of B.S. 2039 (1982) would be promulgated during the life of the project and would therefore come into effect for the 2041/42 financial year. The project was therefore phased in a manner that certain local level planning inputs at the Village Panchayat and District level would be available at the time of finalizing district plans and budgets by the Project Co-ordinator/USAID/RIRD financial planning cycle for the 2041/42 financial year.

Unfortunately there have been a number of inordinate delays due to which the outputs of this project were not available for the 2041/42 planning year. The Decentralization Rules have been drafted and submitted to HMG but have not yet been promulgated. The King's Camp visit to the Mid-western Region required the attendance of a member of officials and elected leaders and consequently the first training cycles at the district and village panchayat levels in all five districts originally scheduled for 9-30 November 1983 were set back to 15 December 1983 - 15 January 1984. On account of these delays and the lack of the legal framework of the Decentralization Rules, USAID decided after discussions with LCRC, not to conduct the second cycle of planning training.

After the first cycle of training at the village panchayat and district levels, 4-5 Panchayats or one Ilaka in each district were to prepare plans as case studies. Research assistants of LCRC followed up the first cycle of training and assisted in these plan preparations where necessary and brought back all the Ward level and Village Panchayat level Questionnaires. These Ward level data have been tabulated and aggregated on to the Village Panchayat level Questionnaire. The Village Panchayat level data have then been tabulated for the Ilaka level (where the VPs constituted one Ilaka) or simply summed and tabulated for each district.

This Interim Report is therefore comprised of three parts: Part I summarizes the orientation meeting (separately detailed as Report No. 1) and the experience of the first training cycle in the five districts and a limited feed-back. Part II is the case Study of Ilaka No. 2 of Rukum district. Part III gives the tabulations of the remaining four districts, of the data gathered by the local people at the ward level and the Village Panchayat level, their resource inventories, their needs by each sector and their VP plan priorities. Although plan outputs by local people cannot be expected to be very sophisticated, the results indicate that with even modest training inputs the lower tier of Village Panchayat planning can be operationalized. Unfortunately critical validation on the quality of the planning output could

sector at the second training cycle. A description of the data is presented only for the Rukum district four VP plans. For the other four districts the similar tables are presented as an Appendix in Interim Report, Part III.

Many people have generally contributed of their time for this project. I am very thankful to the Secretary of MPLD, Mr. Mukti Prasad Kafle for having acknowledged in his foreword to this report. The kind help rendered to us by many individuals at different stages of this project. However, I must express my special gratitude to Mr. Bhoj Raj Ghimire (Vice Chairman of the High Level Decentralization Committee), Mr. Sant Bahadur Rai (formerly Additional Secretary, MPLD, presently Secretary, Ministry of Supplies); Mr. Rameshwor Shah (RIRD Project Co-ordinator); Mr. Tony Stebbins (formerly of PADCO); Mr. William Douglas (formerly Chief, RAD USAID/Nepal); Mr. Richard Nishihara (formerly Acting Chief) and Dr. Carl Dutto (Chief RAD, USAID/Nepal); for their moral support and counsel at different stages of project.

I would also like to express my thanks to all the Honourable Rastriya Panchayat Members, the Savapatis, the Up-Savapatis, Members of the District Panchayats, the Pradhan Panchas, Up-Pradhan Panchas and Ward members for attending the orientation meeting and/or the training sessions and assisting in the preparation of the village Panchayat plans.

I would like to thank Zonal Commissioner, Mr. N. Basnyat, the line ministry officials of the zonal level and the district level

for attending the orientation meeting and district training courses. We would particularly wish to thank the LDOs and Sevapatis of the five districts for making arrangements for both the district and village panchayat level training courses. Without their active co-operation it would not have been possible to conduct the training courses.

I would like to thank the Consultants from MPLD and other line ministries who have prepared the background papers and assisted with the training programmes in all five districts: Prof. U. M. Malla (Member, National Planning Commission), Mr. Khem R. Nepal (MPLD), Mr. K.N. Sharma (Executive Director CRTI), Mr. S.C. Shrestha (Accountant General's Office), Mr. C.M. Bajracharya (FCO, Integrated Hill Development Project), Mr. H.P. Gurung (DGM, Dept. of Agriculture), Mr. S.G. Shah (Dept. of Livestock), Mr. K.B. Malla, (Project Chief, Nepal Remote Sensing Centre), Mr. B. Upadya, and Mr. S.L. Shrestha (USAID/Nepal).

I would like to thank my colleagues, the professional and management staff of LCRC for undertaking this very difficult pioneering project in decentralized planning and training: Dr. Prodipto Roy (Chief Consultant, Sociologist/Planner), Mr. Bhoj Raj Marhatta (Executive Director, LCRC), Mr. Arjun Shah (Agricultural Economist), Mr. Bharat Devkota (Economist), and the Research Assistants. Mr. Harka Gurung, Mr. T.D. Shah, Mr. Ashok Gurung, Mr. Babu Kazi, Mr. Bimal Marhatta, Mr. Narendra Gurung and Mrs. Shanti Rajbhandary.

Finally, we would like to convey our gratitude to USAID/Nepal for financially supporting this project.

Sant Bahadur Gurung
Project Leader,
Local Level Planning &
Related Training Project.

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PART I

I. Introduction

This Interim Report is being prepared because the training cycles had to be delayed due to the non-availability of HMG Rules covering the Decentralization Act 1982. It was decided to curtail this project since the Rules have not been officially promulgated. This report will give a summary of the design phase and the orientation meeting; the experience of the first training cycle at the district and village panchayat levels in all five districts; and the planning experience in 4/5 Village Panchayats or one Ilaka in each district. This last operation lacks the validation of the district level discussions to check with the respective line ministry personnel both the accuracy and utility of VP resource inventory and plans.

It was felt that until the Decentralization Rules are promulgated there would not be much interest nor utility to hold the district level discussions nor a final workshop on these new planning procedures. Hence this interim report reflects in many ways that the project was incomplete. The training for these new planning procedures started with an orientation at the Zonal Level, went to the district and then to Village Panchayat and Ward Level. The test of whether training was understood would have been the

relative accuracy and completion of VP plans, the district level screening & planning and a workshop at Zonal Level to discuss problems, deletions from and additions to the training material.

Finally, without the legal authorization of the Rules and the budget ceilings by sector, the local level planning exercise cannot be a realistic experience but merely a wish list. Further the cycle envisaged in the Rules should start in Kartik (Oct.-Nov.) and provide sufficient time for the centre, to district, and district to VP budget allocation by sector. Then sufficient time can be provided for VP and district level planning and referrals back and forth until the plan is finalized.

This Interim Report therefore covers the following:

1. A summary of the Orientation Meetings held at Tulsipur, 26-28 Sept. 1983 (complete report submitted separately as Report No. 1.);
2. A summary of the 1st Training Cycle;
3. Case study of one Ilaka in Rukum district; and
4. Recommendations.

Appendix: Case Study tables for Rolpa, Piuthan, Salyan and Dang districts.

II. Orientation Meeting-Summary

The orientation meeting was held from Sept. 26-28, 1983, a great deal of preparation had gone into the overall design of the project and the sequence of subsequent training programmes to be held at district and panchayat level. The primary purpose of the Orientation Meetings are given on p. 8 of Report No. 1.

i. To highlight the objectives of the "Local Level Planning and Related Training" project being conducted by L.C.R.C.

ii. To inform the officials, political leaders and subject matter specialists about the Decentralization Act (and the forthcoming Decentralization Rules) and their implication on the process of Local Level planning and implementation.

iii. To decide upon the dates, venues and local arrangements in consultation with the key participants.

The preparation for the Orientation Meeting included papers by the key speakers and the sectoral ministry Consultants. It was necessary to have very high level Consultants to instil credibility among the officials and political leadership about the implications of the decentralized method of planning once the Rules were promulgated. Since only certain officials in

the ministry and members of the High Level Decentralization Committee were party to the deliberations taking place within the government, LCRC had to use a few of these persons as Consultants and persuade them to come to this Orientation Meeting. A copy of the papers prepared along with a first draft of the formats to be used in the training were distributed.

Attendance was very good throughout the three days of the seminar and there was lively participation throughout all sessions and often into the evening in smaller groups. A total of 86 people participated listed on pp 44-52 of Report No. 1. The Vice Chairman of the High Level Decentralization Committee and the two Additional Secretaries of MPLD were the key speakers. All five LDO's and all five district Panchayat Presidents were present. In addition the Zonal Commissioner, eight Zonal Level line ministry officials, nine zonal and district representatives of class organizations, twelve district level line ministry officials, sixteen members of the Project Co-ordinator's Office, five members from PADCO, three members from USAID/RAD and eight members from LCRC were also present.

There were in total seven sessions each with key speakers and discussions. (See Programme pp. 1-7). The orientation meeting opened with an Inaugural session with Mr. Bhoj Raj Ghimire,

Vice-Chairman of the High Level Decentralization Committee as the main speaker. Mr. Sant Bahadur Gurung presented the highlights of the orientation meeting and future training programme and various speakers gave a few words to elaborate the main purposes of the meeting. The session was closed by remarks by the Chairman Mr. Narayan Bahadur Basnyet, the Zonal Commissioner and a vote of thanks by Mr. Arjun Shah.

In the first Plenary Session the present Secretary of MPLD Mr. Mukti Prasad Kafle spoke about the "Formulation and Implementation of the Local Development Plan" for each district. (See pp. 14-17 Report No. 1). There were a number of issues raised and a lively discussion on the implications of decentralized planning followed. Mr. Kafle indicated that since the Decentralization Rules were still being formulated it may be possible to incorporate some of the suggestions made. The ministry was collecting suggestions by holding regional meetings all over the country. The Western regional meetings was held in Nepalgunj about a month after the orientation meeting.

In the second plenary session the main speakers were Mr. Sant Bahadur Gurung and Dr. Prodipto Roy and dealt primarily with how the technology of local level planning would be imparted through the different cycles of training at district and Village Panchayat

Level. The Dewey philosophy of "learning by doing" was to be used in that the local ward and Village Panchayat leaders assisted by the VP Secretary would need to actually do their own planning by preparing a resource inventory, needs assessment and select priorities. While this type of bottom up planning may not result in the most accurate resource base, the local people would begin to understand their own resources and their standards of needs better. Eventually by planning their own projects - some of which are carried out to implementation - the local people will begin to better appreciate the technicalities, costs and financial management of projects. Thus by bringing planning and implementation down to the lowest levels the process of planning would be steadily de-mythologized.

The third plenary session was devoted to sectoral planning. Mr. H.P. Gurung spoke on Agriculture and Horticulture planning including irrigation, marketing and service centres. Mr. S.G. Shah talked about Livestock development and how basic data on animal population and production could be gathered and used for planning. Mr. Batuk Upadhyaya spoke on forestry and soil conservation. Mr. Ujal Pradhan and Saroj Basnyet spoke on irrigation and water management and Mr. Kamal Prasad Lal Karna spoke on education development.

The fourth plenary session was devoted to the "RIRDP budget release procedures". The main speakers were the Project Co-ordinator Mr. Rameshwor Shah and Mr. S.L. Shrestha of the USAID/ Nepal office.

The fifth plenary session was the last substantive area of discussion and centered around the "User's Committee". The main speaker was the former Additional Secretary, MPLD, Mr. S.B. Rai. There was a lively discussion about the ability of local user's groups to manage development projects.

In the closing ceremony various participants gave their impressions as to how the Decentralized Act and Rules could be a welcome step in the development process.

In the sixth informal session the LDO's and district Panchayat Presidents from all five districts met with the Project leaders to set down dates and venues for the first cycle of training programmes at the district and Panchayat level.

III. The First Training Cycle (15 Dec. 1983 - 15 Jan. 1984)

The first training cycle was due to start in November and be completed in December according to the contract Phase II. The first set of tentative dates for the first cycle of training to be held suggested at the Orientation Meetings were 9-30 November

1983. These dates were revised to 17 November to 12 December at the Orientation Meeting. After the Regional meetings of the High Level Decentralization Committee at Nepalgunj the dates were again further set back to 15 December 1983 to 15 January 1984. Since the RIRD Project Co-ordinator, LDOs and Savapathis of all five districts of the Zone were present at the Nepalgunj Regional meeting, the Project Leader finalized the above dates and places for all training programmes in consultation with the Training Officer of the PCO's office.

The cycle of training was held at two levels - the District Level and the Village Panchayat Level. Three District level training sessions were held for the five districts and five Village Panchayat training sessions were held, one for each district. Typically the district level training preceded the Village Panchayat training except in the case of Rolpa district where the order was reversed. A graphic representation of actual training dates is given in Figure 1 for both the District and Village Panchayat training courses.

1. <u>District Level</u>

At the district level three training programmes were held:

1. For Rolpa and Piuthan districts at Bhingri from 21-23 December 1983. (Poush 6-8, 2040).

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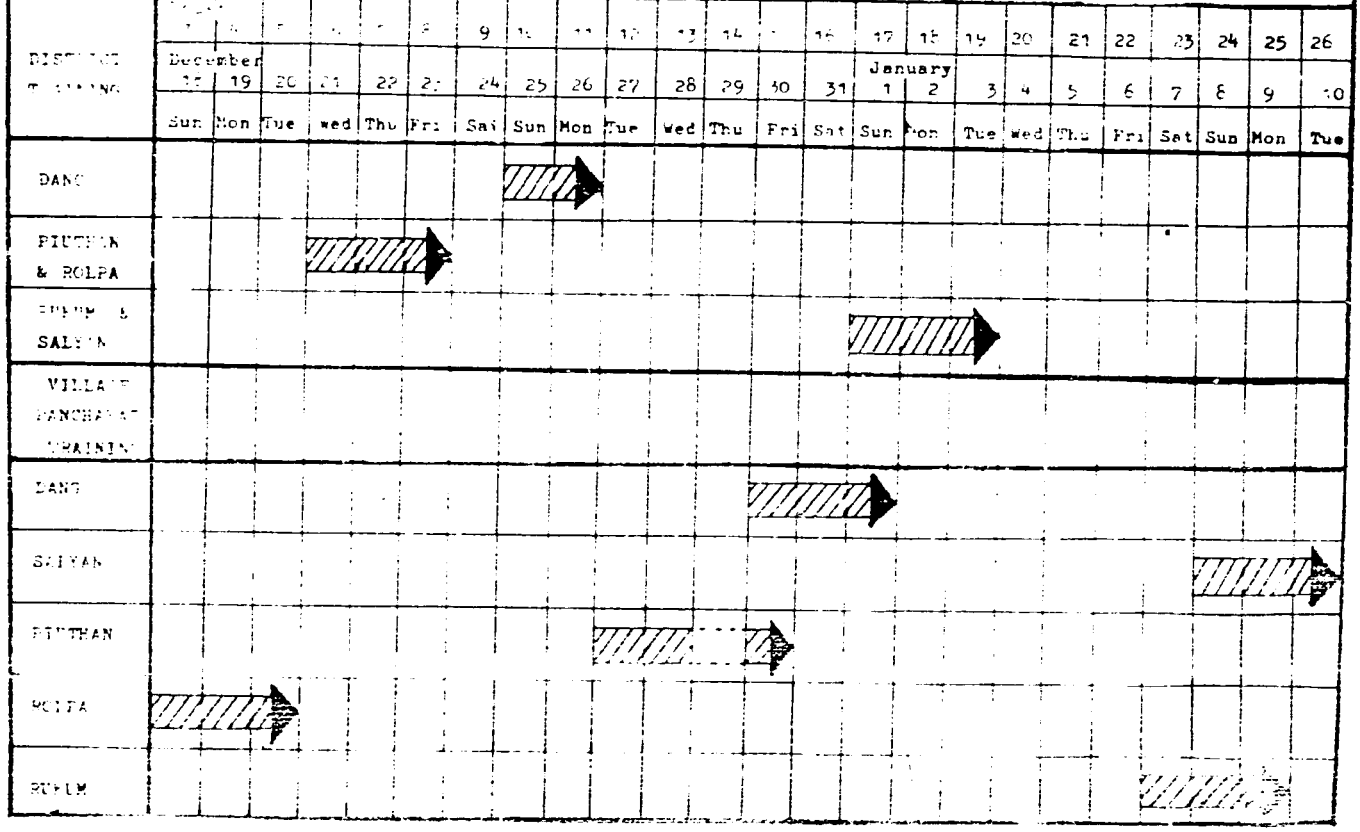
DIAGRAM [illegible]. [illegible] PLANNING AND [illegible] TRAINING PROGRAMME IN [illegible] ZONE ([illegible])



2. For Dang/Deukhuri district at Ghorai 25-26 December, 1983. (Poush 10-11, 2040).

3. For Salyan and Rukum districts at Chaurjahari 1-3 January, 1984. (Poush 17-19, 2040).

The district level training was trimmed down to three days instead of four days as planned earlier due to constraints of logistics, finances and availability of high level technical manpower. (In Dang the training was for two days as most officials had attended the orientation meeting).

LCRC had to field extremely high level manpower from various line ministries and the High Level Decentralisation Committee because it was difficult for a private organization to have access to Rules which are not yet published and further neither the politicians nor the officials from the line agencies would be able to clear their doubts about the implications of decentralised planning. The list of consultants and the detailed time-table with speakers has been submitted with the report on Phase II of the project. The typical curriculum is attached here as Table 2.

The Participant/Trainees for the district level training course included the Savapathis, Up-savapathis and LDO's of all five districts. Rastriya Panchayat members were present for two

of the three training programmes. Ilaka representatives to the district Panchayat, Presidents of class organisations and district level line ministry officers attended the training courses. From Rukum district some sub-district level officials were invited by mistake and consequently there was a financial problem. The number of participant/trainees attending the three training programmes is given in Table 1.

Each of the participants were given a packet of training materials along with the formats for District Level, Village Panchayat and Ward Level needs assessment and resource inventory preparations. A list of materials provided is attached as Table 3.

2. Village Panchayat Level

At the Village Panchayat level five separate training programmes were held because the targetted number of trainees was rather large in each case from 80-102. The length of training was for three working days:

TABLE 1

LIST OF PARTICIPANTS/TRAINEES, DISTRICT LEVEL TRAINING PROGRAMMES

Districts / Designation	Dang (Ghorahi)	Rolpa and Piuthan (Bhingri)	Salyan and Rukum (Chaur-jhari)	Total
1. R.P. Members	3	-	1	4
2. Savapati/Up-Savapati	2	3	4	9
3. District Panchayat Members	7	13	13	33
4. District Organization	6	13	8	27
5. District Level Officers & Others	23	23	30	76
All Total:	41	52	56	149

TABLE 2

TYPICAL DISTRICT LEVEL TRAINING PROGRAMME

Day	1st Session 10.30 - 12.00 Noon	2nd. Session 12.30 - 14.00 Hrs.	3rd. Session 14.30 - 16.00 Hrs.
1.		Inauguration 1. Ceremonies 2. Short Speeches by Savapatis, RP members and Dignitaries 3. Keynotes Speech on "Decentralization"	District Profiles 1. Use of District, VP and Ward Questionnaires 2. Mapping 3. Preparation of Intersectoral District Profile
2.	Sectoral Planning - 1. 1. Agriculture 2. Horticulture 3. Livestock	Sectoral Planning - 2. 1. Forestry 2. Soil Conservation	Sectoral Planning - 3. Rural Works - 1. Drinking Water 2. Tracks, Trails, Bridges 3. Hill Terrace Irrigation
3.	Finances & Administration 1. Accountant General's and District Treasury Rules 2. District Budgets and Co-ordination	Closing Session 1. Follow-up work 2. Ward & VP Questionnaire Tabulation 3. LDO and Sectoral Responsibilities 4. Scheduling Next Training	

Table 3

TRAINING MATERIALS FOR DISTRICT LEVEL TRAINING PROGRAMME

1. Overiew	P. Roy/S.B. Gurung
2 Paper on Curriculum for District & Village Panchayat Planning	K.N. Sharma
*3. Paper on Decentralization	M.P. Kafle
4. Description of Decentralization Rules (2 papers)	B.R. Ghimire
5. Paper on User Committee	S.B. Rai
6. Priority Fixation Resource Inventory for District Planning	U.M. Malla
7. Paper on Service Centre Planning	S.B. Gurung/P. Roy
8. Paper on Financial Process in Rapti IRD	K. Shah/ S.L. Shrestha
9. Paper on Financial Planning & Administration	S.C. Shrestha
10.(a) Paper on Plan Implementation Moni oring and Co-ordination	C.M. Bajracharya
(b) Review Room	NPC
*11.Guideline for District Profile and V.P. Profile	S.B. Gurung/P. Roy

Contd..

TABLE 3 Contd..

12. (a) Guidelines for Agriculture & Horticulture	H.P. Gurung/R. Devkota
(b) Guidelines for Agriculture & Horticulture	B. Devkota
13. Guideline for Livestock Plan	S.G. Shah
14. Guideline for Forestry Plan	P. Roy, B. Upadhyay
15. Guideline for Soil Conservation Plan	K.B. Malla
*16. Guideline for Rural Works Plan	K.R. Nepal
17. Industrial Planning	B. Devkota
18. Integrated Rural Development	B. Devkota

Data Gathering Formats and Tabulation

* A.	-	Ward Level Questionnaire
* B.	-	Village Panchayat Level Questionnaire and Tabulation Formats.
C.	-	District Level Questionnaire.

* Papers included for Village Panchayat Training Programme.

1. Rolpa: 18-20 December 1983 (Poush 3-5, 2040).

2. Piuthan: 27-30 December 1983 (Poush 12-15, 2040).

3. Dang: 30 December 1983 - 1 Jan. 1984 (Poush 15-17, 2040).

4. Rukum: 7-9 January 1984 (Poush 23-25, 2040). and

5. Salyan: 8-10 January 1984 (Poush 24-26, 2040).

The Village Panchayat Training focussed on techniques rather than concepts and comprised primarily of explaining how information on formats for ward level could be collected and tabulated on to VP formats for the VP assembly meetings to make decisions on priorities for FY 2041/42. The trainees were broken into small groups for practice interviews to actually hold meetings and collect information at the ward level and tabulate these data to the VP level formats. The curriculum is attached as Table 4. Each participant was given a packet of training materials, which was a sub-set of the district materials marked with an asterisk on Table 3.

The attendance was very high in each district and in total was 98 per cent for the five districts. The number attending each training programme is given in Table 5. Since either the Pradhan Panch, Up-Pradhan or Secretary was present from every Village Panchayat. the attendance may be considered 100 per cent.

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Table 4

TYPICAL VILLAGE PANCHAYAT LEVEL TRAINING PROGRAMME

Day	Ist Session 10.30 - 12.00 Noon	2nd Session 12.30 - 14.00 Hrs.	3rd Session 14.30 - 16.00 Hrs.
1	Inauguration 1. Ceremonies 2. Short Speeches by Sarvapathi, BDO & Dignitaries	1. Decentralization	Rural Works 1. Drinking Water, Trails, Bridges & Irrigation 2. Practice on Project Preparation
2	Yard Questionnaire	V.P. Questionnaire	Tabulation
3	Practice Interviewing & Tabulation	Review of Practice Interviews	Closing Session

Table 5

NUMBER OF PARTICIPANTS IN VILLAGE PANCHAYAT PROGRAMME

District (No. of Panchayats)	Dang (40)	Salyan (47)	Piuthan (49)	Rolpa (51)	Rukum (43)	Rapti (230)
Pradhan/Up-Pradhan	39	47	48	49	43	226
V.P. Secretary	40	47	49	50	41	227
Total:	79	94	97	99	84	453

The LDO and Savapathis were present in all districts in V.P. level training programmes for part or all the programme. The LDO was a resource person and helped a great deal with the management and financial arrangements.

3. Review of Experience.

The training programmes at district and VP level were confounded by two somewhat unnessary issues: (i) ambiguity about the perdiem and travel allowance and (ii) RIRD concepts, project implementation and related financial problems. The former is a real problem which should be unambiguously resolved before the next training programs are conducted. Training costs far exceeded estimated budgets due to high expectations of participants. While the latter issue about RIRD concepts, project implementation and related financial problems was not entirely irrelavent with this training programmes, it was concerned with the PCO office and not with LCRC. A great deal of time and energy was spent separating these problems from the primary role of LCRC which was training.

The informal feedback indicated that Pradhan Panchas and VP Secretaries welcomed these training programmes. They felt that this type of training programme educated them on how to prepare the plans and projects of their V. P. on the formats

for resource inventories and local needs of the people. The V.P. Secretaries think that their work load will be increased by introducing this type of planning methods but on the other hand the facilities and incentives etc. will remain the same which are not enough for the workload.

One of the comments from the participants in the district level seminar was that the questionnaires are too long and complicated which was not possible to be filled up by the V.P. Secretaries within a limited time. Therefore there should be a separate wing or special programmes to do this job. Regarding this comment during practical exercises in the V.P. level training programmes the V.P. Secretaries felt that they could handle this type of questionnaires easily if they are provided some facilities, incentives, some guidelines and short training. The important thing is that the Pradhan Panchas and V.P. Secretaries should develop a mutual understanding and cooperation between themselves. It is very necessary for the V.P. Secretaries not to harp on their superior educational background and on the other hand the Pradhan Panchas should not stress the notion about being elected representatives of the people. This only causes unnecessary friction between Pradhan Panchas and V.P. Secretaries. Without the mutual understanding

and cooperation between Pradhan Panchas and V.P. Secretaries the Plan formulation for their V.P. and district is not possible. The participants believed that this type of training programmes will certainly help to educate Pradhan Panchas and V.P. Secretaries for proper plan formulation and implementation in their areas.

PART II

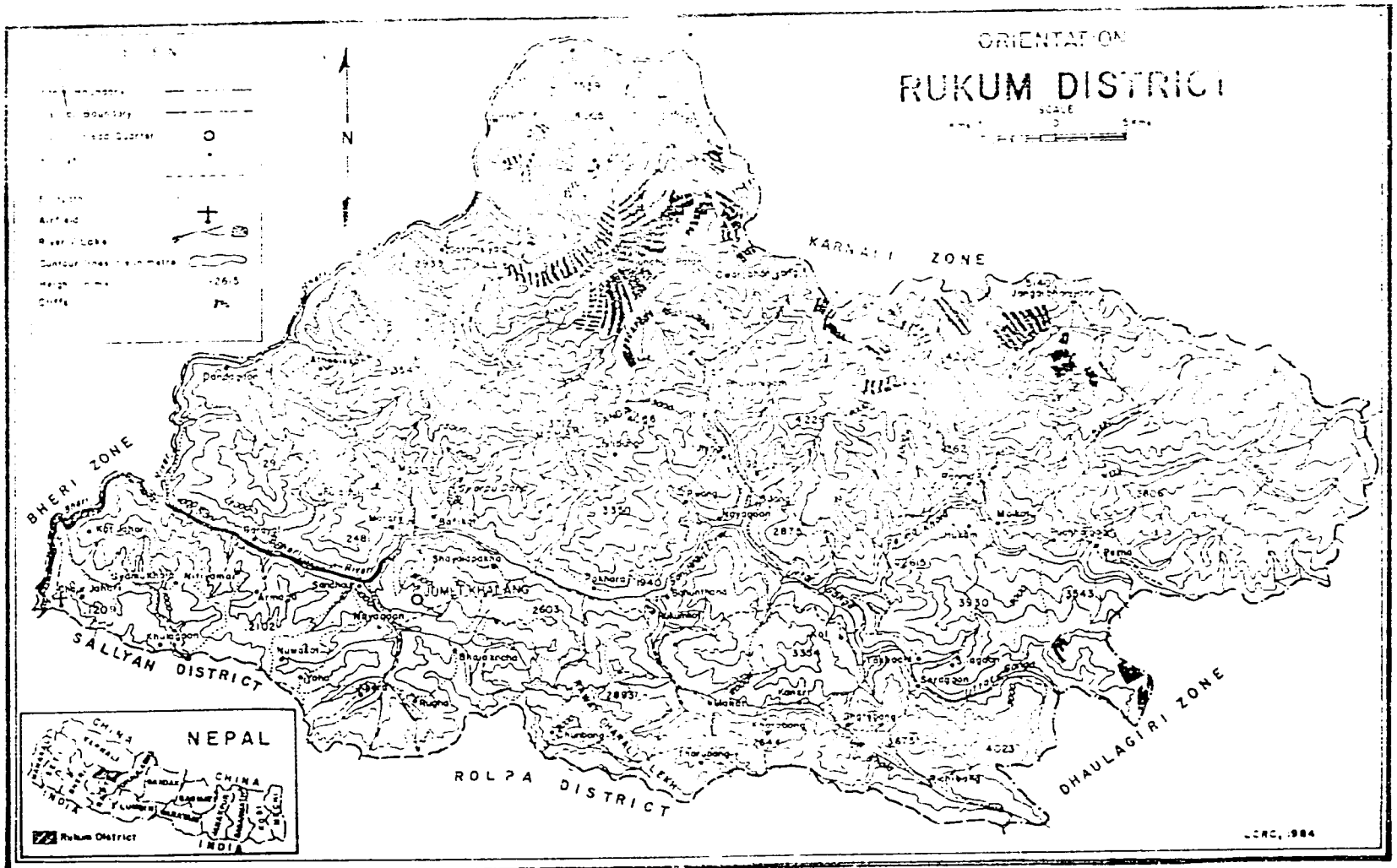
IV. Case Study of Ilaka 2 in Rukum District.

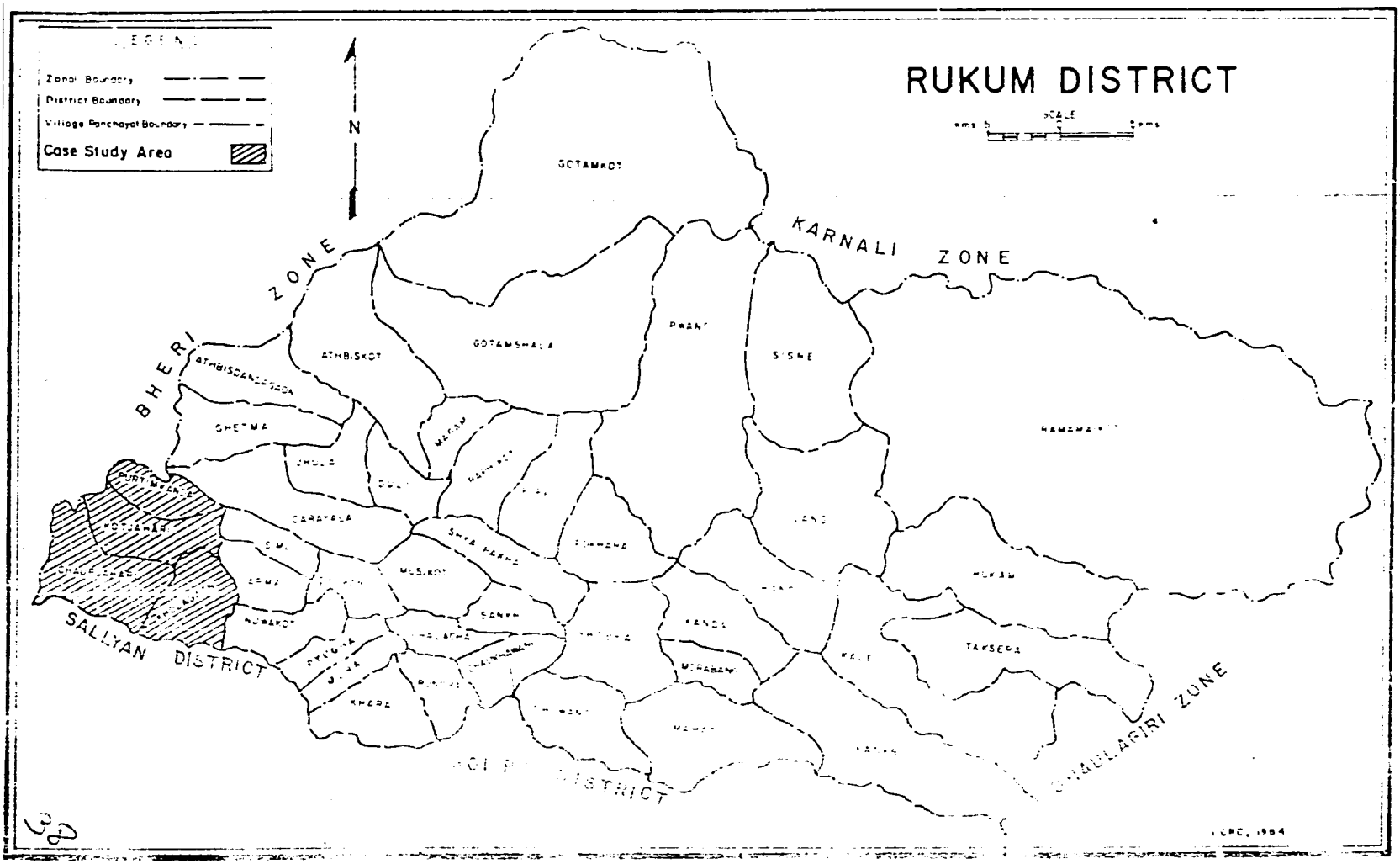
The first cycle of training included participation from all village panchayats in all five districts. However, on account of a number of unforseen circumstances and inordinate delays, it does not seem likely that plans would be forthcoming from all panchayats. After the training it would normally need about a month before one could reasonably expect each village Panchayat to complete ward level discussions, the resource inventory, needs assessment tabulation and hold a Village Panchayat meeting. Just after the training (17 Dec. - 10 Jan.) the King's camp was held (20 Jan. - 18 Feb.) in the western region and many officials and leaders from the zone went to Surkhet. It was decided at a meeting in Kathmandu that as an interim compromise to go back to the alternative contract objective of completing 4/5 panchayats or one Ilaka in each district, tabulate these results to find out how well the training procedures were understood and how accurate these data seemed to be.

Accordingly, research assistants (RAs) were sent to each district. If VP Questionnaire tabulations and plans were complete

only a final round of discussions with the Village Panchayats would be needed. The RAs met the LDO and VP Secretaries when they came for salaries at the beginning of the month of Phalgun (Feb. 15, 1984), about a month after the training cycle was completed. In all cases it seemed that most VP questionnaires were incomplete and would need at least one more month's time. One Ilaka had been selected and VP Secretaries of Panchayats in that Ilaka were requested to accompany the RAs to discuss results or complete the formats for each ward in each Village Panchayats. In three districts one Ilaka was completed but in two districts the four panchayats selected were near each other but not constituting one Ilaka, had to be taken due to the non-availability of the VP Secretaries (See district maps).

Tabulations of each of the nine wards and summary for the village panchayat were first checked. Then the four panchayats were totalled for each district. These data were validated wherever possible with the APROSC or other data. A brief write-up of these results are presented for Ilaka No.2 of Rukum district along with the summary tables as a case study. Tabulations of the other four districts will be submitted separately as an appendix to this Interim Report.


ORIENTATION
RUKUM DISTRICT
SCALE
N
KARNALI ZONE
BHERI ZONE
SALLYAN DISTRICT
ROLPA DISTRICT
DHAULAGIRI ZONE
JUMLI KHALANG
NEPAL
CHINA
INDIA
Rukum District


RUKUM DISTRICT
LEGEND
Zonal Boundary
District Boundary
Village Panchayat Boundary
Case Study Area
N
SCALE
GOTAMKOT
KARNALI ZONE
BHERI ZONE
ATHBISKOT
GOTAMSHAHR
SISNE
GHETMA
SALLYAN DISTRICT
TAKSERA
ICPC, 1984

Of course, the real test of how good the training has been would be a dialogue between the Pradhan Panchas, VP Secretaries, Ilaka representative, the appropriate key line ministry officials, the LDO and the Savapathi after they have had a chance to look at the case study data. Until this type of validation is done one cannot confidently revise formats nor make appropriate changes in the training programmes. Notwithstanding, the case study data are presented without benefit of this dialogue.

1. Population

The total population of Rukum district according to the Census was 105 thousand in 1971 and 132 thousand in 1981. The population in Rukum during 1971-1981 increased by 2.31% per annum. The Agricultural Projects Services Center's (APROSC) baseline survey estimated the total number of households at 17,210 in 1979 with an average household size of 5.34 and a total population of 91,975. It seems that the baseline estimate was biased downward.

The discussions below will be primarily on the population of one Ilaka of Rukum district, consisting of four Panchayats Chaurjahari, Kotjahari, Kholagaun and Purtinkanda - with a total of 2,687 households.

2. Caste and Ethnic Groups

The APROSC's baseline survey shows that the ethnic group A (Brahman, Chhetri, Matwala, Thakuri and Giri) constituted 50.3% of the ethnic groups in Rukum. The second dominant group was ethnic Group D (Kami, Damai, Sarki, Sunar and Gaine) constituting 30%. The third prominent group was ethnic Group B (i.e. Magar and Gurung) who constitutes 16.1% of the households.

In Ilaka number 2 of Rukum district the majority of households are that of Chhetri, Matwala, Brahman, Thakuri and Giri castes (Table 1). Together these castes (APROSC Group A) account for 56.4% of the total households (2,687). The next predominant group of castes (Group D) are Kami, Damai, Sarki, Sunar and Gaine in descending order totalling 21.5%. The third comparable Group B are the Magar and Gurung constituting 21.4%.

There is some variations in the predominance of castes in the four panchayats of the Ilaka: Chaurjahari, Kotjahari, Kholagaun and Purtimkanda, when castes are arranged in terms of household numbers in a descending order. For instance, Chhetri, Brahman, Magar, Kami and Giri are the main five castes in Chaurjahari whereas Chhetri, Matwala, Thakuri, Kami and Brahman castes predominate in Kotjahari. In Kholagaun,

TABLE 1

NUMBER OF HOUSEHOLDS BY CASTE AND NUMBER OF VILLAGE IN EACH PANCHAYAT OF ILAKA 2 OF RUKUM DISTRICT

V.Panchayat / Main Castes	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total	Percent
1. Chhatri	292	126	246	32	696	26.9
2. Magar	113	33	119	287	572	21.3
3. Brahman	141	44	113	7	305	11.4
4. Kami	100	63	37	100	300	11.2
5. Matwala	59	119	20	92	290	10.8
6. Thakuri	17	68	66	2	153	5.7
7. Damai	54	15	27	25	121	4.5
8. Sarki	15	37	31	4	87	3.2
9. Giri	69	2	-	-	71	2.6
10.Others *	54	32	5	1	92	3.4
Total	934	539	664	550	2,687	100.0
Total Number of the Villages	19	11	37	29	96	

* Sunar (59), Badi (14), Gaine (10), Newar (7), and Gurung (2).

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the main five castes are Chhetri, Magar, Brahman, Thakuri and Kami but Magar, Kami, Matwala, Chhetri and Damai castes rank highest in Purtimkanda. Nevertheless, the Chhetri caste dominates others in three panchayats and Magar in one.

In terms of number of villages, Kholagaon and Purtimkanda Panchayats have more settlements then Chaurjahari and Kotjahari even though number of households in the former is smaller than that of Chaurjahari. It means that Kholagaon and Purtimkanda may pose a problem in the provision of certain socio-economic infrastructures.

3. Employment

Porterage and agricultural labour are the major occupations besides their own-farming and account for 42% and 26% respectively of the total persons employed in occupations other than own-farming in the Ilaka. The next most important non-farm occupations in descending order are trade (19%), service (6%), construction (4%), modern industry (1%) and Cottage industry (1%) (Table 2).

Among the four panchayats porterage is the major off-farm occupation in these panchayats, Kotjahari, Purtimkanda and Chaurjahari and the second most important occupation was agricultural labour. Together they account for in between 69% to 88%

TABLE 2.

NUMBER OF PERSONS EMPLOYED IN OCCUPATIONS OTHER THAN OWN-FARMING OF ILAKA 2 OF RUKUM DISTRICT

(Number of Persons)

V. Panchayats / Occupations	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total	Percent
1. Porterage	224	254	46	361	885	42.3
2. Agricultural Labor	163	133	43	200	539	25.8
3. Trade	56	14	145	190	405	19.4
4. Service	39	28	-	62	129	6.2
5. Construction	59	10	10	-	88	4.2
6. Modern Industry	3	-	20	-	23	1.1
7. Cottage Industry	3	2	16	-	21	1.0
8. Other	-	-	2	-	2	-
Total	547	441	291	813	2,092	100.0

of the total persons engaged in occupations other than their own-farming in these three panchayats. On the other hand, trade is the main occupation in Kholagaun and accounts for 50% of the total persons engaged outside their own farming. It is also an important occupation in Purtimkanda. Employment in industries is not significant in the Ilaka except that in Kholagaun where five percent of total persons outside own-farming are engaged in industries. The employment in the service sector is almost the same in all the panchayats and is between 6 and 8%. Construction activity is relatively important only in Chaurjahari.

4. Migration

In the Ilaka temporary migration is more significant than permanent migration (Table 3). In-migration of a permanent nature is greater than out-migration. Temporary in-migration takes place in Chaurjahari alone and that is probably because of its position in terms of provision of socio-economic infrastructures. Permanent in-migration is higher than out-migration in all the panchayats and causal factors might be the migratory stream from the north to the south.

The temporary out-migration is, however, higher in Kotjahari than in other panchayats. Chaurjahari comes second in terms of

temporary out-migration but this place is taken by Purtimkanda in case of permanent out-migration.

In general, it seems the Ilaka is loosing more adult population than what it gains from outside.

5. Land Use Pattern

The total area of the Ilaka was estimated to be 36,471 ropanis (i.e. 1,824 hectares), of which cultivated land is about 50%, forest 33%, pasture 7% and cultivable barren land 1.2% (Table 4a). It means that there is hardly any possibility of extending farming. The forest area and pasture land is less than adequate in two panchayats. Pakho (upland) accounts for about 70% of the cultivated land, implying a need for the introduction of modern technology for up-land, dry-land farming.

Among the four panchayats Purtimkanda and Kholagaun have relatively less area under cultivation than the others. The estimates of the total area seems to be low. The cultivated area is 61% of the total area in Purtimkanda, 58% in Kholagaun, 51% in Kotjahari and 46% in Chaurjahari, Of the cultivated land area, Pakho (upland) accounts for a significant proportion of the cultivated area in Kotjahari (79%) and Kholagaun (74%)

TABLE 3

TEMPORARY AND PERMANENT MIGRATION IN ILAKA 2 OF RUKUM DISTRICT

No of Migrants / Panchayats (No. of HH)	Number of Migrants			
	Less than One Year		More than One Year	
	Out-Migrants	In-Migrants	Out-Migrants	In-Migrants
1. Chaurjahari (934)	345	45	25	35
2. Kotjahari (539)	392	-	1	99
3. Kholagaun (664)	260	-	5	12
4. Purtinkanda (550)	155	-	15	44
Total	1,152	45	46	190

TABLE 4a

LAND USE PATTERN IN ILAKA 2 OF RUKUM DISTRICT

V.Panchayats / Land Use	Chaur-Jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total	Perdent
1. Cultivated Area	7,211	7,847	2,149	902	18,127	(49.7)
1.1 Khet	2,939	1,649	568	291	2,447	
1.2 Pakho	4,272	6,198	1,581	629	12,680	
2. Cultivable Barren	331	53	56	-	440	(1.2)
3. Uncultivable Waste	2,909	146	91	11	3,157	(8.7)
4. Forest	4,276	6,397	1,096	390	12,159	(33.3)
5. Pasture	1,049	1,064	295	180	2,588	(7.1)
6. Other	-	-	-	-	-	-
Total:	15,776	15,507	3,678	1,501	36,471	(100.0)

compared with Purtimkanda (68%) and Chaurjahari (59%). There is relatively more land available for cultivation in Chaurjahari (331 ropanis) than in Kotjahari (53) and Kholagaun (56). There is none in Purtimkanda. Kotjahari has relatively more area under forest (i.e. 41% of the total area, 6400 ropanis) than Chaurjahari (4300 ropanis); the other two panchayats have barely enough forest area (1100 and 400 ropanis). Purtimkanda and Kholagaun have less area under pasture land than Kotjahari and Chaurjahari. The area under pasture in Purtimkanda, Kholagaun, Kotjahari and Chaurjahari are 180, 295, 1064 and 1049 ropanis respectively.

The average cultivated area per household in the Ilaka 6.7 ropanis: Khet 2.0 and Pakho 4.7 ropanis (Table 4b). This indicates inadequacy in the size of holdings, particularly with respect to Khet land. The sizes of holding in Kholagaun and Purtimkanda are very low compared with those of Kotjahari and Chaurjahari. Chaurjahari and Kotjahari have the same size of holding (3.1 ropani per household) for Khet land even though Kotjahari's size of Pakho holding is more than double the size of Chaurjahari. Purtimkanda stands at the bottom among the four panchayats in terms of average size of all the different types of land holdings.

The average size of forest area is 4.5 ropanis per household in the Ilaka. The forest area per household is the largest in Kotjahari and the lowest in Purtimkanda. The same holds in the case of pasture land per household.

Generally, Kotjahari is better placed than others in the size of cultivated area, forest area and pasture land per household. The second place goes to Chaurjahari whereas the last place goes to Purtimkanda. Purtimkanda fares the worst in availability of land resource for agriculture, forestry and pasture. Although Kholagaun is relatively better placed than Purtimkanda, its land resource position is also precarious. It means that under the given technical knowhow, Kholagaun and Purtimkanda will hardly be able to sustain the growing demand for food and forestry products. In short, the Ilaka will have land resource constraints to sustain either their agricultural or forest self-sufficiency.

6. Size of Land Holding

Of the total households of 2,687, about 7% are landless in the Ilaka and a little less than one-third have sub-marginal and marginal holdings with less than 4 ropanis. Small size holdings (4-10 ropanis) comprise about 36%, medium

TABLE 4b.

LAND AVAILABILITY PER HOUSEHOLD FOR SELECTED CATEGORIES OF LAND IN ILAKA 2 OF RUKUM DISTRICT.

(Ropanis)

V. Panchayats / Land Type	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1. Cultivated Land	7.7	14.6	3.2	1.7	6.7
1.1 Khet	3.1	3.1	0.9	0.5	2.0
1.2 Pakho	4.6	11.5	2.4	1.1	4.7
2. Forest	4.6	11.9	1.6	0.7	4.5
3. Pasture Land	1.1	2.0	0.4	0.3	0.7
Total:	13.4	28.5	5.2	2.7	11.9

size holdings (10-20 ropanis) 21% and large-size households holdings over 20 ropanis or 1 hectare 5%. The first three categories (i.e. landless, marginal and sub-marginal, and small-size households with less than 10 ropanis or 0.5 hectares) constitute about 73% of the total households. It means that most of the households have difficulty making out their livelihood from their own-land.*

Relatively speaking, Chaurjahari and Purtimkanda have more landless households than Kotjahari and Kholagaun. Chaurjahari, however, has a significantly lower proportion of sub-marginal and marginal households compared with other panchayats and Kotjahari and Purtimkanda have the highest proportion under this category. There are more small-size holdings in Purtimkanda and Kholagaun than in the other two Panchayats. There are no medium and large size holdings

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* The comparable proportions of the APROSC Base Line Survey for Rukum district are 40% submarginal and marginal holding; small holdings 42.6%; medium holdings 12%, and large holdings 4.6%.

TABLE 5

SIZE OF LAND HOLDING IN ILAKA 2 OF KUKUM DISTRICT

(No. of Families)
(per cent)

V. Panchayats / Land Holding Size	Chaur-jhari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1. Landless	84 (9.0)	24 (4.5)	28 (4.2)	42 (7.6)	178 (6.6)
2. Less than 4 Ropanis	114 (12.2)	258 (47.9)	204 (30.7)	263 (47.8)	839 (31.2)
3. 4 - 10 Ropanis	273 (29.2)	165 (30.6)	274 (41.3)	245 (44.5)	957 (35.6)
4. 10-20 Ropanis	346 (37.0)	92 (17.1)	138 (20.8)	- -	576 (21.4)
5. More than 20 Ropanis	117 (12.5)	-	20 (3.0)	-	137 (5.1)
Total:	934 (100.0)	539 (100.0)	664 (100.0)	550 (100.0)	2,687 (100.0)

Note: Percentage are given within the parentheses.

in Purtimkanda and no large size holdings in Kotjahari. There is concentration of households in small and medium size holdings in Chaurjahari which also has a fairly large proportion with large-size holdings compared to Kholagaun.

In general, the distribution of households in terms of size of holdings shows that Purtimkanda and Kotjahari are likely to be in a precarious position with respect to food self-sufficiency. Chaurjahari has relatively more adequate holdings in terms of ownership of land but it also has the largest number of landless households. Kholagaun has the next highest size of holdings per household but it has 76% of the total households with less than 10 ropanis or half of one hectare.

7. Food Situation

The food situation in the Ilaka is not good. A mere 18 per cent of the households produced enough food for the whole year, another 21 per cent for nine months and 61 per cent of the households have sufficient food for six months or less.

In terms of self-sufficiency in food production Chaurjahari is in a better position as the majority of its households, about

TABLE 6

FOOD SUFFICIENCY IN THE ILAKA 2 OF RUKUM DISTRICT

(No. of Households)

Duration of Food Sufficiency in months. / V.Panchayats	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim Kanda	Total
12	277 (30)	113 (21)	74 (11)	10 (2)	474 (18)
9	300 (32)	65 (12)	208 (31)	4 (1)	577 (21)
6	170 (18)	133 (24)	152 (23)	83 (15)	533 (20)
4	111 (12)	74 (14)	58 (9)	168 (30)	411 (15)
Less than 4	76 (8)	159 (29)	172 (26)	285 (52)	692 (26)
Total:	934 (100)	539 (100)	664 (100)	550 (100)	2687 (100)

Note: Figures in the parentheses refer to percentages.

62% have food for 9 months and more whereas Purtimkanda is in the worst position because 97% of its households produce food sufficient for six months or less. The proportion of households producing food sufficient for six months or less is 67% for Kotjahari and 58% for Kholagaun. The proportion of households that produces enough food for 9 months and more is 42% for Kholagaun, 33% for Kotjahari and a mere 3% for Purtimkanda. It means that Kholagaun is in a better position than Kotjahari although the latter has a higher proposition with 12 months food sufficiency. The worst food situation in Purtimkanda is understandable as it has the lowest amount of cultivated land per households and there are no households with medium and large-size holdings.

8. Agriculture

The total cropped area in the Ilaka was estimated at 44,201 ropanis, i.e. 2,248 hectares, of which 58.6% is in Chaurjahari, 29.2% in Kotjahari, 9.3% in Kholagaun and 2.9% in Purtimkanda (Table 7). Thus a large proportion of the cropped area is in Chaurjahari and the share of Kholagaun and Purtimkanda is rather small.

In terms of both area and production, wheat, paddy, maize and millet are the main staple crops grown in the Ilaka. Other

TABLE 7

AREA, TOTAL PRODUCTION AND PRODUCTIVITY OF MAIN CROPS IN ILAKA 2 OF RUKUM DISTRICT.

Main Crops in Panchayat	Ilaka			Chaurijahari			Kotjahari			Kholagaun			Purtimakaunda		
	Area	Total production	Productivity	Area	Total Production	Productivity	Area	Total Production	Productivity	Area	Total Production	Productivity	Area	Total Production	Productivity
Wheat	6,616	7,748	47	10,268	3,465	34	4,615	2,444	53	1,343	1,779	132	390	50	13
Paddy	12,015	8,098	67	9,556	5,798	61	1,436	1,236	86	758	1,028	136	285	36	13
Maize	6,368	3,751	59	1,809	294	16	3,431	2,183	64	745	1,252	168	383	22	6
Millet	4,266	1,636	38	2,115	701	33	1,543	856	55	412	67	16	196	12	6
Barley	1,043	455	44	80	51	64	551	369	67	412	35	8	–	–	–
Wheat	93	44	47	93	44	47	–	–	–	–	–	–	–	–	–
Potato	744	385	52	492	149	30	186	100	54	66	136	206	–	–	–
Soyabean	479	96	20	479	96	20	–	–	–	–	–	–	–	–	–
Groundnut	255	49	19	120	20	17	130	26	20	5	3	60	–	–	–
Taro	258	5	2	–	–	–	200	3	2	7	1	14	31	1	2
Mustard	1,945	245	13	785	62	8	801	147	18	359	35	10	–	–	–
Ginger	119	16	13	106	11	10	13	5	38	–	–	–	–	–	–
Total	44,201	22,528		25,883	10,701		12,906	7,369		4,107	4,337	1,305		121	

A = Area in Ropani, TP = Total Production in Quintals, P = Productivity in Kg. per Ropani.

staple crops are barley, buckwheat, potato and taro. The last two crops are consumed as food by the poor and as vegetable by both the rich and the poor. Soyabean is consumed as a vegetable and groundnut as a snack at noon time. Mustard is used in making cooking oil whereas ginger is used as a spice and sometimes also as medicine.

The total production of foodgrains including potato is 22,117 quintals in the Ilaka, of which Chaurjahari accounts for 48%, Kotjahari for 32%, Kholagaun 19% and Purtimkanda a little more than half of one percent. It means that Purtimkanda which has 20.5% of the total households of the Ilaka produces less than 1% of the foodgrains. It produces wheat, paddy, maize, millet, and it produces a little taro. Chaurjahari and Kotjahari together produce four fifths of the total foodgrains and they together with Kholagaun also produce a wider variety of products.

The production of foodgrains per household per annum is 8.23 quintals in the Ilaka: 11 quintals in Chaurjahari, 13 quintals in Kotjahari, 6 quintals in Kholagaun and only about 22 kg in Purtimkanda. In terms of foodgrain production per household per day, the average is 2.25 kg per household

of 5.34 members (or 0.42 kg/capita) for the Ilaka: 3.0 kg per household for Chaurjahari, 3.7 kg for Kotjahari, 1.8 kg for Kholagaun and 0.06 kg for Purtimkanda. It thus means that the Ilaka does not fare too badly in the production of foodgrains as a whole but the situation is serious in Kholagaun and particularly so in Purtimkanda.

The land productivity per ropani is very low for the Ilaka as a whole, and it is particularly so in Purtimkanda. Productivity is relatively better, even if low, in Kholagaun than that in Kotjahari and Chaurjahari.

Productivity was estimated to be the highest for maize, paddy and wheat in Kholagaun. But in the Ilaka as a whole productivity of the main staples were low. It means that the so called "green revolution" has not occurred in the Ilaka. This is so because the use of chemical fertilizer and improved seed is very limited here (Table 8a and 8b). The total use of chemical fertilizer was 16.84 metric tons for the Ilaka in 1982-83, of which 56% went to wheat and about 43% to paddy. There is little use of fertilizer for the maize crop. Its use per unit of land high in paddy and quite low in maize (Table 8b). The fertilizer use per ropani is the highest for paddy in Kotjahari and for wheat in Purtimkanda. In Chaurjahari,

TABLE 8a

USE OF IMPROVED AGRICULTURAL TECHNOLOGY IN ILAKA 2 OF RUKUM DISTRICT IN 1982 - 83

V. Panchayats / Diff. Fertilizer	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1. Improved Seeds (Kg)	729	230	422	1,224	2,605
1.1 Wheat	479	130	422	800	1,831
1.2 Paddy	234	100	-	124	458
1.3 Maize	16	-	-	300	316
2. Chemical Fertilizer (Kg)	11,140	4,135	925	620	16,840
2.1 Wheat	6,150	1,910	885	500	9,445
2.2 Paddy	4,890	2,200	40	20	7,170
2.3 Maize	100	25	-	100	225
3. Pesticides/ Insecticides (Liters)	8	-	-	74	82
4. Improved Tolls Implements (Rs.)	-	-	-	1,500	1,500

TABLE 8b

USE OF IMPROVED TECHNOLOGY PER ROPANI IN ILAKA 2 OF RUKUM DISTRICT 1982-83

(Kg per Ropani)

V. Panchayats / Improved Fertilizer	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1. Improved Seeds					
1.1 Wheat	0.05	0.03	0.31	2.05	0.11
1.2 Paddy	0.02	0.07	-	0.44	0.04
1.3 Maize	0.01	-	-	0.78	0.05
2. Chemical Fertilizer					
2.1 Wheat	0.60	1.41	0.66	0.28	0.57
2.2 Paddy	0.51	0.53	0.05	0.07	0.60
2.3 Maize	0.06	0.01	-	0.26	0.04

fertilizer use is higher for wheat than for paddy and maize. It is used more in paddy than in other crops in Kotjahari more in wheat than in paddy than in Kholagaun and in wheat more than in other crops in Purtimkanda which is the only panchayat where its use is as high in maize as in Chaurjahari.

The use of improved seeds per ropani is very low: compared to wheat the use of improved seeds in paddy and maize crops in the Ilaka is very low. Kholagaun used improved seeds of wheat alone. Kotjahari did not use improved seeds of maize. Chaurjahari and Kotjahari used very little improved seeds per ropani of land. Similarly, very little use is made of pesticides and insecticides as well as implements.

However, the demand for improved seeds, chemical fertilizer, pesticides and insecticides is quite high for 1984-85 (Table 9) compared with actual utilization in the last fiscal year, i.e. 1982-83 (Table 8a). The demand of the Ilaka is higher by about 9 times for seeds, about 2 times for fertilizer, 17 times for pesticides and insecticides, and 45 times for agricultural implements. The demand for seeds and fertilizer is significancy higher in Chaurjahari than in other panchayats. Wheat and paddy seed are the most in demand and the demand of fertilizer for wheat and paddy is the highest. Kholagaun and Chaurjahari demand implements. The

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TABLE 9

DEMAND FOR IMPROVED AGRICULTURAL TECHNOLOGY IN ILAKA 2 OF RUKUM DISTRICT FOR THE FINAL YEAR 1984-85.

V. Panchayats / Improved Fertilizer	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1. Seeds (Kg)	17,280	3,797	1,846	1,290	24,213
1.1 Wheat	7,600	2,049	665	925	11,239
1.2 Paddy	7,080	1,498	373	310	9,261
1.3 Maize	1,100	250	246	45	1,641
1.4 Potato	1,000	-	511	-	1,511
1.5 Blackgram	500	-	-	5	505
1.6 Millet	-	-	51	-	51
1.7 Mustard	-	-	-	5	5
2. Chemical Fertilizer (Kg)	22,350	11,700	2,728	1,090	37,868
2.1 Wheat	11,750	4,250	476	700	17,176
2.2 Paddy	8,100	6,700	2,091	285	17,176
2.3 Maize	900	550	51	105	1,606
2.4 Potato	1,100	200	110	-	1,410
2.5 Blackgram	500	-	-	-	500
3. Pesticides/ Insecticides (Litres)	81	882	390	58	1,411
4. Implements (Rs.)	28,800	-	38,000	-	66,800

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demand for insecticides and pesticides is the highest in Kotjahari. It is also clear from Table 9 that people like to use improved seeds of various crops to apply fertilizer to various crops. Therefore, there seems to be a fairly high demand for improved agricultural technology.

9. Vegetable Production

Table 10 shows that vegetable production is greater in winter than in summer. The total estimated production of the main vegetables in 1982-83 was 179 metric tons: winter vegetables 97 tons and summer vegetables 82 tons. Radishes, onions and rape as well as mustard leaves are the prominent winter vegetables whereas pumpkins, sponge/snake gourds and cucumbers are the main summer vegetables. Other less prominent winter vegetables are tomatoes, chillies, egg plants, garlic, peas and so on; and similarly other summer vegetables are turmeric, ginger and cowpeas.

Among the four panchayats, Kotjahari produces the highest amount of both winter and summer vegetables and their production is the lowest in Purtimkanda. The second place goes to Kholagaun even though Chaurjahari produces slightly more winter vegetables. Purtimkanda produces only leaf vegetables and radishes as winter vegetables and summer vegetables here are cucumbers, sponge and snake gourds, and turmerics.

TABLE 10

PRODUCTION OF MAIN VEGETABLES I ILAKA 2 OF RUKUM DISTRICT IN 1982-83

(in Kg.)

V. Panchayats / Main Vegetables	Chaur-janari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1. Winter Vegetables	11,592	74,368	10,325	424.4	96,709.4
1.1 Radishes	2,736	20,582	5,628	12	28,958
1.2 Onions	790	20,552	768		22,110
1.3 Rape & Mustard Leaves	3,156	15,634	2,040	410	21,240
1.4 Tomatoes	2,472	3,168	41	-	5,681
1.5 Chillis	727	3,571	739	-	5,037
1.6 Egg Plants	166	3,679	288	-	4,1[illegible]3
1.7 Garlics	415	2,674	24	-	3,113
1.8 Peas	528	1,738	720	-	2,986
1.9 Cauliflowers/ Cabbages	482	1,733	60	-	2,275
1.10 Other Leaf Vegetables	120	1,037	17	2.4	1,176.4
2. Summer Vegetables	14,916	47,429	18,953	1,034.4	82,332.4
2.1 Pumpkins	5,736	26,758	7,056	-	39,550
2.2 Sponge/Snake Gourd's	2,172	8,237	3,792	228	14,429
2.3 Cucumbers	4,032	1,152	4,159	804	10,147
2.4 Turmirics	1,392	4,994	1,524	2.4	7,912.4
2.5 Gingers	792	4,351	137	-	5,280
2.6 Cowpeas	792	1,937	2,285	-	5,014
Total:	26,508	1,21,797	29,278	1,458.8	1,79,041.8

The total production of vegetables per household in the Ilaka is 66.6 kg per year: winter vegetables 36 kg and summer vegetables 30.6 kg. It comes out 182 grams per households per day: winter vegetables 84 and summer vegetables 98 grams. This is quite low. The total vegetable production per household per year is the highest in Kotjahari (226 kg) and the lowest in Purtimkanda (2.7 kg). The second place goes to Kholagaun with 44.1 kg and third place to Chaurjahari with 28.4 kg. Generally, except Kotjahari the production of vegetables is quite low.

Regarding the future requirement of vegetable seeds in the Ilaka, onion, pea, cauliflower/cabbage and radish seeds are the main vegetable seeds in demand and others are garlic, mustard, cowpea, snake gourd, cucumber and lady's finger seeds (Table 11). The total amount demanded for the Ilaka in 1984-85 is 619 kilograms, of which Chaurjahari demands the most and Purtimkanda the least. The second place belongs to Kholagaun.

10. Horticulture

Regarding horticulture, banana seems to be the most prominent species of fruit tree grown as it accounts for about 83% of the total number of fruit trees (17,006) in the Ilaka (Table 12). Second in importance is guava which amounts to a little more than

TABLE 11

DEMAND FOR VEGETABLE SEEDS IN ILAKA 2 OF RUKUM DISTRICT

FOR THE FISCAL YEAR 1984-85

(in Kg.)

Veg. Seeds Type \ V. Panchayats		Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1.	Onions	133	9	18	18	178
2.	Peas	20	22	100	5	147
3.	Cauliflowers/ Cabbage	56	18	25	10	109
4.	Radish	54	19	18	10	101
5.	Garlies	-	-	20	16	36
6.	Mustard	20	3	-	-	23
7.	Cowpeas	10	-	-	-	10
8.	Snake Gourds	-	-	7	-	7
9.	Cucumbers	-	-	6	-	6
10.	Lady's Fingers	-	-	2	-	2
	Total:	293	71	196	59	619

TABLE 12

NUMBER OF MAIN FRUIT - TREES IN ILAKA 2 OF KUKUM DISTRICT IN 1983.

(Number of Trees)

V. Panchayats / Fruit tree types	Chhur-jhari	Kotja-hari	Khola-yaun	Purtim-kanda	Total
1. Bananas	3,625	3,115	6,851	545	14,136 (83.1)
2. Guavas	151	1,075	205	-	1,431 (8.4)
3. Tangerines/Orange	46	67	209	115	437 (2.6)
4. Papaya	225	85	32	-	342 (2.0)
5. Mangoes	82	71	34	115	302 (1.8)
6. Apriests/Peachs/Pears/Plums	29	61	61	-	151 (0.9)
7. Apples	97	36	-	-	133 (0.8)
8. Lemons/Limes/Jyamir	-	-	39	--	39 (0.2)
9. Jack-fruit	31	3	-	-	34 (0.2)
Total:	4,286 (25.2)	4,514 (26.5)	7,431 (43.7)	775 (4.6)	17,006 (100)

Note: Percentages are given in the parentheses.

8 per cent. Others in a descending order of importance are tangerines/orange, papaya, mango, apricot/peach/pear/plum and apple trees. There are also a few trees of lemons, lime and jack fruit.

Kholagaun has the largest number of fruit-trees, accounting for about 44% of the total whereas Purtimkanda has the least number of fruit trees. Kotjahari is in a slightly better position than Chaurjahari. Nevertheless, banana is the most important fruit in all the panchayats. The second important fruit is guava in Kotjahari; tangerine/orange in Kholagaun; papaya in Chaurjahari; and guava and mango is Purtimkanda. The third most important fruit is guava in Chaurjahari and Kholagaun and papaya in Kotjahari.

In terms of the average number of fruit trees per household, the Ilaka has 6 trees per household: Kholagaun has 11, Kotjahari 8, Chaurjahari 5 and Purtimkanda 1. It means that except for Purtimkanda other panchayats are in a r latively good position in terms of fruit trees per family.

Table 13 shows the demand for fruit saplings. The most prominent fruit species demanded are lemons, limes, tangerine, orange, mangoes, pears, peaches, plums, apples and pineqpples. They together amount to 93.5% of the total saplings demanded, i.e. 34,782. The first two categories, i.e. lemons, limes,

TABLE 13

DEMAND FOR FRUIT - TREES IN BLOCK 2 OF KUKUR FOR THE FISCAL YEAR 1984-85

(No. of Trees)

V. Panchayats / Fruit tree types	Chaur-jaheri	Kotja-heri	Khola-gaun	Purcim-kinia	Total
1. Lemons/Limes/Jyamir	1,200	10,000	550	110	11,850 (34.1)
2. Tangerines/ Orange	825	500	577	5,210	7,112 (20.4)
3. Mangoes	1,085	1,300	850	776	4,011 (11.5)
4. Pear/Peach/ Apricot/Plums	881	1,265	477	1,033	3,658 (10.5)
5. Apples	20	-	540	2,410	2,970 (8.5)
6. Paneapples	1,055	910	600	400	2,965 (8.5)
7. Bananas	195	-	600	-	855 (2.5)
8. Guavas	370	-	40	-	410 (1.2)
9. Papayas	100	-	81	200	401 (1.2)
10. Jack-fruits	-	350	-	-	350 (1.0)
11. Pomegranates	200	-	-	-	200 (0.6)
Total:	5,931 (17.0)	14,325 (41.2)	4,375 (12.6)	10,151 (29.2)	34,782 (100)

Note: Percentages are given in the Parenthesis.

tangerines and oranges alone account for 54.5% of the total saplings demanded.

Kotjahari demanded the largest amount of fruit saplings (41.2%). After that came Purtimkanda with 29.2%, Chaurjahari with 17% and Kholagaun with 12.6%. Chaurjahari's preference is for lemons, limes, mangoes, and pineapples, Kotjahari's for lemons, lime, mangoes, pears, peaches and plums, Kholagaun's for mangoes, pineapples and bananas, and Purtimkanda's for tangerines/oranges, apples, peaches, pears and plums.

11. Livestock

Altogether there are 13,468 livestock in the Ilaka. Chaurjahari has the largest number of livestock of 4,403. Kotjahari has the second largest population, Kholagaun the third largest population and Purtimkanda the least number of livestock population.

The average number of livestock per household is 5 for the Ilaka, 7 for Kotjahari, 5 for Chaurjahari and 4 each for Kholagaun and Purtimkanda. Thus shows that Kotjahari and Chaurjahari are better off in terms of livestock.

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Bullocks, cows and she-buffaloes are the three main cattle groups in the Ilaka. On an average, each household has 1.4 bullocks: Chaurjahari and Kotjahari are is a better place in this regard than Kholagaun and Purtimkanda. On the average each household in the Ilaka had 2.2 cows and she-buffaloes. In terms of ownership of cows each household of all the panchayats except Kholagaun had one cow. But in case of she-buffalo Kotjahari and then Kholagaun households have at least one she-buffalo and that is not the case in other two panchayats. Kotjahari has more goats per household than others. The sheep population is not so large in the Ilaka and the case is similar for ducks. Chicken rearing is quite significant in Chaurjahari and Kotjahari compared to other panchayats and the number of pigs is largest in Kholagaun

The Ilaka has various types of livestock diseases, of which foot and mouth disease, liverfluke and haemorrhogic septicaemia are the main diseases mentioned. Other diseases reported are black-quarter, cholera for chicken and tick-borne diseases. In short, livestock diseases pose a serious problem in the development of livestock in the Ilaka.

Regarding the production and sale of livestock products in the Ilaka, Table 16 shows that ghee (Purified butter) is the main item of production and sale. The ghee is exported outside

the district, i.e. to Dang or Banke. Ghee production is highest in Chaurjahari and lowest in Kotjahari even though the latter has the largest number of cows and she-buffaloes. Kotjahari does not produce such milk compared to Chaurjahari. This inconsistency may be due to under-reporting of production of milk in Purtimkanda and that of both production and sale of ghee in Kotjahari.

The production of wool is not high and Chaurjahari sells all the wool produced. Whereas there is no sale from Kholagaun and Purtimkanda and Kotjahari sells a small amount of what it produces.

Eggs are sold in Chaurjahari alone. Its production is not high per household.

The production of sheep/goats is also low and sale accounts for a small proportion (16% of production).

Therefore, in terms of production as well as sale ghee is the main item of livestock production and earnings.

TABLE 14

LIVESTOCK POPULATION OF IL[illegible] 2 OF KORUM DISTRICT IN IN 1983.

(Numbers)

V. Panchayats Livestock Type	Chaur-jahari	Kotja-hari	Khola-jaun	Purtim-kanda	Total
1. Bullocks	1,460	916	794	556	3,726 (28)
2. Cows	1,080	1,160	522	755	3,317 (25)
3. She-buffaloes	556	815	724	396	2,491 (18)
4. He-buffaloes	39	4	10	3	56 (01)
5. Goats	1,120	1,387	374	645	3,526 (13)
6. Sheep	560	285	480	162	1,487 (6)
7. Pigs	312	-	925	445	1,682 (6)
8. Chicken	2,700	2,075	475	36	5,286 (4)
9. Ducks	15	4	-	-	19 (0)
Weighted Total*	4,402.5 (33)	3,938.8 (29)	2,787 (21)	2,339.6 (17)	13,468 (100)

* Following weights used while adding:
Livestocks Types 1 - 4 = 1.0
,, ,, 5 - 7 = 0.5
,, ,, 8 - 9 = 0.1
Note: Percentages are in the parentheses.

TABLE 15

MAIN LIVESTOCK DISEASES IN JLAKA 2 OF RUKUM DISTRICT.

(Number of Livestock)

V. Panchayats / Livestock Diseases.	Chaur-jahari	Kotja-hari	Khola-gaun	Murtim-kanda	Total
1. Foot Mouth Diseases	1,330	2,314	1,420	1,170	6,234
2. Liverfluke	885	1,789	796	252	3,722
3. Haemorrhagic Septicaemia	695	728	109	335	1,867
4. Black Quarter	55	157	530	20	762
5. Cholera (Chicken)	150	250	550	30	980
6. Tick-borne Disease	380	-	80	-	460
7. Others (Bhyagute & Murlo)	-	-	-	165	165

12. Consumption of Fodder

The total amount of fodder consumed by livestock in 1982-83 was estimated to be 231,838 quintals* of which lopping tree-branches and cutting grasses accounted for 53% and 47% respectively (Table 17). Thus lopping of tree-branches constributed a little more than half of the total consumption of fodder. Of the total fodder consumed by livestock, fodder from their own-farms formed a significant amount, 84% of the total and the share obtained from the forest was a mere 16% (i.e. 37,080 quintals). Out of 37,080 quintal from forest, fodder from lopping tree branches amounted to 24,522 quintals which was 10.6% of the total fodder consumed. It means that there is not much pressure on forest trees for fodder in the Ilaka and particularly the lopping of tree branches from forest does not constitute more than 11 per cent of the fodder consumption.

Among the four panchayats in the Ilaka, Kotjahari gets the largest proportion, i.e. 61%, of fodder from lopping tree-branches whereas Purtimkanda gets 46.5% of fodder from this source; Kholagaun acquires 52.5% and Chaurjahari 49%. However, most of

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* The estimate for Kholagaun seems high and Purtimkanda seems low considering the livestock population of these two Panchayats.

TABLE 17
CONSUMPTION OF FODDER IN THE ILAKA 2 OF RUKUM DISTRICT IN 1982-83.

(in Quintals)

V.Panchayats / Sources of Fodder	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1. Own-farm	37,844	39,616	105,962	11,335	194,758(84)
1.1 Lopping Tree Branches	16,144	21,596	55,737	4,567	98,044(42.3)
1.2 Cutting grasses	21,700	18,021	50,225	6,768	96,714(41.7)
2. From the Forest	24,784	6,607	4,376	1,313	37,080(16)
2.1 Within the ward	219	-	3,376	875	5,470
2.1.1 Lopping Tree Branches	131	-	2,188	875	3,194
2.1.2 Cutting Grasses	88	-	2,188	-	2,276
2.2 Outside the Ward but within the panchayat	1,093	6,607	-	88	7,788
2.2.1 Lopping Tree Branches	262	6,519	-	88	6,869
2.2.2 Cutting Grasses	831	88	-	-	919
2.3 Outside the Panchayat	23,472	-	-	350	23,822
2.3.1 Lopping Tree Branches	14,109	-	-	350	14,459
2.3.2 Cutting Grasses	9,363	-	-	-	9,363
Total of Lopping Tree Branches	30,646	28,115	57,925	5,880	122,566(53)
Total of Cutting Grasses	31,982	18,109	52,413	6,768	109,272(47)
Total:	62,628	46,224	110,338	12,648	231,833(100)

Note: a. One load is assumed to equal to 35 kg.

b. Percentages are shown in the parenthesis.

fodder from lopping of tree-branches comes from their own-farm and thus there is little pressure on forest for fodder except that in Chaurjahari which, however, get about 23.2% of fodder from the forest. It corratorates the observation made in the preceeding paragraph except that for Chaurjahari.

The lopping of tree-branches from forest within the ward, outside the ward but within the panchayat and outside the panchaya is respectively 0.4%, 0.9% and 4.6% of the total fodder from lopping of tree-branches in Chaurjahari. Kotjahari gets all its fodder from lopping of tree from within the panchayat but outside the ward. Kholagaun gets all such fodder from its own ward. But Furtimkanda gets 15% from within the ward, about 1% from within the panchayat. But outside the ward and 6% from outside the panchayat. It means that Chaurjahari in particular and Furtimkand to some extend, have had to rely on outside the panchayat for lopping tree-branches for fodder.

Table 18 shows that the total amount of fodder taken per livestock per day amounted to about 4.9 kg, of which 2.6 kg was acquired by lopping tree-branches in 1982-83. It shows that grasses as fodder contribute less than tree-branches and that the amount of fodder taken per livestock is low. In other wards,grazi contributes a sizeable proportion in livestock fodder. When fodde

TABLE 18

CONSUMPTION OF FODDER BY SOURCES PER LIVESTOCK PER YEAR AS WELL AS PER DAY IN 1982-83.

Fodder Consumption / V. Panchayats	Fodder Consumption per Livestock Per Year in Quintals			Fodder Consumption per Livdstock Per Day in Kg.		
	Total Fodder	Lopping Tree Branches	Cutting Grasses	Total Fodder	Lopping Tree Branches	Cutting Grasses
1. Chaurjahari	15.2	7.4	7.8	4.2	2.0	2.2
2. Kotjahari	12.4	7.5	4.9	3.4	2.1	1.3
3. Kholagaun	40.4	21.2	19.2	11.1	5.8	5.3
4. Purtimkanda	5.4	2.5	2.9	1.5	0.7	0.8
Total:	17.9	9.5	8.4	4.9	2.6	2.3

Note: Cattle includes from numbers 1 to 7 of Table 14 and are weighted as suggested in that table.

consumption of Ilaka is taken as norm at panchayats except Kholagaun are not in a good position and Purtimkanda is in the worst position.

Table 19 shows the possibility of livestock development by species. There is high possibility of developing livestock in Kotjahari if the demand is taken as an indication. Next comes Kholagaun. The total weighted number of livestock desired in the Ilaka is 2,426 heads, of which cattle like cows, she-buffaloes and bullocks are the main ones. The demand for these is high in Kotjahari and Kholagaun. Purtimkanda's demand is the lowest and its demand is basically for rearing sheep and goats.

13. Landslides and Soil Erosion

Table 20 shows that altogether landslides had occurred in 57 places in this one Ilaka, affecting a total area of 4,442 ropanis. Although Kotjahari has the largest number of landslides (30), Kholagaun was affected the most in terms of area affected (about 1900 ropanis): landslides that - occurred in Kholagaun in 10 places amounted to 42.2% of the total area that come under landslides. The next most affected panchayat was Kotjahari with 24.8% (1,104 ropanis), and Purtimkanda was the least affected area. In short, landslides were a problem in the area as they had affected about 222 hectares of land in the Ilaka. But there has not yet been any effort to contain this problem.

TABLE 19

POSSIBILITY OF LIVESTOCK DEVELOPMENT BY SPECIES IN THE TILANA 2 OF ROKUM DISTRICT

(Weighted total Number)

V. Panchayats / Livestock Species.	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1. Cows	157	326	165	-	647
2. She-buffaloes	167	244	151	25	587
3. Bullocks	85	116	129	-	330
4. He-buffaloes	18	11	12	1	42
5. Goats	50	72	239	400	761
6. Sheep	10	65	54	400	529
7. Pigs	20	50	23	-	93
8. Chicken	400	441	310	35	1,186
9, Ducks	65	9	21	-	95
Weighted total No:	513.5	835.5	648.1	428.5	2,425.6

TABLE 20

LANDSLIDES AND SOIL EROSION IN ILAKA 2 OF RUKUM DISTRICT.

Landslides & area affected / Panchayats	No. of Landslides	Area affected by slides* in Ropanis
1. Chaurjahari	12	625 (14.1)
2. Kotjahari	30	1,104 (24.8)
3. Kholagaun	10	1,875 (42.2)
4. Purtimkanda	5	838 (18.9)
Total:	57	4,442

* Percentages are shown in the parenthesis.

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14. Forest

The total estimated area under forest in the Ilaka is 18,769 ropanis, i.e. 939 hectares (Table 21). Of this total, dense forest accounts for about 45%, scrub 30%, patch forest 14% and barren forest 11%. The barren forest area is sizeable, indicating the magnitude of deforestation. This barren forest area is not much in Chaurjahari (0.2% of its forest area) and accounts for about 5% in Kotjahari and about 2.6% in Purtimkanda. It forms a significant proportion (15.1%) in Kholagaun, which also has a large proportion (21.7%) of scrub forest is in Kotjahari (73%) and in Chaurjahari (49%) and a relatively low proportion of it (28%) is in Purtimkanda. The area under dense forest in Chaurjahari, Kotjahari, Kholagaun and Purtimkanda are respectively 2,238; 102; 5,692 and 435 ropanis. It means that Kholagaun and Chaurjahari are in a relatively better position with respect to forest area.

In terms of total area under forest, Kholagaun has the largest amount of forest area, 7.4%, Chaurjahari has 23.7%, Purtimkanda 3.3% and Kotjahari 2.5% of the total estimated forest area (939 hectares).

Table 22 indicates that at present, firewood supply from neighbouring forests is not enough for 18 wards, i.e. equivalent to two whole panchayats in the Ilaka and 18 wards have just enough

TABLE 21

FOREST TYPE AND AREA IN ILAKA 2 OF RUKUM DISTRICT IN 1983.

(in Kopanis)

Type of Forests / V. Panchayats.	Dense Forest	Scrub Forest	Patch Forest	Barren Forest	Total
1. Chaurjahari	2,238	2,192	15	11	4,456 (23.7)
2. Kotjahari	102	340	-	24	466 (2.5)
3. Kholagaun	5,692	2,873	2,660	1,995	13,220 (70.4)
4. Purtimkanda	435	176	-	16	627 (3.3)
Total:	8,467 (45.1)	5,581 (29.7)	2,675 (14.3)	2,046 (10.9)	18,769 (100)

Note: Percentages are given in the parenthesis.

TABLE 22

WARD - WISE REQUIREMENT AND SUPPLY SITUATION IN FOREST PRODUCTS IN THE VILLAGE PANCHAYAT

V. Panchayats / Item	Number of Wards														
	Chaurjhari			Kotjahari			Kholagun			Purtimkanda			Total		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
24.1 At Present															
1. Firewood	-	4	5	-	4	5	-	5	4	-	5	4	-	18	18
2. Fodder	-	4	5	-	5	4	-	5	4	-	-	9	-	14	22
3. Timber	-	3	6	-	1	8	-	2	7	-	1	8	-	7	29
4. Tree branches for Roofing & Compost Making	-	3	6	-	6	3	-	6	3	-	4	5	-	19	17
24.2 Future															
1. Firewood	-	1	8	-	1	8	-	-	9	-	1	8	-	3	33
2. Fodder	-	1	8	-	1	8	-	-	9	-	1	8	-	3	33
3. Timber	-	-	9	-	1	8	-	-	9	-	-	9	-	1	35
4. Tree branches for Roofing & Compost Making	-	1	8	-	2	7	-	-	9	-	-	9	-	3	33

A = More than enough.

B = Just enough.

C = Not enough.

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supply. Local people estimate that in the future only three wards out of 36 wards in the Ilaka will have just enough supply of firewood and 33 wards will have a problem of firewood. Purtimkanda and Kholagaun are now relatively in a better position than Chaurjahari and Kotjahari as the former have relatively more wards with just enough firewood supply. But, in the future, Kholagaun estimates that it will be in the worst position as all its wards will have firewood scarcity inspite of having over 13,000 ropanis of forest area.

The fodder supply is just enough in 14 wards in the Ilaka and 22 wards are in deficit. Here Purtimkanda is the worst affected as all its wards have fodder scarcity at present. Kotjahari and Kholagaun are relatively better off than Chaurjahari. But in future, the fodder supply condition in the Ilaka will be like that of the firewood. In this case, all wards of Kholagaun will have scarcity of fodder and eight wards of each of the other panchayats will have this problem.

At present, timber supply is just enough for seven wards and not enough for 29 wards in the Ilaka. Purtimkanda and Kotjahari have an acute problem as eight out of nine wards of each do not have enough supply of timber. Chaurjahari is in relatively better position than Kholagaun. In future, only one ward in the Ilaka

will have just enough supply of timber and the remaining 35 wards, will face scarcity. The worst affected panchayats will be Chaurjahari, Kholagaun and Purtimkanda as all of the wards will have timber scarcity. Only one ward is Kotjahari will have just enough timber supply.

About 53% of all the wards in the Ilaka have just enough tree-branches for roofing and compost making. Kotjahari and Kholagaun are in a better position than Chaurjahari and Purtimkanda in this regard. However, in future, about 8% of all wards in the Ilaka will have just enough for these purposes. Kholagaun and Purtimkanda will have more serious problems than the other two panchayats.

The total number of trees planted till now is 1,355 which is not a very impressive figure (Table 23). Of the total trees planted Kholagaun accounts for 59%, Chaurjahari for 30% and Kotjahari for 11%. No trees have been planted in Purtimkanda. Of the total trees thus planted, most of the trees were planted around the houses (51%) and about 21% of such plantation was made around the upland and another 27% plantation was done in other areas. There is no such plantation in the low land (Khet) in the Ilaka except in Chaurjahari.

TABLE 23

NUMBER OF TREES PLANTED TILL NOW IN IL.KA. 2 OF RUKUM

(Number of Trees)

Panchayats	No. of Trees Planted Till Now					No. of Trees Dead	
	Around the Upland	Around the Lowlan	Around the House	Other	Total	Number	%
1. Chaurjahari	130	15	90	170	405	240	59
2. Kotjahari	150	-	-	-	150	75	50
3. Kholagaun	-	-	600	200	800	525	66
4. Purtimkanda	-	-	-	-	-	-	-
Total	280	15	690	370	1,355	840	62

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In fact, the effective/net plantation amounted to 515 trees only as the mortality of trees planted totalled to 840 with a death rate of about 62%. The death rate is high at about 66% of trees planted in Kholagaun where their plantation is the highest. The proportion of trees which died after being planted is 59% in Chaurjahari and 50% in Kotjahari. In short, tree plantation is limited in the Ilaka and the death rate is high.

Regarding the potential for afforestation, it is estimated that afforestation is possible in 1,666 ropanis of land (i.e. 83 hectares) which will involve about Rs. 600 thousand and will benefit 7,369 households in the Ilaka as whole (Table 24), It means that the plantation costs will amount to Rs. 349 per ropani and Rs. 79 per beneficiary household. The main species preferred are sal, pine and poplar. Among the panchayats, Chaurjahari wants to have tree plantation in 882 ropanis thus accounting for about 53% of the total planned area at a cost of Rs. 568 per ropani. Kholagaun plans plantation in 591 ropanis at Rs. 102 per ropani, and Purtimkanda in 190 ropanis at Rs. 105 per ropani. This means that the cost per ropani is estimated higher in Chaurjahari than in Kholagaun and Purtimkanda. In general, it seems that both costs and number of families benefitted* are overestimated in Chaurjahari compared with other panchayats.

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* There are only a total of 934 families in Chaurjahari, yet the trees are reported to benefit 6,228 families.

TABLE 24

POTENTIALS FOR AFFORESTATION IN ILAKA 2 OF KUKUM IN THE FISCAL YEAR 1984-85

Panchayats	Area Ropanis	No. of Benefitting Families	Estimated Costs in Rs.	Main Species
1. Chaurjahari	882	6,228	500,700	Sal, Pine, Poplar
2. Kotjahari	3	221	-	Sal, Pine
3. Kholajaun	591	691	60,000	Sal, Pine
4. Purtimkanda	190	229	20,000	Sal, Pine
Total:	1,666	7,369	580,700	Sal, Pine, Poplar

TABLE 25

CONSUMPTION OF TIMBER, POLES AND FIREWOOD IN ILAKA 2 OF KUKUM IN THE FISCAL YEAR 1982-83.

Panchayats	Large Timber (cu.m.)	Slender Poles (Quintals)*	Firewood (Quintals)*	Total (cu.m.)
1. Chaurjahari	12,700	2,488 (360)	62,125 (8,973)	22,033
2. Kotjahari	4,260	5,786 (836)	46,112 (6,660)	11,756
3. Kholagaun	7,400	4,672 (675)	36,274 (5,239)	13,314
4. Purtimkanda	2,170	310 (45)	18,431 (2,662)	4,877
Total :	26,530	13,256 (1,916)	162,942 (23,534)	51,980

* One load is equal to 35 kg.

Note: Amounts in the parenthesis are in cubic meters.

15. Consumption of Timber, Poles and Firewood.

The total consumption of timber, poles and firewood in the Ilaka is 1982-83 was estimated to be 51,980 cubic meters, of which timber accounted for 51%, poles 4% and firewood 45% (Table 25). The annual consumption of all the three items in the Ilaka was 19.3 cubic meters per households. Chaurjahari consumed the largest amount at 23.6 cubic meters and Purtimkanda the smallest amount at 8.9 cubic meters. It was 21.8 cubic meters in Kotjahari and 20.1 cubic meters in Kholagaun.

The annual consumption of timber per household was estimated at 9.9 cubic meters in the Ilaka. It is 13.6 cubic meters in Chaurjahari, 11.1 cubic meters in Kholagaun, 7.9 cubic meters in Kotjahari and 3.9 cubic meters in Purtimkanda. It means that the timber consumption is higher in Chaurjahari and Kholagaun than in Kotjahari and Purtimkanda. The latter consumes the least amount of timber. Though low at 0.71 cubic meters per household in the Ilaka, the per household consumption of slender poles used for construction and fencing is higher in Kotjahari (1.55 cubic meters) and Kholagaun (1.0 cubic meters) than in Chaurjahari (0.39 cubic meter) and Purtimkanda (0.08 cubic meters). The former two panchayats exploit much of potential timber and thus exert more pressure on forest than the latter. As a matter of fact, although the absolute amount of slender poles consumed is not much its consumptio

is nevertheless significant when its potential as timber is taken into account.

The consumption of firewood, though a significant amount is, however, not that important from the view point of pressure on forest as most of it does not come from the felling of forest trees. It will be dealt with in detail in the next section.

1(. Firewood Consumption.

The total consumption of firewood in the Ilaka in 1982-83 was estimated at 16,294.2 metric tons, i.e. 23,534 cubic meters (Table 25). It means that a household consumed 60.6 quintals of firewood in one year that is 16.6 kg. per day in that year. The daily consumption of firewood per household in that year was 18 kg. in Chaurjahari, 23 kg. in Kotjahari, 15kg. in Kholagaun and 9kg. in Purtimkanda. It means that the annual firewood consumption per household in Chaurjahari, Kotjahari, Kholagaun and Purtimkanda was 66.5, 85.6, 54.6 and 33.5 quintals respectively. By taking the Ilaka figure as a norm, it can be observed that Kholagaun and Purtimkanda fall below the norm and other two panchayats consume more firewood. If the trend of consumption of firewood is taken as a proxy for the indicator of economic well-being, Kotjahari is a relatively more prosperous panchayat than the others; and

TABLE 26

CONSUMPTION OF FIREWOOD BY SOURCES OF SUPPLY IN ILAKA 2 OF KUKUR IN THE FISCAL YEAR 1982-83

(in Quintals)

Sources of Supply of firewood / Panchayats	Chaurjahari	Kotjahari	Kholagaun	Purtimkanda	Total
1. Collecting Wastes from Forest	38,605	45,966	33,264	15,904	133,739
1.1 Within Ward	37,030	45,686	33,264	15,899	131,879
1.2 Outside Ward Within Panchayat	1,575	280	-	5	1,860
2. Cutting Trees from Forest	3,500	32	2,800	2,515	5,847
2.1 Within Ward	3,500	32	2,800	2,515	5,847
3. Collecting Agriculture Wastes	20,020	114	210	12	20,356
3.1 Within Ward	770	-	-	12	782
3.2 Outside Ward Within Panchayat	350	114	140	-	604
3.3 Outside Panchayat	18,900	-	70	-	18,970
Total:	62,125	46,112	36,274	18,431	162,942

Purtimkanda is the poorest. Chaurjahari occupies the second place and third place goes to Kholagaun.

At Table 26 shows, collection of wastes from forest amounts to 82.10% of the total firewood consumed in the Ilaka of which a large chunk of collection of wastes from forest (80.9%) is being made within the ward and a more 1.2% is from outside the ward but within the panchayat. Collection of agricultural wastes forms another 12.£% and felling of forest trees 5.4%. A large amount of agricultural wastes (11.6% of total firewood) is collected from outside the panchayat, implying that farms are located outside the panchayat. It means that there is not much pressure on forest for felling trees for firewood, though forest provides most of the firewood required by people.

Kotjahari and Kholagaun depend heavily on the collection of wastes from forest as it accounts for 99.7% and 91.7% of the total firewood consumption respectively. Kholagaun gets all its forest wastes from within the ward whereas Kotjahari gets 99.1% from within the ward and the rest (i.e. 0.6%) from outside the ward but within the panchayat. Kotjahari get very little from felling of trees of the forest (0.1%) and collection of agricultural wastes (0.2%). Kholagaun acquires 7.7% firewood from felling of trees,

Chaurjahari also gets 5.6% from felling of trees in the forest. However, Purtimkanda gets 13.6% firewood from felling of forest trees and thus is relatively more, dependent on felling trees from the forest. Kotjahari is least dependent on felling trees. However, none of the four panchayats go outside the ward for felling trees in the forest for firewood. Chaurjahari is highly dependent on the collection of agricultural wastes, 32.2% of its total requirement, of which a large part (30.4%) is acquired from outside the panchayat. Purtimkanda consumes the least amount (0.1%) of agricultural wastes as firewood.

In general, the main source of firewood is the collection of wastes from forest and the second important firewood source is the collection of agricultural wastes except in Purtimkanda. The Ilaka gets most of its firewood from within the ward. Therefore, forests in the Ilaka one can say have not been exploited much for firewood in the form of felling of trees.

17. Irrigation.

More area is traditionally irrigated than is under the government schemes, (Table 27). The traditionally irrigated area is 2,973 ropanis and under the government scheme it is 2,554 ropanis. There are no government irrigation schemes in Kotjahari and Purtimkanda. There is one scheme in Kholagaun with the capacity of

TABLE 27

EXISTING IRRIGATION FACILITIES IN ILKA 2 OF RUKUM

Irrigation Facilities \ V. Panchayats	Chaurja-hari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1. From Traditional Canal					
1.1 No. of Canals	-	-	-	-	-
1.2 Area Covered (Ropanis)	465	1,649	568	291	2,973
1.3 No. of Beneficiaries (Households)	-	-	-	-	-
2. Under the Government Scheme					
2.1 No. of Projects	1	-	1	-	2
2.2 Area Covered (Ropanis)	2,474	-	80	-	2,554
2.3 No. of Beneficiaries(Household)	492	-	-	-	492
Total Area:	2,939	1,649	648	291	5,527

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irrigating 80 ropanis. There is one scheme in Chaurjahari with a command area of 2,474 ropanis, which is the largest one in the Ilaka.

Table 28 shows potentials for irrigation in the Ilaka. Altogether the potential projects number 31 in total with an average irrigation capacity of 829 ropanis at an average cost of Rs. 170 thousand and the average number of beneficiary households is 58. Kholagaun requires the largest number of projects, i.e. 10 and Kotjahari has the least number of projects. Although the average estimated costs per project are higher in Chaurjahari and Kotjahari than in Purtimkanda and Kholagaun, the command area which will come under irrigation is also higher in the former than in the latter panchayats.

As no government irrigation scheme exists in Purtimkanda at least one project in a year could be awarded to it as the number of beneficiaries are more here than in other panchayats and as it has only small farmers and very poor submarginal and marginal farmers. Similarly, since Kotjahari has no government scheme, it looks justifiable in terms of higher average area per project than that of Kholagaun which already has had one such scheme. In terms of average cost per project Kholagaun stands better chance of

TABLE 28

POTENTIALS FOR IRRIGATION IN ILAKA 2 OF KUKUM

Potential Projects / Panchayats	No. of Projects	Average Area per Project (Ropanis)	No. of Beneficiaries* per Project	Average Estimated Costs per Project (Rs. '000)
1. Chaurjahari	8	1,870	50	270
2. Kotjahari	6	584	49	243
3. Kholagaun	10	545	43	72
4. Purtimkanda	7	89	98	134
Total:	31	829	58	170

* Households.

getting a project than Chaurjahari if there is competition between them for one project in the same year.

18. Drinking Water Facilities.

There are altogether four government aided drinking water (DW) projects in the Ilaka (Table 29). Kotjahari has 2 and one each in Chaurjahari and Kholagaun. Purtimkanda which is situated in a rugged mountainecus area has no DW projects. It is reported that Chaurjahari has five non-working projects and others have none. From the working project, the number of households served is greater in Chaurjahari than in Kotjahari as, on an average, one tap serves 20 households in Chaurjahari and 9 households in Kotjahari. Though Kholagaun has more taps than the former two panchayats, the average number of households served by a tap is not known. Probably it serves more households as the population in quite big. Since Purtimkanda does not have such schemes, it is but natural to accord priority to it in assigning drinking water projects in the Ilaka.

Regarding the requirement for drinking water projects, Kholagaun and Purtimkanda demand more schemes than others (Table 30). In terms of average number of beneficiaries or average cost per project, Purtimkanda and Chaurjahari may be favoured even if

TABLE 29

DRINKING WATER FACILITIES IN ILAKA 2 OF RUKUM

V. Panchayats / Government Aided Drinking Water Scheme	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-Kanda	Total
1. Total no. of Projects	1	2	1	-	4
2. No. of not working Projects.	5	-	-	-	5
3. No. of Taps Under Working Projects	26	12	42	-	80
4. No. of beneficiaries* of working Projects	523	108	-	-	631

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TABLE 30

REQUIREMENT OF DRINKING WATER PROJECTS IN ILAKA 2 of KUKUM

Requirement of Water Project / Panchayats	No. of Projects	Average No. of Beneficiaries: No. of Villages	Average No. of Beneficiaries: No. of Household	Average Estimated Costs per Project (Rs. in 1000)
1. Chaurjahari	7	3	69	134
2. Kotjahari	7	3	216	197
3. Kholagaun	9	1	46	63
4. Purtimkanda	8	2	67	231
Total:	31	2	95	153

they involve relatively higher costs than others. The cost factor need not be given that much weight as these may be initial crude estimates. It seems that there may be an element of overestimation regarding the number of households to be benefitted from such schemes.

19. Water Mills.

There are 33 water mills in the Ilaka, of which 20 are in Kholagaun and 11 in Purtimkanda (Table 31). There are only two water mills in Chaurjahari and none in Kotjahari. The total number of households benefitted is 465, of which 323 are in Purtimkanda. Water mills of Purtimkanda serve more families than those of Chaurjahari and Kholagaun. The latter has the largest number of households served by a water mill.

20. Adult Literacy and Education.

Altogether there are 1,347 literates in the Ilaka, of which males form about 91% (Table 32). It means that there are relatively very few female literates in the Ilaka. The estimated total adult literacy rate is 9.4% in the Ilaka, 9.1% in Chaurjahari, 15.5% in Kotjahari, 7.9% in Kholagaun and 6.3% in Purtimkanda. The baseline study of APROSC estimated the total literacy rate for population of 6 years and above to be 13% for Rukum district in 1979.

TABLE 31

WATER MILLS AND THEIR BENEFICIARIES IN ILAKA 2 OF KUKUM

No. of Water Mills / Beneficiaries / Panchayats	No. of Water Mills	No. of Beneficiaries (Households)
1. Chaurjahari	2	100
2. Kotjahari	-	-
3. Kholagaun	20	42
4. Purtimkanda	11	323
Total:	33	465

TABLE 32

ADULT LITERACY* IN THE ILAKA 2 RUKUM

(Number)

Adult Literacy / Panchayats	Male	Female	Total
1. Chaurjahari	390	45	435 (32.3)
2. Kotjahari	411	36	447 (33.2)
3. Kholagaun	240	40	280 (20.8)
4. Purtimkanda	183	2	185 (13.7)
Total:	1,224 (91)	123 (9)	1,347 (100)

* Population of 10 years and above, who can read letters and r[illegible] ly.

It seems that the adult female literacy is very low in the Ilaka. This is particularly so in Purtimkanda. Female literacy is better in Kotjahari and Kholagaun than in Purtimkanda and Chaurjahari. Total adult literacy rate is higher in Kotjahari than in other panchayats and Purtimkanda ranks at the bottom. Since Purtimkanda has only the small size of holdings, it seems that poverty and illiteracy go together, It is also clear that female illiteracy and poverty also have that relationship.

Table 33a shows that altogether there are 14 educational institutes in the Ilaka, of which 11 are primary schools, one a lower secondary school and two are high schools. Chaurjahari and Purtimkanda have more schools than other panchayats, however, the latter has primary schools only. There are the only two panchayats where there is a high school. Kotjahari and Kholagaun each has on primary school but Kotjahari also has a lower secondary school.

In terms of absolute figures primary enrolment is higher in Chaurjahari and Purtimkanda than in others as they have also more primary schools. A primary school in Kholagaun serves more students than in other panchayats. Registration is very low in Kotjahari and there are no girls. Participation of girls in school is very low in Purtimkanda and ratio-wise it is better in Kholagaun than in Chaurjahari, though absolute enrolment figure is higher in the latter than in the former.

TABLE 33a.

EDUCATION FACILITIES AND ENROLMENT IN THE ILAKA 2 OF KURUM

(Number)

Education Facilities & Enrolment \ Panchayats	Chur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
A. Educational Institues:					
1. Primary School	4	1	1	5	11
2. Lower S. School	-	1	-	-	1
3. High Schools	1	-	1	-	2
B. Enrolment:					
1. Primary	715	60	200	471	1,446
a. Boys	600	50	150	456	1,266
b. Girls	115	-	50	15	180
2. Lower S.	-	141	-	-	141
a. Boys	-	125	-	-	125
b. Girls	-	16	-	-	16
3. High School	250	-	233	-	483
a. Boys	200	-	200	-	400
b. Girls	50	-	33	-	-

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The enrolment in lower secondary school is low and female participation is also low as out of 141 students, the girls numbe 16 only. Enrolment, both total and for girls is higher in Chaurjahari than in Kholagaun. However, the absolute enrolment is not that high in the Ilaka.

The student-teacher ratio at the primary level is better in Kotjahari and Purtinkanda than in Chaurjahari and Kholagaun, the latter having the highest ratio (Table 33b). This ratio at the lower secondary level is reasonable similar to the high school level, where Chaurjahari is in a better position than Kholagaun. For the Ilaka as a whole, this ratio is better at the high schoo level than at the primary and lower secondary levels.

Regarding the quality of teachers at the three levels, Tabl 33c shows that the percentage of trained teachers is better at t high school level than at the primary and lower secondary levels The latter has the smallest percentage of trained teachers in th Ilaka. For instance, the percentages of trained teachers at the primary lower secondary and high school levels are 36, 33 and 57 respectively. Kotjahari and Chaurjahari have relatively more trained primary teachers than Kholagaun and Purtinkanda. But al the trained teachers are males alone. There are female teachers at the primary level in all the panchayats in the Ilaka except i

TABLE 33b.

STUDENT-TEACHER RATIOS IN THE ILAKA 2 OF RUKUM

(STUDENT PER TEACHER)

V. Panchayats / School	Chaur-jahari	Kotjahari	Kholagaun	Purtimkanda	Total
Primary School	42	20	50	31	37
Lower S. School	-	23	-	-	23
High Schools	17	-	29	-	21

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TABLE 33c.

TRAINED AND UNTRAINED TEACHERS BY SEX IN EDUCATIONAL INSTITUTES OF ILAKA 2 OF RUKUM

(Number)

V.Panchayats / Teachers	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1. Primary School	17	3	4	15	39
1.1 Trained	6	1	1	6	14
a. Male	6	1	1	6	14
1.2 Untrained	11	2	3	9	25
a. Male	10	2	2	7	21
b. Female	1	-	1	2	4
2. Lower Secondary	-	6	-	-	6
2.1 Trained	-	2	-	-	2
a. Male	-	2	-	-	2
2.2 Untrained	-	4	-	-	4
a. Male	-	4	-	-	4
3. High School	15	-	8	-	23
3.1 Trained	11	-	2	-	13
a. Male	11	-	2	-	13
3.2 Untrained	4	-	6	-	10
a. Male	4	-	6	-	10

Kotjahari and female teachers ratio is better in Purtimkanda than in Kholagaun and Chaurjahari.

The trained teachers at the low secondary level form 33%. There are no female teachers here and same is the case at the high school level. At the high school level, there are more trained teachers than untrained ones. The ratio of trained teachers is better in Chaurjahari than in Kholagaun.

21. Service Centres and Facilities.

All four panchayats in the Ilaka get chemical fertilizers and improved seeds from Chaurjahari (Table 34). The Veterinary hospital and post office are also in Chaurjahari. For health center and hospital all households of the Ilaka go to Jajarkot in the next district. Kotjahari has one health post. But Kholagaun and Purtimkanda have none. There is a high school in Chaurjahari and also in Kholagaun. It means that Chaurjahari is serving more or less as the service center for the Ilaka. For loans and banking services households of the Ilaka have, however, to go to the district headquarters and their main markets are Tulsipur/ Ghorahi in Dang and Nepalgunj in Banke district.

TABLE 34

DISTANCES TO BE COVERED TO GET SERVICES AND FACILITIES

V.Panchats / Services/and Facilities	Distance in Km.				Places,
	Chaur-jahari	Kotja-hari	Khola-gaun	Purthim-kanda	Panchayat & District.
1. Chemical Fertilizer	1	4	8	32	Chaurjahari, Rukum
2. Improved Seeds	1	4	8	32	,, ,,
3. Loans	45	90	55	32	,, ,,
4. Market	94	160	96	129	Dang, Nepalgunj
5. High School	-	-	-	32	Chaurjahari
6. Health Centre Hospital	6	4	9	35	Jajarkot
7. Veterinary Hospital	-	4	9	32	Chaurjahari
8. Post Office	-	-	9	32	,,
9. Bank	45	56	55	32	Rukum

Though Chaurjahari is emerging as a service center due to its accessibility to outside markets via air, people will have to go outside the Ilaka for other services such as banking and marketing. In terms of distances to be covered, Purtimkanda is at a disadvantage as its households have had to travel greater distances for various services.

Godown and Sajha (Co-operative). Both a godown and Sajha are in Chaurjahari alone in the Ilaka. The godown has a capacity of 250 tons. There is one Sajha which is still active.

22. Loans.

Agricultural loans and consumption loans are the only two loans reported to be taken from banks (Table 35). Chaurjahari and Kholagaun are the two panchayats which have taken loans. The total number of borrowers are 142 for the Ilaka and the total amount taken amounts to Rs. 160 thousand, implying a per borrower debt of Rs. 1,127. However, only agricultural loans have been taken by Chaurjahari people, whereas people of Kholagaun have borrowed loans for consumption purposes. The loans for consumption exceed the loans for agriculture by Rs. 96 thousand.

TABLE 35

LOANS TAKEN BY HOUSEHOLDS OF ILAKA 2 OF RUKUM DISTRICT UP TO NOW

V.Panchayats / Loan Type	Chaur-jahari	Kotja-hari	Khoda-gaun	Purtim-kanda	Total
1. Agriculture Loans from Bank:					
1.1 No. of Debtors	22	-	-	-	22
1.2 Total Loans Taken	32,000	-	-	-	32,000
2. Consumption Loans from Bank:					
1.1 No. of Debtors	-	-	120	-	120
2.2 Total Loans Taken	-	-	128,000	-	128,000
Total No. of Debtors	22	-	120	-	142
Total Amount of Loan Taken (Rs.)	32,000	-	128,000	-	160,000

23. Sources of Revenues of Village Panchayats.

The sources and the amount of revenues are reported by Chaurjahari and Kotjahari alone (Table 36). On the basis of information from Chaurjahari it can be summarised that Khalagaon and Furtinkanda will have about Rs. 1,000 each in a year in the form of revenue. At present, their revenue sources are few and yield low amount of revenue except that of Kotjahari from royalty from quarrying.

24. Potential Cottage Industries.

Table 37 shows that tailoring, cotton cloth weaving, hosiery and furniture making are reported to be the potential cottage industries. Their estimated cost varies in between Rs. 10 thousand and Rs. 200 thousand. In terms of employment generation, it is reported that two tailoring and one cotton cloth weaving industries are more employment generating. The sources of raw material for all such industries except one tailoring will be Nepalgunj and they all aim at catering to the demands of local people by taking into consideration the given investment cost and employment, it is obvious that tailoring at Syalkhola, all in Chaurjahari, will cost only rupees one thousand per person of employment generation. Furniture making at Amaltakura in Chaurjahari, tailoring at Gotane and at Tatagaun both also in Chaurjahari will cost Rs. 2 thousand

TABLE 36

SOURCES OF REVENUE OF VILLAGE PANCHAYATS OF THE ILAKA 2 OF RUKUM DISTRICT

V.Panchayats / Sources of Revenue	Amounts (Rs)				
	Chaur-jahari	Kotja-hari	Khola-gaun	Purtim-kanda	Total
1. Licensing & Its Renewable (Radio and Guns)	500	200	-	-	700
2. Applications	500	100	-	-	600
3. Recommendations	-	200	-	-	200
4. Fines	-	100	-	-	100
5. House Tax	-	200	-	-	200
6. Royality from Quarring	-	3,200	-	-	3,200
Total	1,000	4,000	-	-	5,000

TABLE 37

POTENTIAL COTTAGE INDUSTRIES AS DEMANDED IN THE ILAKA 2 OF KURUM DISTRICT.

Types of Industries	Location Village, Ward & Panchayat	Estimated Cost in 1000	Capacity	No. of People to be employed	Sources of Raw Materials	Where to Sell?
1. Tailoring	Dharigaun, 3, Chaurjahari	200	-	35	Dang	Locally
2. ,,	Gotame, Chaurjahari	100	-	50	Nepalgunj	,,
3. ,,	Syalkhola, Chaurjahari	10	-	10	,,	,,
4. ,,	Tatagaun, Chaurjahari	20	-	10	,,	,,
5. Weaving	Ward 3, Kholagaun	200	-	50	,,	,,
6. Hosiery,	Jugepani, Kholagaun	10	-	3	,,	,,
7. Furniture Making	Amaltakura, Chaurjahari	20	30,000 Units	10	,,	,,

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per person of employment generation. The hosiery at Jugepani in Kholagaun will cost Rs. 3.3 thousand per person of employment generation. The remaining two tailoring and weaving are costly from the view point of investment per person. Kotjahari and Purtinkanda have not reported any potential cottage industries.

25. Project Selection.

a. Bridge Requirement

Table 38 shows that Chaurjahari, Kotjahari and Kholagaun require one suspension bridge each. Given the cost and the number of beneficiaries, the construction of suspension bridge on the Jahari Trail in Kotjahari will be cheaper per beneficiary and also more important than that at Kamelenaule or at Jahari in Kholagaun. The bridge construction at Kholagaun will be cheaper than that in Chaurjahari.

b. Improvement of Trails Required

Table 39 shows that altogether 13 km. of trails are required to be improved in two panchayats, Chaurjahari (8km) and Kotjahari (5 km). The improvement of three trails in Chaurjahari will facilitate travel for all 2,687 households of the Ilaka and such activity in Kotjahari will give benefit to about 100 households.

TABLE 38

LOCATION SPECIFIC REQUIREMENT OF BRIDGES IN THE ILAKA 2 OF RUKUM DISTRICT.

Name of Trail	V.D.C. Panchayat	River	Types of Bridge Estimated		Estimated Cost Rs. in '000	No. of Beneficiaries (Households)
			Suspen-sion	Wooden		
1. Kamele Naule	Chaurjahari	Jahari	x	-	10,00	2,087
2. Jahari	Kotjahari	Jahari	x	-	14,00	25,000
3. Jahari	Kholagaun	Jahari	x	-	1,50	800

TABLE 39

REQUIREMENT FOR THE IMPROVEMENT OF TRAILS IN THE ILAKA 2 OF KORUM DISTRICT.

Name of Trail	Panchayat	Length of Trail(Km)	No. of Beneficiaries(Households)
1. Banskhola-Airport;	Chaurjahari	2	2,687
2. Chaurjahari-Mankot	Chaurjahari	4	2,687
3. Patagaun-Ma tal	Chaurjahari	2	2,687
4. Kotjahari	Kotjahari	5	100

26. Selection of Projects on Priority Basis.

The table 40 gives a list of projects on the basis of priorities assigned by the local people. Of the 22 projects listed on priority basis, drinking water projects number 6, school buildings 4, bridges 3, dams 3, irrigation schemes 3, health post 1, panchayat building 1 and cottage industry 1. It means that most of the projects demanded are social infrastructures (12). Economi infrastructural projects number 9 and there is only one directly productive scheme, cottage industry. Among the social infrastructures, drinking water is the most important priority as it forms half of the total projects demanded under the social category.

If priority 1 projects are selected for the first year they will involve an estimated expenditure of Rs. 14,75 thousand and wil give benefit to 4,576 households. Those projects which are assign second priority will involve an estimated cost of Rs. 20, 50 thousa and will give benefit to 4,726 households. Projects having third priority will require an estimated amount of Rs. 8,02 thousand and will provide benefit for about 350 households. The fourth priorit projects will cost an estimated amount of Rs. 3,08 thousand with generation of benefit to 208 households.

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TABLE 40

PROJECTS LISTED IN TERMS OF PRIORITY BY VI LAGE PANCHAYATS OF THE ILAKA 2 OF RUKUM

Name of	Priority (Rank)	Bases for Assigning Priority	Location Village Panchayat	Capacity	No. of Benefi ciaries(House-holds)	Estimated Cost Rs. in Thousand
1. Bridge	1	Difficult to Cross Stream	Male Maule, Chaurjahari		2,587	10,00
2. Cottage Industry	1	Employment Generation	Kumigaun, Kotjahari		539	3,00
3. Bridge	1	Difficult to Cross Stream	Kholagaun, Kholagaun		800	1,50
4. Panchayat Building	1	Facilitate Work	Purtimkanda		550	25
5. Drinking Water	2	Scarcity	Githakot, Purtimkanda		105	4,00
6. Dam	2	Flood Control	Kholagaun		1,000	1,00
7. Bridge	2	Difficult to Cross Stream	Ward 2, Kotjahari		2,587	14.00

Contd....

TABLE 40 Contd....

	Name of Projects	Priority (Rank)	Bases for Assigning Priority	Location: Village	Location: Panchayat	Capacity	No. of Beneficiaries (Households)	Estimated Cost Rs. in Thousand
8.	Health Post	2	Treatment	Chaurjahari,	Chaurjahari		934	1,50
9.	Primary School Building	3	Education	Schatarkhola,	Chaurjahari	250 Students	95	50
10.	Drinking Water	3	Scarcity	Melenaula,	Kotjahari		Wards 1-4	7,00
11.	School Building	3	Education	Tisauna,	Kholagaun		Wards 1&2	50
12.	Drinking Water	3	Scarcity	Siri,	Purtimkanda		51	2
13.	Drinking Water	4	Scarcity	Chamaon,	Purtimkanda		52	1,00
14.	Irrigation Canal	4	Farming	Chaiteghola,	Kholagaun		26	8
15.	Irrigation Canal	4	Farming	Ghandanda,	Kotjahari		40	50
16.	Primary School Building	4	Education	Tatagaun,	Chaurjahari	250 Students	80	1,50

Contd....

TABLE 40 Contd.....

Name of Projects	Priority (Rank)	Bases for Assigning Priority	Location		Capacity	No. of Beneficiaries(Households)	Estimated Cost Rs. In Thousand
			Village	Panchayats			
17. Dam	5	Flood Control	Latojure,	Chaurjahari		75	1,00
18. School Building	5	Difficulty	Ghoudanda,	Kotjahri	250 Students	100	1,00
19. Drinking Water	5	Scarcity	Thariya,	Purtimkanda		55	1,00
20. Drinking Water	6	Scarcity	Jiula,	Purtimkanda		400	8,00
21. Irrigation Canal	3	Scarcity	Dasala,	Kotjahari		40	2,00
22. Dam	6	Flood Control	Bukokhola,	Chaurjahari		140	50

In short, except Kotjahari which has given top priority to industry, other panchayats are more interested in having socio-economic infrastructures, particularly drinking water. This is partly because this has been the type of projects that village panchayats usually are allowed to select.

V. Recommendations.

Based on the experiences in this project hitherto, certain inferences and tentative recommendations are being set down. This section is basically a review of problems, mistakes, unfortunate interruptions and unpredictable delays which one would attempt to avoid if one was doing a second project and starting on a clean slate. We would like to re-iterate that the primary purpose of the project was to improve the planning capability both at the Village Panchayat and District Level. It is the local level people who would actually prepare the plans, if the training was effective In retrospect we feel it is not possible to qualitatively check resource inventories, need priorities or plans for 230 Panchayats for a short-term consultancy group. This decentralized planning should be part of a long-term learning process which would gradually improve capability with the experience of making and executing plans. All assistance should be given during training to assist VPs and line ministries to make plans but the aim should be to instil this capability within local level officials and elected leaders and to simplify planning procedures.

1. Feed-back from Pradhan Panchas and VP Secretaries indicated that they were interested in the training and motivated to participate in preparing their own VP plan (including User's Group plans) and its implementation. We feel the training time should be increased and more time is needed to permit ward level and VP level deliberations and plan preparation. Further some sort of discipline, incentives and rewards would, we feel improve the quality of planning.

2. The Project Co-ordinator, LDO (and his Planning Officer) and certain key line ministry officials (such as Agriculture, Livestock, Forestry and the DTO), should play a supportive role and provide technical support through their sub-district level officials (JT, JTAs, Foresters and Overseers) to assist in VP plan preparation.

3. In order for VP planning to be realistic, budget ceilings by sector must be available not only for the district level. but also for the Village Panchayat level. Further, the types of projects which can be planned and implemented by VPs, district Panchayat and Central line ministries need to be proscribed. These details will be partly in the Rules and will envolve within each ministry.

4. The management of the training courses has a great deal of room for improvement with respect to physical facilities, logistics, per diem and travel costs. All these need to be specified ahead of time, better planned and more realistically budgeted.

5. The role of an external short-term consultancy group with respect to a new mode of decentralized planning needs to be clarified as to how it assists VPs,, LDOs and PCO's planning functions.

6. The Consultancy group should spend more time on the orientation of the key planning officials in the PCO's office, LDO's others, PADCO and once their training materials were ready with respect to their strategy of training for local level planning.

7. In future, the implications of the Decentralization Act and Rules, will imply that a great deal more time and effort will have to be spent by the PCO, LDO, line ministry personnel with the political leaders in the planning process. Projects should be identified by the local people and their priorities will have to be given due consideration both at the VT and the District Level.

8. One assumption of this project was that the Decentralization Rules would be promulgated early in the life of the project. If they are signed the officials will be far more interested in the next training programmes. The case study panchayat reports can be used very effectively for the next training courses at the different levels.

9. Some or all the remaining panchayats may have also completed their VP plans. One should wait and see how many panchayats in each district have completed their plans, examine the quality of the data before taking a decision on the best methods for tabulation and data processing.

INTERIM REPORT

Part III.

LOCAL LEVEL PLANNING AND RELATED TRAINING PROGRAMS IN RAPTI ZONE.

APPENDICES

(DANG, SALYAN, PIUTHAN AND ROLPA DISTRICTS)

Submitted to

USAID/Nepal

March, 1984.

LANGUAGE CULTURE TRAINING AND RESEARCH CENTRE

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F O R E W O R D

This "Local Level Planning and Related Training" project has been a pioneering venture in decentralized local level planning for Nepal. The USAID sponsored Rapti Integrated Rural Development Project is the largest and only IRD project which covers one whole Zone including five districts. A draft of the Decentralization Rules have been prepared. After approval of these Rules the procedures of decentralized local level planning will be considerably strengthened both at the Village Panchayat level and the District Panchayat level. Hence in many ways, this project which USAID and LCRC have undertaken can be viewed as an experiment project which would prepare and test the methods of planning and training materials which may be useful for other IRD projects and the rest of the districts in the nation.

The process of decentralization was started over two decades ago with the advent of the Panchayat system in Nepal. The six Five Year Plans have gradually provided infrastructures for development, improved agricultural inputs, raised the standards of education and health and generally ameliorated living conditions in the entire kingdom. The Decentralization Act of 2039 B.S. was the next logical step to strengthen this process of decentralization of power and delegation of authority to local level institutions and to district and sub-district officials. This project was undertaken to train local level personnel in methods of planning from below and reverse the trend of top down planning.

However, if local level planning and implementation is to become a reality a number of key inputs are needed: First, the new organizational structure needs to be specified, infrastructure and staffing provided. Second, locally elected leaders and district and sub-district level officials need to be trained in planning and implementation procedures. Third, training manuals guidelines and other reading materials need to be prepared, formats need to be standardized and procedures simplified in order that planning from below can become realistic. Fourth, financial budget ceilings need to be disaggregated to district and village panchayat level by each sectoral line ministry. And finally, integration or convergence of inter-sectoral planning and implementation at district, service centre/Ilaka and village panchayat levels, will need to emerge by trial and error and better methods of co-ordination and streamlining of procedures evelved.

Although Rome was not built in one day, a beginning must be made. The work done under the project needs to be circulated among the line ministries to get their re-actions. Integrated rural development will need the close collaboration and technical inputs from all sectoral line ministries and also the elected leaders at the local level. I hope that this report will be of use to the different line agencies as a case study in methods of micro-regional planning and training, experiences of which can be applied to other IRD projects.

Mukti Prasad Kafle,
Secretary,
Ministry of Panchayat
& Local Development.

Preface and Acknowledgments

This project was undertaken by the Language, Culture, Training and Research Centre (LCRC) in August 1983 and was scheduled to be completed by March 1984. The project was undertaken with the anticipation that the Rules governing the Decentralization Act of B.S. 2039 (1982) would be promulgated during the life of the project and would therefore come into effect for the 2041/42 financial year. The project was therefore phased in a manner that certain local level planning inputs at the Village Panchayat and District level would be available at the time of finalizing district plans and budgets by the Project Co-ordinator/USAID/RIRD financial planning cycle for the 2041/42 financial year.

Unfortunately there have been a number of inordinate delays due to which the outputs of this project were not available for the 2041/42 planning year. The Decentralization Rules have been drafted and submitted to HMG but have not yet been promulgated. The King's Camp visit to the Mid-western Region required the attendance of a member of officials and elected leaders and consequently the first training cycles at the district and village panchayat levels in all five districts originally scheduled for 9-30 November 1983 were set back to 15 December 1983 - 15 January 1984. On account of these delays and the lack of the legal framework of the Decentralization Rules, USAID decided after discussions with LCRC, not to conduct the second cycle of planning training.

After the first cycle of training at the village panchayat and district levels, 4-5 Panchayats or one Ilaka in each district were to prepare plans as case studies. Research assistants of LCRC followed up the first cycle of training and assisted in these plan preparations where necessary and brought back all the Ward level and Village Panchayat level Questionnaires. These Ward level data have been tabulated and aggregated on to the Village Panchayat level Questionnaire. The Village Panchayat level data have then been tabulated for the Ilaka level (where the VPs constituted one Ilaka) or simply summed and tabulated for each district.

This Interim Report is therefore comprised of three parts: Part I summarizes the orientation meeting (separately detailed as Report No. 1) and the experience of the first training cycle in the five districts and a limited feed-back. Part II is the case Study of Ilaka No. 2 of Rukum district. Part III gives the tabulations of the remaining four districts, of the data gathered by the local people at the ward level and the Village Panchayat level, their resource inventories, their needs by each sector and their VP plan priorities. Although plan outputs by local people cannot be expected to be very sophisticated, the results indicate that with even modest training inputs the lower tier of Village Panchayat planning can be operationalized. Unfortunately critical validation on the quality of the planning output could not be obtained through line ministry technical inputs for each

sector at the second training cycle. A description of the data is presented only for the Rukum district four VP plans. For the other four districts the similar tables are presented as an Appendix in Interim Report, Part III.

Many people have generally contributed of their time for this project. I am very thankful to the Secretary of MPLD, Mr. Mukti Prasad Kafle for having acknowledged in his foreword to this report. The kind help rendered to us by many individuals at different stages of this project. However, I must express my special gratitude to Mr. Bhoj Raj Ghimire (Vice Chairman of the High Level Decentralization Committee); Mr. Sant Bahadur Rai (formerly Additional Secretary, MPLD, presently Secretary, Ministry of Supplies); Mr. Rameshwor Shah (RIRD Project Co-ordinator); Mr. Tony Stebbins (formerly of PADCO); Mr. William Douglas (formerly Chief, RAD USAID/Nepal); Mr. Richard Nishihara (formerly Acting Chief) and Dr. Carl Dutto (Chief RAD, USAID Nepal); for their moral support and counsel at different stages of project.

I would also like to express my thanks to all the Honourable Rastriya Panchayat Members, the Savapatis, the Up-Savapatis, Members of the District Panchayats, the Pradhan Panchas, Up-Pradhan Panchas and Ward members for attending the orientation meeting and/or the training sessions and assisting in the preparation of the village Panchayat plans.

I would like to thank Zonal Commissioner, Mr. N. Basnyat, the line ministry officials of the zonal level and the district level

for attending the orientation meeting and district training courses. We would particularly wish to thank the LDOs and Sarapatis of the five districts for making arrangements for both the district and village panchayat level training courses. Without their active co-operation it would not have been possible to conduct the training courses.

I would like to thank the Consultants from MPLD and other line ministries who have prepared the background papers and assisted with the training programmes in all five districts: Prof. U. M. Malla (Member, National Planning Commission), Mr. Khem R. Nepal (MPLD), Mr. K.N. Sharma (Executive Director CPTI), Mr. S.C. Shrestha (Accountant General's Office), Mr. C.M. Bajracharya (PCO, Integrated Hill Development Project), Mr. H.P. Gurung (DGM, Dept. of Agriculture), Mr. S.G. Shah (Dept. of Livestock), Mr. K.B. Malla, (Project Chief, Nepal Remote Sensing Centre), Mr. B. Upadya, and Mr. S.L. Shrestha (USAID/Nepal).

I would like to thank my colleagues, the professional and management staff of LCRC for undertaking this very difficult pioneering project in decentralized planning and training: Dr. Prodipto Roy (Chief Consultant, Sociologist/Planner), Mr. Bhoj Raj Marhatta (Executive Director, LCRC), Mr. Arjun Shah (Agricultural Economist), Mr. Bharat Devkota (Economist), and the Research Assistants. Mr. Harka Gurung, Mr. T.D. Shah, Mr. Ashok Gurung, Mr. Babu Kazi, Mr. Bimal Marhatta, Mr. Narendra Gurung and Mrs. Shanti Rajbhandary.

Finally, we would like to convey our gratitude to USAID/Nepal for financially supporting this project.

Sant Bahadur Gurung
Project Leader,
Local Level Planning &
Related Training Project.

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DANG DISTRICT (TABLES)

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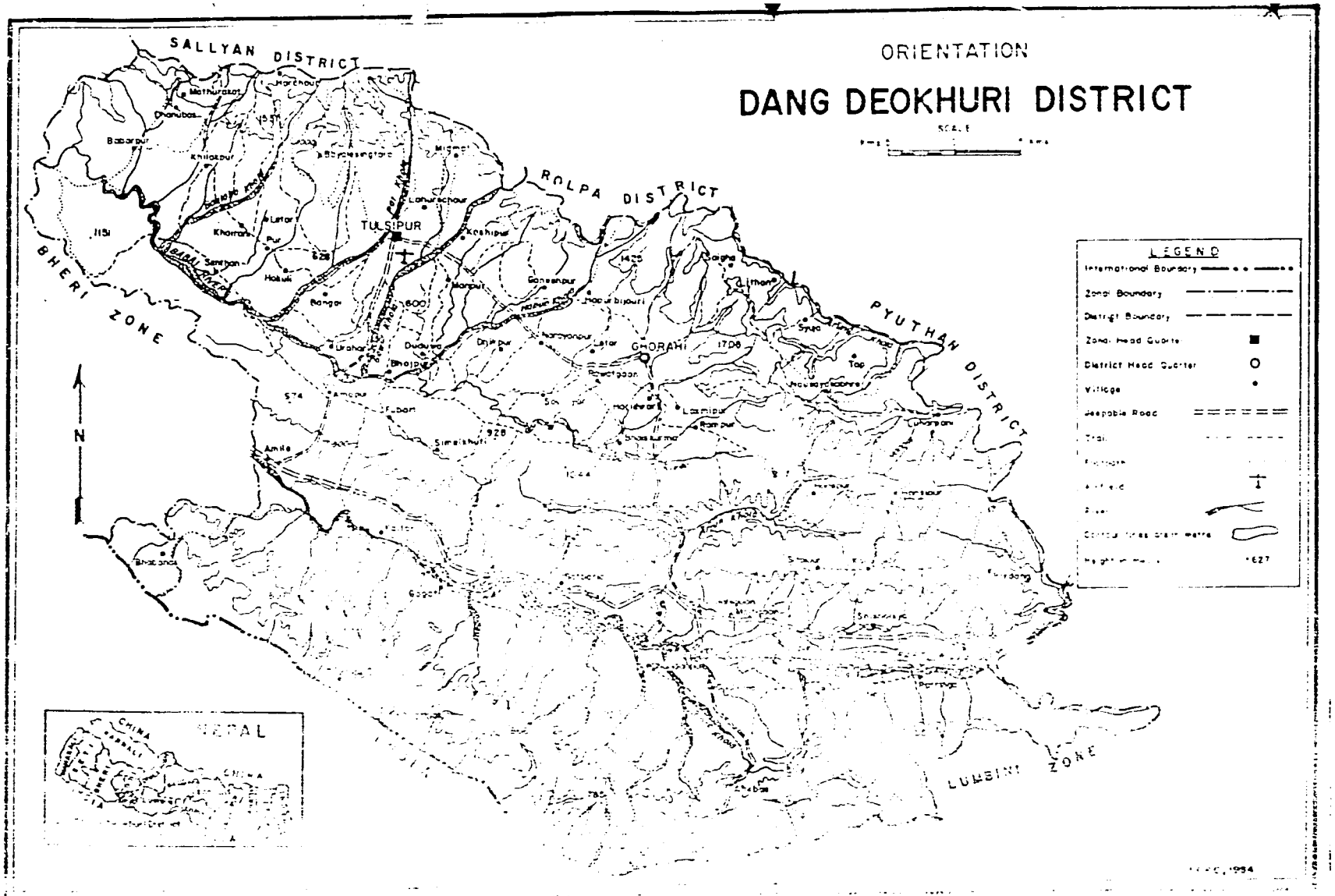
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SALLYAN DISTRICT
ROLPA DISTRICT
PYUTHAN DISTRICT
BHERI ZONE
LUMBINI ZONE
TULSIPUR
GHORAHI
N
NEPAL
CHINA
LEGEND
International Boundary
Zonal Boundary
District Boundary
Zonal Head Quarter
District Head Quarter
Village
Jeepable Road
Trail
Footpath
Bridge
River
Critical cross drain works
Height in metres
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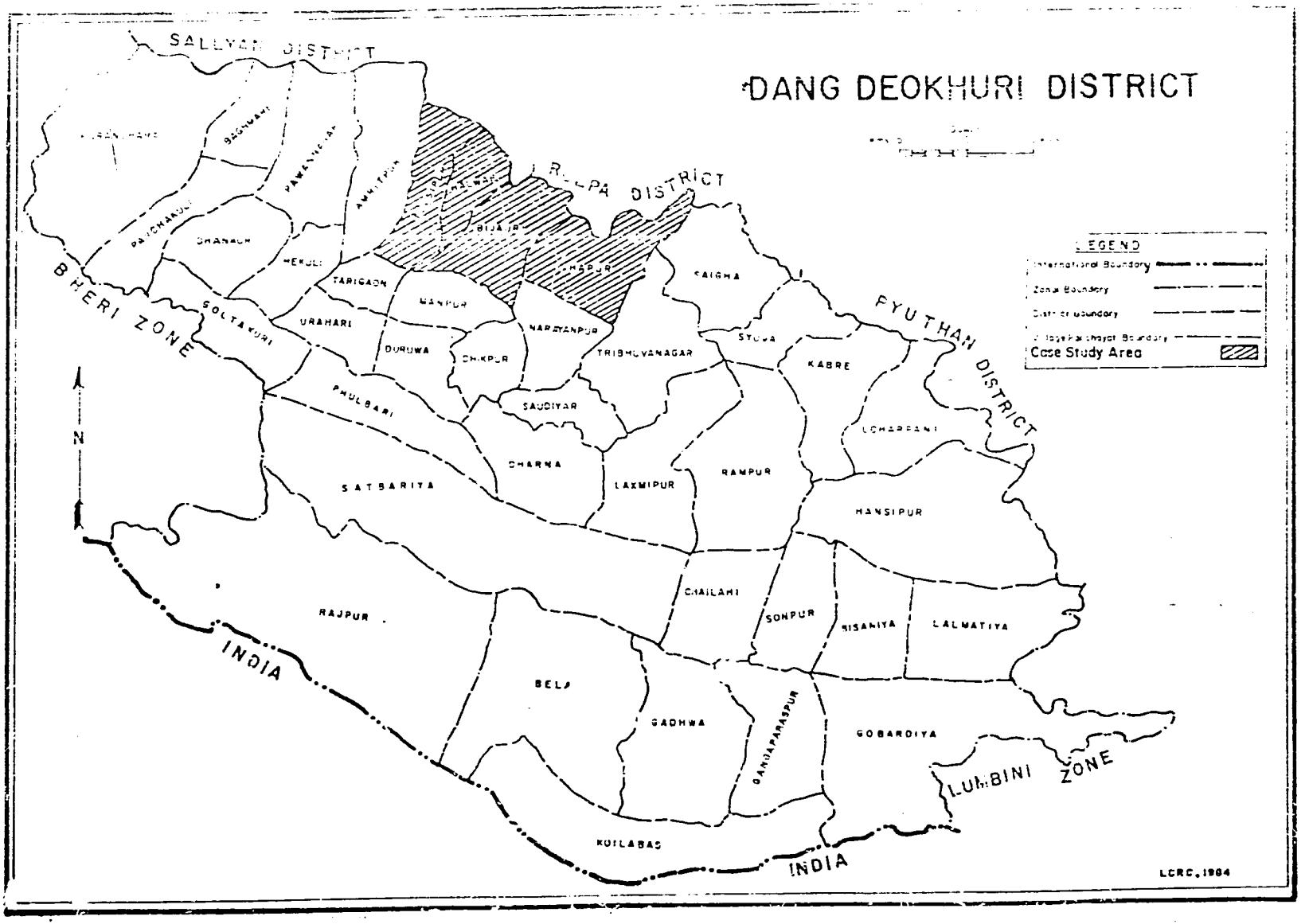
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SALLYAN DISTRICT
ROLPA DISTRICT
PYUTHAN DISTRICT
BHERI ZONE
LUMBINI ZONE
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LEGEND
International Boundary
Zonal Boundary
District Boundary
Village Panchayat Boundary
Case Study Area
BAGNAKI
PANWANGAR
AMRITPUR
PAICHAKUI
DHANAUR
HEKULI
TARIGAON
SOLTAKURI
URAHARI
MANPUR
DURUWA
CHIKPUR
NARAYANPUR
TRIBHUVANAGAR
SAIGHA
SYUWA
KABRE
LOHARPANI
PHULBARI
SAUDIYAR
CHARNA
LAXMIPUR
RAMPUR
HANSIPUR
SATBARITA
RAJPUR
CHAILAHI
SONPUR
NISANIYA
LALMATIYA
BELA
GADHWA
GANGAPARASPUR
GOBARDIYA
KUILABAS
LCRC, 1984

Table 1.

Number of Households by Caste and Number of Villages in Ilaka 8 of Dang District in 1983.

Panchayats / Main Caste	Tulsipur	Halwar	Bijauri	Hapur	Total	Percent
1. Chhetri	334	145	393	218	1090	21.3
2. Brahman	297	295	136	201	929	18.5
3. Magar	90	268	144	318	820	16.02
4. Tharu	187	93	170	111	561	10.96
5. Kami	97	107	115	100	419	8.18
6. Matwala	38	31	75	120	264	5.16
7. Damai	79	42	51	60	232	4.53
8. Sarki	30	18	75	55	178	3.47
9. Giri	49	24	3	36	112	2.18
10. Others*	267	101	35	108	511	9.98
Total:	1468	1124	1197	1327	5116	99.93
No. of Villages	29	53	34	51	167	

* Thakuri (93), Tamang (2), Gurung (36), Rai (1), Kasai (2), Newar (75), Badi (39), Sunar (100), Pode (2), Gupta Bania (39), Gaine (51), Kumale (45), Dhobi (5) and Muslims (21).

Table 2.

Number of Persons Employed in Occupations other than Own-farming in Ilaka 8 of Dang District in 1983.

(No. of persons)

Types of Occupation	Tulsipur	Halwar	Bijauri	Hapur	Total	Percent
1. Agricultural labour	1119	652	392	524	2687	52.02
2. Porterage	734	165	242	220	1361	26.35
3. Service	133	107	98	134	472	9.13
4. Construction	103	63	62	36	264	5.11
5. Trade	61	40	-	70	171	3.31
6. Cottage Industry	40	15	-	100	155	3.00
7. Industry	-	15	-	-	15	0.03
8. Others	-	40	-	-	40	0.03
Total:	2190	1097	794	1084	5165	99.98

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Table 3.

Temporary & Permanent Migration in Ilaka 8 of Dang District in 1983.

Panchayats	Number of Migration			
	Less than one year		More tham one year	
	Out Migration	In Migration	Out Migration	In Migration
1. Tulsipur	138	74	51	88
2. Halwar	285	106	140	14
3. Bijauri	132	-	4	6
4. Hapur	317	3	170	5
Total:	872	183	365	113

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Table 4a.

Land Use Pattern in Ilaka 8 of Dang District in 1983.

Panchayats / Types of Land	Tulsi-pur	Halwar	Bijauri	Hapur	Total	%
1. Cultivated Area:	1868	1995	2605	2089	8557	41.5
1.1 Khet	1175	1308	1370	1175	5028	24.39
1.2 Pakho	693	687	1235	914	3529	17.12
2. Cultivable Barren	15	10	145	300	470	02.28
3. Uncultivable Waste	20	311	47	15	393	01.90
4. Forest	4045	3320	756	1710	9831	47.70
5. Pasture	358	273	32	656	1319	06.39
6. Others	-	-	-	40	40	00.19
Total:	6306	5909	3585	4810	20610	

Table 4b.

Land Availability per Household for Selected Categories of Land in Ilaka 8 of Dang District in 1983.

(Bigha)

Panchayats / Types of Land	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Cultivated Land:	1.3	1.8	2.2	1.57	1.7
1.1 Khet	.8	1.2	1.2	0.89	1.0
1.2 Pakho	.5	.6	1.0	0.68	.7
2. Forest Land	2.8	3.0	.6	1.29	1.9
3. Pasture Land	0.3	0.2	.03	0.49	0.3

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Table 5.

Land Ownership Pattern in Ilaka 8 of Dang District in 1983.

(No. of Families

Panchayats / Land Ownership	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Landless	557 (37.9%)	235 (20.9%)	225 (18.8%)	207 (15.7%)	1224 (23.9%)
2. Less than 1 Ropani	469 (31.9%)	423 (37.6%)	288 (24.1%)	368 (27.7%)	1548 (30.3%)
3. 4-10 Ropanis	149 (10.1%)	227 (20.2%)	200 (16.7%)	345 (26.0%)	921 (18.0%)
4. 10-20 Ropanis	187 (12.7%)	122 (10.9%)	234 (19.5%)	172 (12.7%)	715 (14.0%)
5. More than 20 Ropanis	106 (7.2%)	117 (10.4%)	250 (20.9%)	235 (17.7%)	708 (13.8%)
Total:	1468 (100.0%)	1124 (100.0%)	1197 (100.0%)	1327 (100.0%)	5116 (100.0%)

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Table 5.

Food Situation in Ilaka 8 of Dang District in 1982-83.

Panchayats	No. of Families According to Food Sufficiency Classes.				
	1 year	9 months	6 months	4 months	Less than 4 months
1. Tulsipur	254	177	225	148	664
2. Halwar	190	204	360	170	200
3. Bijauri	159	227	374	228	209
4. Hapur	210	299	274	237	207
Total	813	907	1333	783	1280

Table 7.

Area Total Production and Productivity of Main Crops in Ilaka 8 of Dang District 1982-83.

Main Crops	Total			Tulsipur			Halwar			Bijauri			Hapur		
	A	TP	Pt	A	TP	Pt	A	TP	Pt	A	TP	Pt	A	TP	Pt
1. Paddy	5270	62733	1190	1133	12213	1166	1603	21729	1355	1360	15347	1128	1174	12444	1059
2. Wheat	4316	23722	549	662	4225	638	1228	5841	475	900	4035	4035	1526	9621	630
3. Maize	2697	16417	608	605	2256	349	722	4627	640	840	5148	612	530	4386	827
4. Mustard	2238	9018	402	575	2137	371	650	2672	411	635	2134	336	378	2075	548
5. Barley	650	2289	352	169	388	229	99	245	247	99	256	258	283	1400	494
6. Potato	334	7377	2208	6	18	300	6	151	2516	144	1742	1209	38	424	1115
7. Mashuro	314	574	182	160	209	130	54	38	70	100	327	327	–	–	–
8. Ginger	25	321	1284	–	–	–	2	31	1550	23	290	1260	–	–	–
9. Pidalu	15	570	3800	–	–	–	10	545	5450	5	25	500	–	–	–
10. Millet	12	169	1408	605	2256	372	722	4627	640	840	5148	612	–	–	–
Total:	15871	123190		3915	24702		5096	40506		4946	34452		3929	30350	4673

A = Area in Bigha, TP = Total Production in Quintals, Pt = Productivity in Kg. per Bigha.

Table 8a.
Use of Improved Agricultural Technology in Ilaka 8 of Dang District in 1982-83.

Panchayats / Particulars	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Improved Seeds (kg)	1260	46065	2060	2030	51415
1.1 Wheat	200	32560	2000	810	35570
1.2 Paddy	60	10050	-	1100	11210
1.3 Potato	-	2000	-	-	2000
1.4 Maize	-	1450	60	120	1630
1.5 Mustard	1000	-	-	-	1000
1.6 Millet	-	5	-	-	5
2. Chemical Fertilizer (kg)	19400	140755	66150	18913	245218
2.1 Wheat	11900	102490	65300	13452	193142
2.2 Mustard	6400	20500	-	1000	27900
2.3 Paddy	600	16200	-	2243	19043
2.4 Maize	500	60	-	2218	2778
3. Pesticides/ Insecticides (litres)	23	80	20	5	128

Table 8b.

Use of Improved Technology per Bigha in Ilaka 8 of Dang District 1982-83.

(kg per Bigha)

Particulars / Panchayats	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Improved Seeds.					
1.1 Wheat	0.30	26.51	20	0.53	8.24
1.2 Paddy	0.05	6.26	-	0.93	2.12
1.3 Potato	-	333.3	-	-	5.98
1.4 Maize	-	2.008	0.07	0.22	0.60
1.5 Mustard	1.73	-	-	-	0.44
1.6 Millet	-	.00006	-	-	0.41
2. Chemical Fertilizer					
2.1 Wheat	17.97	83.46	72.55	8.8	44.8
2.2 Mustart	11.13	31.53	-	2.6	12.5
2.3 Paddy	0.52	10.1	-	1.9	3.6
2.4 Maize	0.82	0.06	-	4.2	1.03
2.5 Potato	-	250.8	5.9	-	7.1

Table 9.

Demand For Improved Agricultural Technology in Ilaka 8 of Dand Dist. in the Final Year 1984-85.

(in kg)

Panchayats / Improved Agri. Technology.	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Seeds (kg)	15015	92635	21115	10328	139093
1.1 Wheat	4300	56800	11800	4492	77392
1.2 Mustard	-	20000	-	-	20000
1.3 Paddy	5400	4400	1300	3243	14343
1.4 Potato	3100	5000	5230	700	14030
1.5 Maize	2215	3435	285	1893	7828
1.6 Ginger	-	2000	2500	-	4500
1.7 Millet	-	1000	-	-	1000
2. Chemical Fertilizer (kg)	48400	18340	43190	20000	129930
2.1 Wheat	27500	1490	40000	12100	81090
2.2 Paddy	6500	2250	2690	2800	14240
2.3 Mustard	9000	5000	-	-	14000
2.4 Maize	200	6100	-	4500	10800
2.5 Potato	5200	2500	500	500	8700
2.6 Millet	-	1000	-	100	1100
3. Pesticides/ Insecticides (litres)	108	138	162	126	534
4. Implement Rs.	9500/-	13300/-	80000/-	39800/-	142600/-

Table 10.
Production of Main Vegetables in Ilaka 8 of Dang District in FY 1982-83.

(in kg)

Main Vegetables \ Panchayats	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Winter Vegetables:	65762	18657	136272	203532	430769
1.1 Radishes	39939	6546	8445	116034	170964
1.2 Rape & Mustard leaves	17066	3289	24008	60368	104731
1.3 Other leaf Vegetables	3634	2127	48240	17480	71481
1.4 Cauli flower/ Cabbage	1552	7054	51213	1101	60920
1.5 Onion	667	3733	1804	2380	8584
1.6 Tomato	1051	492	570	1480	3593
1.7 Egg Plant	230	920	423	1900	3473
1.8 Chilli	1010	665	841	708	3224
1.9 Pea	241	172	245	1711	2369
1.10 Garlic	372	205	483	370	1430
2. Summer Vegetables	105417	28743	43882	181782	359824
2.1 Pumpkin	52463	11362	18970	97814	180609
2.2 Cucumber	33085	6900	5260	43248	88493
2.3 Sponge gourd/ Snake gourd	12926	6376	2856	20473	42631
2.4 Cow Pea	4172	688	4488	18927	28275
2.5 Turmeric	1380	2587	11185	850	16002
2.6 Ginger	1322	607	523	290	2742
2.7 Ladies finger	23	223	600	180	1026
2.8 Christophine	46	-	-	-	46

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Table 11.
Demand for Vegetable Seeds in Ilaka 8 of Dang Districts
For the Fiscal Year 1984-85.

(in kg)

Panchayats / Vegetables Seeds	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Christophine	5	-	1403	3	1410
2. Ginger	-	500	-	-	500
3. Radish	136	28	199	28	391
4. Cauliflower/ Cabbage	205	27	71	23	326
5. Cow Pea	-	-	255	6	261
6. Pea	116	-	41	30	187
7. Onion	80	55	15	-	150
8. Tomato	45	3	-	27	148
9. Ladies finger	-	-	134	13	147
10. Rape leaves	70	10	-	58	138
11. Egg Plant	45	4	62	21	132
12. Chilli	45	3	-	27	75
13. Garlic	30	30	13	-	73
14. Lauka	-	-	51	4	55
15. Pumpkin/Cucumber	15	-	22	4	36
Total:	802	672	2323	233	4030

Table 12.
Number of Main Fruit-trees in Ilaka 8 of Dang District.
in FY 1982-83.

(in Number)

Panchayats / Fruit-tree Types	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Bananas	3920	7206	19900	37400	68426 (78.05)
2. Mango	1555	1799	1145	3120	7619 (8.69)
3. Guava	265	362	669	3600	4896 (5.58)
4. Lemon/Lime/Jyamir	59	72	390	1260	1781 (2.03)
5. Papaya	192	473	227	585	1477 (1.68)
6. Pear/Apricot/Plum	47	87	17	880	1031 (1.17)
7. Jack-fruit	109	326	97	365	897 (1.02)
8. Apple	-	-	60	740	800 (0.91)
9. Tangerine/Orange	6	10	60	501	577 (0.65)
10. Pine-apple	1	50	100	-	151 (0.17)
11. Lichi	-	7	-	-	7 (.01)
12. Walnut	1	-	-	-	1
Total:	6155 (7.02)	10392 (11.85)	22665 (25.85)	48451 (55.26)	87663 (100.00)

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Table 13.
Demand for Fruit-trees in Ilaka 8 of Dang District
in the Fiscal Year 1984-85.

(in Number)

Fruit-tree Types \ Panchayats	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Mango	1790	4401	3275	1325	10791 (32.03)
2. Lichi	220	2050	890	575	3735 (11.08)
3. Lemon	1030	1350	575	100	3055 (9.06)
4. Pear	175	1427	825	350	2777 (8.24)
5. Jack-fruit	525	-	525	1215	2265 (6.72)
6. Pine apple	115	1900	-	-	2015 (5.98)
7. Bananas	1300	-	-	310	1610 (4.71)
8. Grape	-	1028	335	50	1413 (4.19)
9. Papaya	420	450	160	460	1490 (4.42)
10. Guava	635	400	335	-	1370 (4.06)
11. Apples	217	100	250	500	1067 (3.16)
12. Walnut	10	800	-	100	910 (2.7)
13. Tangerine	325	-	200	100	625 (1.8)
14. Limes	10	300	-	-	310 (0.92)
15. Peaches	-	150	100	-	250 (0.74)
Total:	6752 (20.00)	14356 (42.6)	7470 (22.2)	5085 (15.1)	33683 (100.00)

Note: Percentages are given in the parenthesis.

Table 14.

Description of Livestock Population of Ilaka 8 of Dang District in 1983.

Livestock Types \ Panchayats	Tulsipur	Halwar	Bijauri	Hapur	Total
1-4 weighted Total:	4534	5402	5495	6450	21881
1. Cow	1960	2976	2850	2800	10586
2. Bullock	1770	1670	1675	2820	7935
3. She-buffaloes	660	666	860	785	2871
4. He-buffaloes	144	90	110	45	369
5-8 weighted Total:	1130	1235.5	1041	2685	6051.5
5. Goats	1315	1231	1279	4000	7825
6. Pigs	355	930	513	370	2168
7. Sheeps	590	255	290	1000	2135
8. Horses	-	55	-	-	55
9-10 weighted Total:	465	730.8	459.7	511.4	2166.9
9. Chicken	4650	7275	4550	5100	21575
10. Ducks	-	33	47	14	94
Grand Weighted Total:*	16129	7368.3	6995.7	9646.4	30139.4

* Following Weights Used While Adding:

Nos. 1 - 4 = 1.0
Nos. 5 - 8 = 0.5
Nos. 9 - 10 = 0.1

Note: Percentages are in the Parenthesis.

Table 15

Description of Diseases to Cattle in Ilaka 8 of Dang District in FY 1982-83.

Panchayats / Livestock Disease	No.of Livestock suffering from Disease				
	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Foot & Mouth Diseases	30000	2235	1995	390	34620
2. Cholera	800	1010	1220	200	3230
3. Haemorrhagic Septicaemia	1400	511	983	620	3114
4. Liverfluke	1140	905	419	410	2874
5. Rinderpest	70	257	225	120	672
6. Six month disease/ Sheeps & Goats	27	115	210	215	567
7. Bhoke	300	200	-	-	500
8. Black quarter	50	157	280	-	487
9. Ranikhet	200	·	125	-	325
10. Tick-borne disease	-	124	75	-	199
11. Bhyagute	-	100	80	-	180
12. Tap tipe	50	-	80	-	130

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Table 16.

Description of Livestock Products and Their Sale in Ilaka 8 of Dang District in FY 1982-83.

Panchayats / Livestock Products	Dulsiri		Falwey		Bijauri		Kagur		Total	
	P	S	P	S	P	S	P	S	P	S
1. Milk (per K. litre)	77.9	34.4	41.0	8.0	86.3	9.3	369.0	11.4	574.2	63.1
2. Wool (kg)	–	–	10	–	15	15	–	–	25	15
3. Ghee (kg)	1691	620	2285	485	17030	12725	59170	28060	80156	41890
4. Eggs (no)	5150	5200	34100	5150	9800	1450	48000	6500	99050	18300
5. Sheeps/Goats (no)	110	38	790	255	625	95	–	–	1525	368
6. Others (pigs)	–	–	60	50	–	–	–	–	60	50

Note:

P = Product.
S = Sale.

Table 17.
Consumption of Fodder in the Ilaka 8 of Dang District in 1982-83.

(Quintals)

Sources of Fodder \ Panchayats	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Own-farm:	17290	37035.3	160125	94500	308950.3
1.1 Looping tree-branches	245	31325	73535	38500	143605
1.2 Cutting grasses	17045	5710.3	86590	56000	165345.3
2. From the Forest:	36452.5	5197.5	115573.5	18200	175424
2.1 Within the ward	2905	4200	35000	5250	47355
2.1.1 Lopping tree-branches	1400	1613.5	17500	4200	24713.5
2.2 Outside the ward but within Panchayat	32830	875	80573	7000	121279
2.2.1 Lopping tree-branches	30485	455	38514	-	69454.5
2.2.2 Cutting grass	2345	420	42059.5	7000	51824.5
2.3. Outside the Panchayat	717.5	122.5	-	5950	6790
2.3.1 Lopping tree-branches	-	52.5	-	700	752.5
2.3.2 Cutting grasses	717.5	70	-	5250	6037.5
Total Lopping tree-branches:	32130	33446	129549	43400	238525
Total Cutting grass:	21612.5	8786.8	146149.5	69300	245848
Total:	53742.5	42232.8	275698.5	112700	484373.8

Note: (a) One load is assumed to equal to 35 Kg.
(b) Percentage are shown in the Parenthesis.

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Table 18.
Consumption of Fodder by Sources per Livestock per Year as well as per day in 1982-83.

Panchayats	Fodder Consumption per Livestock/Year in Quin			Fodder Consumption per Livestock/Day in kg.		
	Total Fodder	Lopping tree-branches	Cutting grasses	Total Fodder	Lopping tree branches	Cutting grasses
1. Tulsipur	9.5	5.7	3.8	2.6	1.6	1.0
2. Halwar	6.3	5.0	1.3	1.8	1.4	.4
3. Bijauri	42.2	19.8	22.4	11.5	5.4	6.1
4. Hapur	12.4	4.8	7.6	3.4	1.3	2.1
Total:	70.4	35.3	35.1	19.3	9.7	9.6

Note: Cattle includes from numbers 1 to 7 of Table 14 and are weighted as suggested in that Table.

Table 19.
Possibility of Livestock Development by Species in the Ilaka 8 of Dang District.

(in Number)

Livestock Species \ Panchayats	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Cow	345	1464	2000	-	3809
2. Bullock	465	972	1000	-	2437
3. She-buffaloes	165	885	650	-	1700
4. He-buffaloes	93	112	10	-	215
5. Sheeps	556	130	507	-	1193
6. Goats	750	1725	7087	3525	13087
7. Pigs	227	328	207	-	762
8. Chicken	1352	2200	27060	100	30712
9. Ducks	4	57	1	-	62
Total:	3957	7873	38522	3625	53977

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Table 20.

Land Slides and Soil Erosion in Ilaka 8 of Dang District Till now

Panchayats	No. of Landslides	Area Affected by Landslides	
		In Ropanis*	Percentages
1. Tulsipur	3	115	28.4
2. Halwar	7	93.5	23.1
3. Bijauri	12	155	38.3
4. Hapur	3	41	10.2
Total:	25	404.5	100.00

Table 21.

Forest Type and Area in Ilaka 8 of Dang District in FY 1982-83.

Types of Forest / Panchayats	Dense Forest	Scrub Forest	Patch Forest	Barren Forest	Total
1. Tulsipur	2950	820	30	590	4390 (41.7)
2. Halwar	2540	351	532	121	3544 (33.7)
3. Bijauri	730	650	50	-	1430 (13.6)
4. Hapur	1137	14	-	-	1151 (10.9)
Total:	7357 (70.0)	1835 (17.5)	612 (5.8)	711 (6.8)	10515 (100.0)

Note: Percentages are given in the Parenthesis.

Table 22.

Requirement and Supply Situation in Forest Products in Ilaka 8 of Dang District.

Item \ Panchayats	Number of Wards														
	Tulsipur			Halwar			Bijauri			Hapur			Total		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
24.1 At Present:															
1. Fire Wood	1	3	5	-	5	4	1	2	6	-	4	5	2	14	20
2. Fodder	1	2	6	-	3	6	1	2	6	-	7	2	2	14	20
3. Timber	1	2	6	-	1	8	1	2	6	-	7	2	2	12	22
4. Tree-branches for Roofing & Compost making	1	3	5	-	5	4	1	2	6	-	4	5	2	14	20
24.2 Future:															
1. Fire Wood	-	-	9	-	-	9	-	1	8	-	-	9	-	1	35
2. Fodder	-	-	9	-	-	9	-	1	8	-	-	9	-	1	35
3. Timber	-	-	9	-	-	9	-	1	8	-	-	9	-	1	35
4. Tree branches for Roofing & Compost making	-	-	9	-	1	8	-	1	8	-	-	9	-	2	34

Note: A = More than Enough.
B = Just Enough.
C = Not Enough.

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Table 23.

Number of Trees Planted till now in Ilaka 8 of Dang District.

(Number of Trees)

Panchayats	No. of trees Planted till now.					No. of trees Dead	
	Around the up land	Around the low land	Around the house	Other	Total	No.	%
1. Tulsipur	550	-	223	50	823	285	34.6
2. Halwar	7109	150	831	200	8290	1046	12.6
3. Bijauri	-	-	-	-	-	-	..
4. Hapur	100	-	-	32000	32000	8050	25.1
Total:	7759	150	1054	32250	41213	9381	22.7%

Table 24.

Potentials for afforestation in Ilaka 8 of Dang District in the FY 1984-85

Panchayats	Area Ropanis	No. of Benefitting family	Estimated Cost in Rs.	Main Species
1. Tulsipur	17.5	470	17200/-	Sal, Populas, Bambo
2. Halwar	3325	1566	59900/-	Sal, Populas, Bambo
3. Bijauri	186	571	313000/-	Sal, Populas, Bambo
4. Hapur	449.5	907	185000/-	Sal, Populas, Bambo
Total:	4478	3514	575100/-	Sal, Populas, Bambo.

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Table 25.

Description of Forest Nursery in the Ilaka Sub Dang District in FY 1982-83.

V. Panchayats Name of Villages having forest nursery & other information.	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Rakchha Chaur					
Area Covered. (ropani)	50	-	-	-	50
- Annual Production of Saplings	5000	-	-	-	5000
2. Bijauri Khanjura					
- Area Covered, (ropani)	-	-	-	8	8
- Annual Production of Saplings	-	-	-	2000	2000
Total:	5050	-	-	2008	7058

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Table 26.

Consumption of Timber, Poles and Firewood in Ilaka 6 of Dang District in FY 1982-83.

Timbers in Qt / Panchayats	Large Timber (Cu.m.)	Slender Poles (Quintals)*	Fire Wood (Quintals)*	Total (Cu.m.)
1. Tulsipur	8850	7945 (1148)	32760 (4732)	14730
2. Halwar	5775	6275 (907)	24500 (3539)	10221
3. Bijauri	102000	18445 (2665)	65450 (9454)	114119
4. Hapur	8000	2835 (409)	80500 (11627)	20036
Total:	124625	35500 (5128)	203210 (29352)	159106

* One load is Equal to 35 kg.

Note: Amounts in the Parenthesis are in Cubic meters.

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Table 27.
Consumption of Firewood by Sources of Supply in Ilaka 8 of Dang Distric in FY 1982-83.

(in Quint.)

Sources of Firewood \ Panchayats	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Collecting Wastes from Forest:	33250	39777	20702	71750	165479
1.1 Within Ward	25305	23642	18900	64750	132597
1.2 Outside Ward within Panchayat	3325	16135	1802	7000	28262
1.3 Another Panchayat	4620	-	-	-	4620
2. Cutting Trees from Forest:	9695	230	6125	-	16050
2.1 Within Ward	8925	38	5950	-	14913
2.2 Outsides Ward within Panchayats	280	192	175	-	647
2.3 Another Panchayats	490	-	-	-	490
3. Collecting Agriculture Wastes:	5166	10073	10193	25200	50632
3.1 Within Ward	875	9653	9861	24500	44889
3.2 Outside Ward within Panchayat	3500	70	-	-	3570
3.3 Outside Panchayat	791	350	332	700	2173
Total:	48111	50080	37020	96950	232161

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Table 28.

Existing Irrigation Facilities in Ilaka 8 of Dang District in FY 1982-83

Irrigation Facilities \ V. Panchayats	Tulsi-pur	Halwar	Bijauri	Hapur	Total
1. From Traditional Canal:					
1.1 No. of Canals	11	14	1	3	28
1.2 Area Covered (ropani)	557	7691	100	571	8919
1.3 No. of Beneficiaries (households)	780	536	50	232	1598
2. Under the Government Scheme:					
2.1 No. of Projects	1	-	2	1	4
2.2 Area Covered (ropanis)	175	-	112	37	324
2.3 No. of Beneficiaries (households)	119	-	125	45	289
Total:	732	7691	212	9243	

Table 29.
Potentials for Irrigation in Ilaka 8 of Dang District.

Panchayats	No. of Projects	Average Area per project (Bigha)	No. of Beneficiaries* per project	Average Estimated costs per project in('000)
1. Tulsipur	10	637	624	440
2. Halwar	8	375	437	590
3. Bijauri	8	936.5	583	370
4. Hapur	6	2386	847	1390
Total:	32	3724.5	2499	2790

Households.

Table 30

Drinking Water Facilities in Ilaka 8 of Dang District in FY 1982-83.

Govt.aided W/S Scheme \ Panchayats	Tulsi-pur	Halwar	Bijauri	Hapur	Total
1. Total No.of Projects	8	-	5	-	13
2. No.of not working Projects	-	-	-	-	-
3. No. of Tapes under working projects	335	-	16	-	351
4. No. of Beneficiaries of working projects	1000	-	300	-	1300

Table 31.

Requirement of Drinking Water Projects in Ilaka 8 of Dang District.

Panchayats	No. of Projects.	Average no.of beneficiary		Average Estimated costs per project in('000)
		No. of Villages	No. of Households.	
1. Tulsipur	11	20	891	399
2. Halwar	7	38	1474	2878
3. Bijauri	1	37	879	510
4. Hapur	8	56	2239	3100
Total:	27	151	5483	6887

Table 32.

Adult Literacy in the Ilaka 8 of Dang District in FY 1982-83.

No.of Adult literacy. Panchayats.	Number			
	Male	Female	Total	Percentage
1. Tulsipur	1315	281	1596	32.6
2. Halwar	928	133	1061	21.67
3. Bijauri	1340	270	1610	32.9
4. Hapur	478	149	627	12.8
Total:	4061 (82.97)	833 (17.03)	4894	100.00

Population of 10 years and above who can read letters and reply.

Table 33a.
Education Facilities and Enrolment in the Ilaka 8 of Dang District in FY 1982-83.

(Number)

V.Panchayats / Edu. Facilities	Tulsipur	Halwar	Bijauri	Hapur	Total
A. Educational Institutes:					
1. Primary School	1	5	4	4	14
2. Lower S.School	1	-	-	1	2
3. High School	-	1	2	2	5
B. Enrolments:					
1. Primary	300	657	657	600	2215
a. Boys	200	480	480	440	1600
b. Girls	100	177	178	160	615
2. Lower S.School	500	-	-	345	845
a. Boys	350			220	570
b. Girls	150			125	275
3. High School	500	500	1130	920	3050
a. Boys	400	400	825	750	2375
b. Girls	100	100	305	170	675

Table 33b.
Student-teacher Ratio in the Ilaka 8 of Dang District in FY 1982-83.

V.Panchayats / Schools	Students per Teacher				
	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Primary Schools	50	51	60	50	53
2. Lower S. Schools	63	-	-	49	56
3. High Schools	33	50	49	37	42

Table 33c.
Trained and Untrained Teachers by Sex in Educational Institutes of Ilaka 8 of Dang District in FY 1982-83.

(Number)

V.Panchayats / Teachers.	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Primary School					
1.1 Trained	4	6	3	5	18
a. Male	4	6	3	5	18
b. Female	-	-	-	-	-
1.2 Untrained	2	7	8	7	24
a. Male	2	7	8	7	24
b. Female	-	-	-	-	-
2. Lower S. School					
2.1 Trained	4	-	-	1	5
a. Male	3			1	4
b. Female	1				1
2.2 Untrained	4	-	-	6	10
a. Male	2			6	8
b. Female	2			-	2
3. High School					
3.1 Trained	10	1	13	18	42
a. Male	10	1	13	18	42
b. Female	-	-	-	-	-
3.2 Untrained	5	10	10	7	32
a. Male	5	8	8	6	27
b. Female	-	2	2	1	5

Table 34.
Distance to be Covered to get Services and Facilities by Panchayats' Households in Ilaka 8 of Dang District in FY 1982-83.

(in Km.)

Panchayats / Service & Facilities	Distance in Km.				Places & Panchayats
	Tulsi-pur	Halwar	Bijau-ri	Hapur	
1. Chemical Fertilizer	3	5	3	7	Tulsipur, Dang, Bijauri
2. Improved Seeds	3	5	3	7	,, ,, ,,
3. Loans	3	5	3	7	,, ,, ,,
4. Market	3	5	13	7	Tulsipur, Gorahi
5. High School	3	5	2	7	,, ,,
6. Health Centre, Hospital	3	5	10	7	,, ,,
7. Veterinary Hospital	3	5	13	7	,, ,,
8. Post Office	3	5	13	7	,, ,,
9. Bank	3	5	13	7	,, ,,

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Table 35.
Godowns in the Ilaka 8 of Dang District in FY 1982-83.

Panchayats	No. of Godowns	No. of Villages Using Godowns	Total Capacity of Godowns Muri/Quintal
1. Tulsipur	1	116	
2. Halwar	-	-	
3. Bijauri	-	-	
4. Hapur	-	-	
Total:	1	116	

Table 36.
Main Existing Cottage Industries in Ilaka 8 of Dang District in FY 1982-83.

Name of Industries	Location Ward/V. Panchayats	Capacity	Average Production in the last 3 yrs. Quantity	Value in Rs.
1. Water Mill	Tulsipur	11 horse power	1 yr.	1,25,000/-
2. Loaf factory	Tulsipur	-	-	-
3. Rice Mill	Tulsipur	-	-	-
4. Water Mill	Halwar	-	-	-

Table 37.

Potential Cottage Industries as Demanded in the Ilaka 8 of Dang District

Types of Industries	Location Village/ ward	Estimated cost in Rs.'000	Capacity	No. of Sources People to be employed.	Raw material local	Where to sell local
1. Hosiety	Tulsipur	2	500	10	Tulsipur	Tulsipur
2. Cotton cloth Weaving	Tulsipur	15	-	10	,,	,,
3. Poultry	Halwar	10		4	,,	,,
4. Piggery	,,	15		6	,,	,,
5. Rice Mill	,,	50		4	,,	,,
6. Soap factory	,,	500		100	,,	,,
7. Lime Industries	,,	15		15	,,	,,
8. Shaw Mill	,,	90		50	,,	,,
9. Fisheries	,,	3		25	,,	,,
10. Hosiery	,,	45		10	,,	,,
11. Soap factory	Bijauri	20		400	Gorahi	Local
12. Cotton cloth weaving	,,	50		25	,,	,,
13. ,, ,,	,,	400		200	,,	,,
14. ,, ,,	,,	50		20	,,	,,
15. ,, ,,	Hapur	40		15	,,	,,
16. ,, ,,	,,	50		10	,,	,,
17. Hosiety	,,	50		40	,,	,,

Table 38.
Loans Taken by Households of Ilaka 8 of Dang District up to Now.

V. Panchayats / Types of Loans	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Agriculture loan from Bank:					
1.1 No.of Debtors	15	5	136	21	177
1.2 Total loan taken	26000	2000	12400	7000	47400
2. Agriculture loan from Sajha:					
1.1 No.of Debtors	185	49	128	–	362
1.2 Total loan taken	94000	4000	75000		128000
3. Agriculture loan from moneylenders:					
1.1 No.of Debtors	109	–	27	–	136
1.2 Total loan taken	3000		135000		138000
4. Consumption loans from moneylenders:					
1.1 No.of Debtors	270	260	110	100	740
1.2 Total loan taken	92000	60000	65000	120000	337000
5. Loans for Festival from moneylenders:					
1.1 No.of Debtors	240	45	40	55	380
1.2 Total loan taken	52000	22000	16000	70000	160000
6. Loans for Cremation from moneylenders:					
1.1 No.of Debtors	74	10	30	35	149
1.2 Total loan taken	70000	15000	7000	40000	132000
Total no.of Debtors	893	369	471	211	1944
Total amt.of loan	292000	103000	310400	237000	942400

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Table 39.

Location Specific Requirement of Bridges in the Ilaka 8 of Dang District.

Name of Trail	Village Panchayat	River	Types of Bridges estimated		Estimated cost in Rupees '000	No. of Beneficiaries (households
			Suspension Bridge	Wooden Brideges		
1. Dumria	Tulsipur	Canal		✓	5	4238
2. Ghhar	Halwar	Guharkhola	✓			
3. Ranigar	,,	Ranigar	✓			
4. Kala Khola	,,	Kala Khola		✓		
5. Betini	,,	Betini		✓		
6. Kalla	,,	Kalla		✓		
7. Goti Khola	Bijauri	Goti		✓		
8. Aankhola	,,	Aankhola		✓		
9. Lek Khola	,,	Lek Khola		✓		
10. Syaula Pani	,,	Syaula Pani	✓			
11. Somar Khola	,,	Somar Khola	✓			

Table 40.
Requirement for the Improvement of Trails in the Ilaka 8 of Dang District.

Name of Trails	Panchayat	Length of trail(km)	No.of Beneficiaries (households)
1. Uhar	Tulsipur	10	5 Panchayats
2. Silleni to Ward no. 1	Halwar	5	5 Panchayats
3. 2 Ward to Harisa	,,	8	1124
4. 2 Ward to Ward no. 8	,,	3	1124
5. Dhudaras - Sakran	Bijauri	7	1197
6. Jamune to Byansi	,,	3	1197

Table 41.

Projects Lists in Terms of Priority by Village Panchayats of the Ilaka 8 of Dang District.

Name of Projects	Priority (Rank)	Bases for assigning Priority	Location		Capacity	No. of beneficiaries (households	Estimated Cost in Rs. Thousandth.
			Villages	Panchayats			
1. Drinking Water	1	Scarcity	Tikrapatu	Tulsipur	3 tapes	20	10
2. Drinking Water	1	,,	Halwar	Halwar	46 tapes	7 Ward	75
3. Road	1	,,	Bijauri	Bijauri		1197	100
4. Drinking Water	1	,,	Guruje	Hapur	25 tapes	500	1000
5. Drinking Water	2	,,	Kapada Devi	Tulsipur	13 tapes	3000	75
6. Road	2	,,	Salgun	Halwar		6 panchayats	40
7. Irrigation	2	Farming	Dhudharas	Bijauri	700 ha.		5000
8. Drinking Water	2	Scarcity	Basantapur	Hapur	18 tapes	350	200
9. Irrigation	3	Farming	Dumria	Tulsipur		55	15
10. Forest Conservation	3			Halwar		1124	
11. Drinking Water	3	Scarcity	Satkule	Bijauri	15	300	50
12. Drinking Water	3	Scarcity	Majauri	Hapur	30	400	100

Table - 42

Sources of Revenue of Village Panchayats of the Ilaka 8 Dang District in 1982-83.

V. Panchayats / Sources of Revenue	Amounts in Rs.				
	Tulsipur	Halwar	Bijauri	Hapur	Total
1. Licensing & its renewal (Radio & Gun)	700	1700	705	600	3705
2. Applications	500	100	-	250	850
3. Recommendations	2000	1000	1500	300	4800
4. Fines	50	75	-	-	125
5. Duplication	50	50	-	-	100
6. Business taxes	10000	-	-	-	10000
7. Water mill taxes	100	50	300	50	500
8. Educational taxes	2000	-	-	-	2000
9. Fair taxes	-	6000	-	-	6000
10. Donation	2000	-	-	-	2000
11. Other resources	-	500	-	-	500
Total:	17400	9475	2505	1200	30580

APPENDICES

SALYAN DISTRICT (TABLES)

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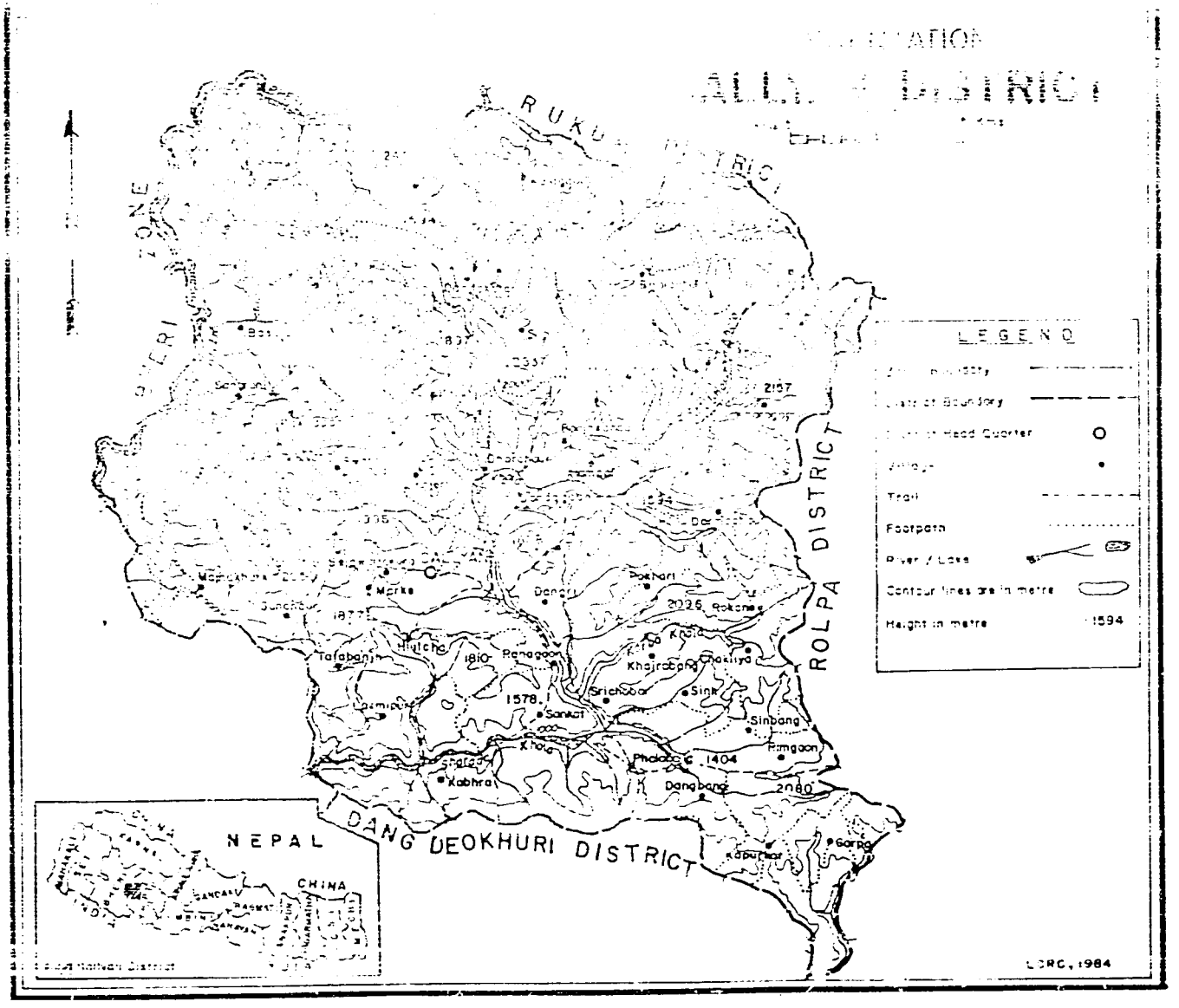
RUKUM DISTRICT
ROLPA DISTRICT
DANG DEOKHURI DISTRICT
LEGEND
Trail
Footpath
River / Lake
Contour lines are in metre
Height in metre
Pokhari
Dangal
Marke
Hulche
Tafabanjh
Ramagoon
Sanikot
Khaira
Sinbang
Kabhra
Dangbang
Kapurkot
Garra
NEPAL
CHINA
LDRC, 1984

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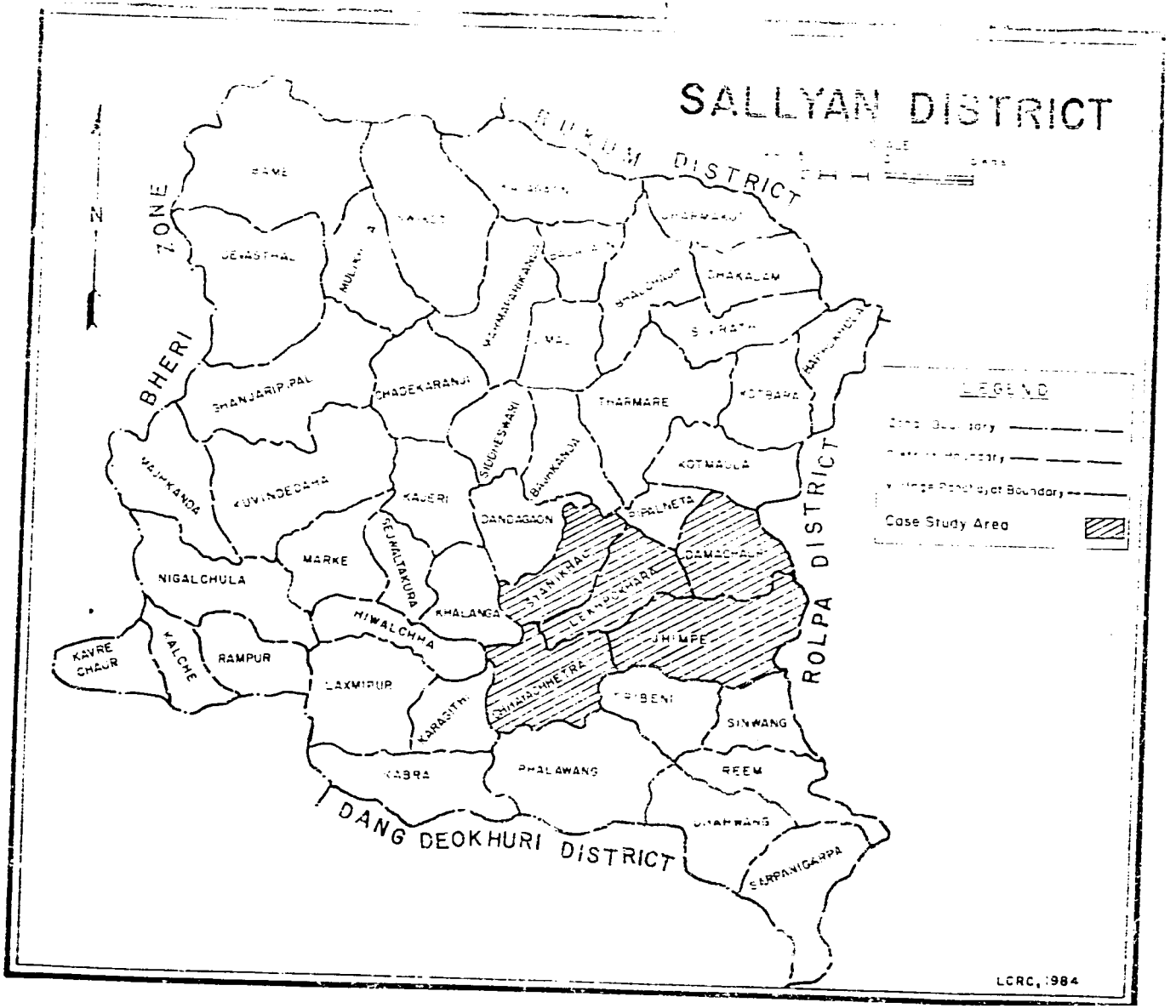
SALLYAN DISTRICT
N
ZONE
BHERI
ROLPA DISTRICT
DANG DEOKHURI DISTRICT
DEVASTHAL
SHANJARIPAL
MAJHKANDA
KUVINDEDAHA
NIGALCHULA
KAVRE CHAUR
KALCHE
RAMPUR
MARKE
HIWALCHHA
LAXMIPUR
KHALANGA
KAJERI
DANDAGAON
SHADEKARANJI
THARMARE
KOTMALLA
KOTBARA
SHAKALEM
JHIMPE
TRIBENI
SINWANG
REEM
PHALAWANG
KABRA
SERPANIGARPA
LEGEND
Case Study Area
LCRC, 1984

Table 1.

Number of Households by Caste and Number of Villages in each Panchayat of Ilaka 2 of Salyan District.

Panchayats / Main Castes	Syani-khal	Lekhpo-khara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total	Percent
1. Chhetri	180	210	217	375	65	1047	34.0
2. Matwala	124	21	-	-	433	578	19.
3. Magar	137	81	102	147	49	516	17.
4. Kami	70	36	85	96	44	331	11.
5. Thakuri	2	1	129	8	16	156	5.
6. Sarki	14	48	21	33	11	127	4.
7. Brahman	2	2	72	9	21	106	3.
8. Damai	37	9	10	25	12	93	3.
9. Giri	20	-	22	17	21	80	2.
10. Others*	7	-	6	15	29	57	2.
Total:	593	408	664	725	701	3091	100.00
Total no. of villages:	25	20	23	33	31	132	

* Sunar (28), Muslim (13), Badi (7), Kumale (5), and Newar (4).

Table 2.
Number of Persons Employed in Occupations other than Own-farming of Ilaka 2 of Salyan District.

(Number of persons)

Type of occupation \ V.Panchayats	Syani-khal	Lekh-pokha-ra	Dama-chaur	Jhimpe	Chhaya chhet-ra	Total	Percen
1. Agricultural labour	278	24	258	234	98	892	40.8
2. Porterage	131	139	146	262	64	742	33.9
3. Construction	36	26	59	35	92	248	11.3
4. Service	46	21	21	19	44	151	6.9
5. Trade	62	9	7	-	23	101	4.6
6. Cottage Industry	2	4	-	1	17	24	1.1
7. Other (Transporting goods on Porter's back)	-	-	28	-	-	28	1.2
Total:	555	223	519	551	338	2186	100.00

Table 3.

Temporary and Permanent Migration in Ilaka 2 of Salyan District.

No. of Migrants / Panchayat (no. of HH)	Number of Migration.			
	Less than one year		More than one year	
	Out Migration	In Migration	Out Migration	In Migration
1. Syanikhal (593)	413	-	49	-
2. Lekhpokhara (408)	216	-	9	-
3. Damachaur (664)	300	-	26	2
4. Jhimpe (725)	459	-	43	5
5. Chhayachhetra (701)	432	-	118	-
Total:	1820	-	245	7

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Table 4a.

Land Use Pattern in Ilaka 2 of Salyan District.

V.Panchayats / Land Use	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total	Percent
1. Cultivated land area	5615	8535	7477	23955	1484	47066	25.4
1.1 Khet	1235	1431	777	3005	342	13580	-
1.2 Pakho	4380	7104	6700	20950	1142	40275	-
2. Cultivable Barren	30	50	38	520	306	944	.5
3. Uncultivable Waste	20	-	20	2040	973	3053	1.6
4. Forest	32000	36548	6200	27300	2970	105018	56.7
5. Pasture	16500	2976	1700	4100	3750	29026	15.7
6. Other	-	-	-	-	-	-	-
Total:	54165	56644	15435	57915	9483	185107	100.00

Table 4b.
Land Availability per Household for Selected Categories of Land in Ilaka 2 of Salyan District.

(Ropanis)

Land Type \ V. Panchayats	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
1. Cultivated Land	9.4	20.9	11.2	33.0	2.0	15.2
1.1 Khet	2.1	3.5	1.1	4.1	0.4	2.2
1.2 Pakho	7.3	17.4	10.1	28.9	1.6	13.0
2. Cultivable Barren	0.05	0.1	0.05	0.7	0.4	0.3
3. Uncultivable Waste	0.03	-	0.03	2.8	1.4	1.0
4. Forest Land	53.9	89.5	9.3	37.6	4.2	34.0
5. Pasture	27.8	7.2	2.5	5.6	5.3	9.4
Total:	91.2	117.7	23.1	79.7	13.3	59.9

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Table 5.

Size of Land Holding in Ilaka 2 of Salyan District.

(No. of families & percent

Land holding size and categories / V.Panchayats	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
1. Landless	9 (1.5)	16 (4)	34 (5.1)	57 (7.9)	43 (6.1)	159 (5.1)
2. Less than 4 Ropanis	170 (28.7)	88 (21.6)	124 (18.7)	143 (19.7)	119 (17.0)	644 (20.8)
3. 4-10 ropanis	147 (24.8)	112 (27.4)	200 (30.1)	200 (27.6)	187 (26.6)	846 (27.4)
4. 10-20 ropanis	208 (35.1)	107 (26.2)	160 (24.1)	169 (23.3)	197 (28.1)	841 (27.2)
5. More than 20 ropanis	59 (9.9)	85 (20.0)	146 (22.0)	156 (21.5)	155 (22.1)	601 (19.4)
Total:	593 (100.0)	408 (100.0)	664 (100.0)	725 (100.0)	701 (100.0)	3091 (100.0)

Note: Percentages are given within the parenthesis.

Table 6.

Food Sufficiency in the Ilaka 2 of Salyan District.

(No. of Households, percent)

Duration of food sufficiency in months \ V.Panchayats	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
12	80 (13.5)	87 (21.3)	142 (21.4)	156 (22)	113 (16)	578 (19)
9	191 (32.2)	108 (26.4)	144 (21.7)	119 (16)	82 (12)	644 (21)
6	192 (32.3)	102 (25.0)	210 (31.6)	183 (25)	189 (27)	876 (28)
4	94 (15.9)	86 (21.1)	138 (20.8)	156 (22)	185 (26)	695 (21)
Less than 4	36 (6.1)	25 (6.1)	30 (4.5)	111 (15)	132 (19)	334 (11)
Total:	593 (100.0)	408 (100.0)	664 (100.0)	725 (100.0)	701 (100.0)	3091 (100.0)

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Table 7.

Area, Total Production and Productivity of Main Crops in Ilaka 2 of Salyan District in 1983.

V. Panchayats / Main Crop	Total Ilaka			Syanikhal			Lekhpokhara		
	Area (ropani)	Total Production	Productivity	Area (ropani)	Total Production	Productivity	Area (ropani)	Total Production	Productivity
1. Wheat	29497	137175	465	5166	2831	55	5030	1973	39
2. Paddy	11739	115359	982	2000	1866	93	1443	949	66
3. Maize	22755	148360	6	3566	3856	108	3000	2004	67
4. Barley	5399	14422	267	949	292	31	1400	580	41
5. Millet	5069	25496	503	539	388	72	620	2256	364
6. Potato	1440	44992	3124	301	1184	393	175	544	311
7. Soyabean	1665	5972	358	449	353	79	270	61	22
8. Mustard	1388	4929	355	315	104	33	150	8	5
9. Groundnut	740	18485	2497	293	117	40	290	167	57
10. Ginger	3428	47919	1397	607	59	191	643	558	87
11. Pidalu	106	1078	1017	24	87	362	-	-	-
12. Sugarcane	69	3920	5681	36	389	1080	-	-	-
13. Pepper	26	47	180	-	-	-	-	-	-
Total:	83321	545207		14245	12626		13021	9100	

Continuation of Table - 7. . .

V.Panchayats / Main Crop	Danachaur			Jhimpe			Chhayachhetra		
	Area ropani	Total production	Productivity	Area ropani	Total production	Productivity	Area ropani	Total production	Productivity
1. Wheat	3300	1344	41	6500	71900	1106	9451	59127	625
2. Paddy	777	285	37	3005	67725	2254	4514	45533	1009
3. Maize	2580	2188	76	3700	68500	1851	9609	71812	747
4. Barley	1015	168	16	610	6775	1111	1425	6607	464
5. Millet	794	313	39	2800	20400	728	316	2139	677
6. Potato	212	207	97	600	42350	7058	92	1197	1301
7. Soyabean	352	898	255	370	3490	943	2241	1170	522
8. Mustard	51	55	108	265	2875	1085	607	1937	319
9. Groundnut	-	-	-	6	300	5000	151	1790	11854
10. Ginger	788	7059	896	625	21950	3512	7656	17193	224
11. Pidalu	-	-	-	-	-	-	82	991	1208
12. Sugarcane	-	-	-	-	-	-	33	3531	10700
13. Pepper	-	-	-	-	-	-	26	47	181
Total:	10169	12517		18481	306265		34186	212985	

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Table 8a.

Use of Improved Agricultural Technology in Ilaka 2 of Salyan District in 1982-83.

Improved Agri. Technology \ V. Panchayats	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
1. Improved Seeds (kg)	345	-	-	100	10	455
1.1 Wheat	230	-	-	100	5	335
1.2 Paddy	15	-	-	-	5	20
1.3 Maize	100	-	-	-	-	100
2. Chemical fertilizer (kg)	2730	-	5020	300	4020	12070
2.1 Wheat	1990	-	2350	300	3855	8495
2.2 Paddy	740	-	450	-	65	1255
2.3 Maize	-	-	1220	-	100	1320
3. Pesticides/Insecticides (Liters)	2	-	-	-	8	10
4. Improved Tools Implements (Rs)	-	-	-	-	-	-

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Table 8b.

Use of Improved Technology per Ropani in Ilaka 2 of Salyan District 1982-83.

(kg. per Ropani)

Improved Technology \ V. Panchayats	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
1. Improved Seeds						
1.1 Wheat	0.04	-	-	0.03	-0.04	-0.01
1.2 Paddy	-0.03	-	-	-	-0.04	-0.03
1.3 Maize	0.02	-	-	-	-	-0.03
2. Chemical Fertilizer						
2.1 Wheat	0.34	-	0.22	0.05	0.74	0.10
2.2 Paddy	0.37	-	0.45	-	0.03	0.28
2.3 Maize	-	-	0.34	-	0.02	-0.05
2.4 Potato	0.03	-	6.81	-		1.43
2.5 Millet	-	-	0.09	-		- .03

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Table 9.

Demand for Improved Agricultural Technology in Ilaka 2 of Salyan District for the Final Year 1984-85.

Improved Agri. Technology. / V. Panchayats	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
1. Seeds (kg)	3101	3585	2160	2195	84773	95854
1.1 Wheat	2076	1910	1035	830	55445	61296
1.2 Paddy	225	630	285	615	8300	10055
1.3 Maize	600	555	695	450	13625	15925
1.4 Potato	160	160	145	300	7100	7865
1.5 Millet	-	80	-	-	303	383
1.6 Cotton	40	-	-	-	-	40
1.7 Ginger	-	250	-	-	-	250
2. Chemical Fertilizer	11130	8730	7950	5600	240500	273910
2.1 Wheat	7900	4140	3400	2500	115750	133690
2.2 Paddy	1750	1340	1300	1600	45050	51040
2.3 Maize	1125	2850	3250	900	40050	48175
2.4 Potato	55	300	-	600	39650	40605
2.5 Cotton	300	-	-	-	-	300
2.6 Ginger	-	100	-	-	-	100
3. Pesticides/Insecticides (litres)	225	75	153	130	414	1197
4. Implements Rs.	-	-	5000	-	80500	85500

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Table 10

Production of Main Vegetables in Ilaka 2 of Salyan District in 1982-83.

(in Kg.)

V.Panchayats / Main Vegetables	Syani-khal	Lekh-pokhara	Dama chaur	Jhimp	Chhaya-chhetra	Total
1. Winter Vegetables	26680	24936	13466	31793	55081	151956
1.1 Radhishes	10320	18648	4770	24755	1265	59758
1.2 Rape & Mustard leaves	7440	2712	3875	2705	10825	27557
1.3 Other leaf veg.	780	660	1425	1105	23800	27770
1.4 Tomato	780	1056	940	1315	10300	14391
1.5 Chilli	4512	355	564	540	600	6571
1.6 Pea	408	216	100	220	-	944
1.7 Cauliflower/ cabbage	480	408	635	152	224	1899
1.8 Garlic	650	114	340	202	2425	3761
1.9 Onion	1128	420	667	317	5352	7884
1.10 Egg-plant	182	317	150	482	290	1421
2. Summer Vegetables	58191	62789	165025	89487	234300	609792
2.1 Pumpkins	24432	17280	9650	38960	116600	206922
2.2 Cocumber	6408	16080	6650	19680	27800	76618
2.3 Sponge gourd/ (shake gourd)	5314	2880	125	2605	8000	18924
2.4 Cow Pea	2827	1445	1447	3455	18500	27674
2.5 Ginger	16992	23220	146525	23392	24600	234729
2.6 Turmeric	2218	1884	628	1395	37500	43625
2.7 Christophine	-	-	-	-	600	600
2.8 Lady's finger	-	-	-	-	700	700
Total:	84871	87725	178491	121280	289381	761748

Table 11.

Demand for Vegetable seeds Ilaka 2 of Salyan District

for the Fiscal Year 1984-85.

(in kg.)

Vegetable Seed Type \ V.Panchayats	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya+ chhetra	Total
1. Rape & Mustard	14	32	28	22	55	646
2. Onion	11	8	23	17	236	295
3. Cauliflower/cabbages	50	29	34	39	60	212
4. Radish	56	29	38	45	67	235
5. Garlic	12	-	5	-	115	132
6. Tomato	38	34	33	20	4	129
7. Chilli	-	-	6	-	95	401
8. Cow Peas	-	2	-	-	55	57
9. Egg - plant	2	12	-	3	31	48
10. Pumpkin	-	-	-	17	-	17
11. Carrot	22	-	5	2	-	29
Total:	205	146	172	165	718	1901

Table 12.

Number of Main Fruit - trees in Ilaka 2 of Salyan District in 1983

V. Panchayats / Fruit-tree Type	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
1. Bananas	1770	3655	2645	20725	85200	121995 (83.6)
2. Tangerine/Orange	365	605	2946	683	203	4802 (3.3)
3. Mango	581	27	7	1259	2139	4013 (2.7)
4. Guava	825	133	221	155	1734	3068 (2.1)
5. Apple	19	97[illegible]	5166	520	9	6691 (4.6)
6. Apricots/peaches/ Pears/Plums	370	421	1760	343	138	3032 (2.1)
7. Lemon/Lime/Jyamir	189	141	559	55	383	1327 (1)
8. Papaya	293	8	6	66	176	549 (.3)
9. Walnut	29	5	193	-	6	233 (.15)
10. Butter fruit (Chiuri)	7	-	77	-	-	84 (.05)
11. Jack-fruit	13	-	-	17	12	42 (.02)
Total:	12461 (8.5)	[illegible]	13580 (9.3)	23823 (16.3)	90000 (61.7)	145836 (100.0)

Note: Percentages are given in the parenthesis

Table 13.

Demand for Fruit-trees in Ilaka 2 of Salyan District for the Fiscal Year 1984-85

(No. of trees)

V. Panchayats / Fruit - tree Type	Syani-khal	Lekh-pokhara	Dame-chaur	Jhimpe	Chhaya-chhetra	Total
1. Apple	300	1750	5570	3600	645	11865 (27.3)
2. Tangerines/Orange	555	1445	5300	910	1381	9591 (22)
3. Lemon/Lime/Jyamir	815	320	885	520	4200	6740 (15.5)
4. Banana	-	-	310	-	4450	4760 (10.9)
5. Mango	600	25	-	280	2055	2960 (6.8)
6. Pear/Peach/Apricot/ Plums.	295	500	200	390	1435	2810 (6.5)
7. Walnut	110	730	800	5	600	2245 (5.2)
8. Jack-fruit	160	-	60	180	904	1304 (2.9)
9. Grape	-	40	380	105	-	525 (1.2)
10. Lichi	208	110	120	-	-	428 (1.0)
11. Persimmon	-	-	250	-	-	250 (0.6)
Total	3043 (6.9)	4920 (11.3)	13875 (31.9)	5990 (13.8)	15670 (36)	43488 (100.0)

Note: Percentage are given in the parenthesis.

Table 14,

Description of Livestock in the Livestock & Fodder Ilaka 2 of Salyan District.

V. Panchayats / Types of Livestocks	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
Total of Rank-1	4989	2715	4168	5995	5307	23174(72.2)
1. Cow	3675	1770	2370	3476	3534	14825(46)
2 Bullock	1127	780	1223	1230	1716	6076(18.9)
3. She - buffaloes	146	163	560	1285	54	2208(7.0)
4. He - buffaloes	16	2	15	4	3	40(0.1)
5. Ponies	25	-	-	-	-	25(0.07)
Total of Rank -2	828.5	467	877	1400	2164	5736.5(14.9)
6. Goat	1232	527	1160	2240	2884	8083(12)
7. Sheep	225	172	575	470	1240	2682(4)
8. Pig	200	235	19	90	204	748(2)
Total of Rank-3	724.4	192.7	415.2	510	1331.1	3173.4(9.9)
9. Chicken	7210	1910	4150	5100	13245	31615(10)
10. Duck	34	17	2	-	66	119(0.03)
Weighted Total	6541.9	3374.7	5460.2	7905	88021	32083.9
Percent	(20.3)	(10.5)	(17)	(24.6)	(27.4)	(100.0)

* Following Weights use while adding :-

Types of Livestock 1 - 5 = 1.0 Rank 1.

,, ,, 6- 8 = 0.5 ,, 2.

,, ,, 9 - 10= 0.1 ,, 3.

Note: Percentages are in the parenthesis.

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Table 15.

Main Livestock Diseases in Ilaka 2 of Salyan District.

(No. of Livestock affected)

V. Panchayats / Livestock Diseases	Syani-khal	Lekh-pokhra	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
1. Foot & Mouth Disease	4650	100	486	700	1446	7382
2. Liverfluke	600	465	715	1015	81	2876
3. Haemorrhgic Septicaemia	965	255	320	465	248	2253
4. Black quarter	--	686	-	-	63	749
5. Cholera (chicken)	4870	874	950	1770	3493	11957
6. Rinderpest	-	20	-	50	93	163
7. Tick - borne disease	--	-	-	-	57	57
8. Others (Phatke, Bairi, Sukhate & Chheruwa)*	1175	1626	210	55	--	3066
Total:	12260	4006	2681	4055	14688	28483

* Phatke (1220(, Bairi (510), Sukhate (20) and Chheruwa (1316).

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Table 16.

Production and Sale of Livestock Products in Ilaka 2 of Salyan District in 1982-83.

Production and Sale / Livestocks Products	Syanikhal		Lekhpokhara		Damachaur		Jhimpe		Chhayachhetra		Total	
	Production	Sale	Production	Sale	Production	Sale	Production	Sale	Production	Sale	Production	Sale
1. Milk (lg)	41388	17325	18850	40	135144	-	29687	2100	7185	605	232254	20070
2. Wool (kg)	60	60	-	-	-	-	1130	1050	-	-	1190	1118
3. Ghee (kg)	1888	1190	3230	1512	4160	2570	5858	4340	311	18	15447	9630
4. Egg (no.)	8100	4700	6540	-	7900	-	4300	-	31500	2005	58340	6705
5. Sheep/ goats (Number)	5480	3170	185	43	170	50	370	120	1663	500	7868	3383

2/1/

Table 17.

Consumption of Fodder in the Ilaka 2 of Salyan District in 1982-83.

(in Quintals)

Sources of Fodder / V. Panchayats	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
1. Own Farm						
1.1 Lopping Tree branches	14245	1348	8802	4476	6951	35822
1.2 Cutting grass	18130	10430	26110	6912	10839	72421
2. From the Forest						
2.1 Within the ward						
2.1.1 Lopping tree branches	2800	273	-	4270	2604	9947
2.1.2 Cutting grasses	5600	8855	-	8400	3780	26635
2.2 Outside the ward but within panchayat						
2.2.1 Lopping tree branches	16555	2187	8715	5635	2275	35367
2.2.2 Cutting tree branches	10430	5425	24850	11305	5180	57190
2.3 Outside the panchayat						
2.3.1 Lopping tree branches	-	17	-	-	2275	2292
2.3.2 Cutting grasses	-	70	-	-	2800	2870
Total lopping tree branches	33600	3825	17517	14381	14205	83428
Total ofcutting grasses	34160	24780	50960	26617	22599	159116
Total:	67760	28605	68477	40998	36704	242544

Note: One load is assumed to equal to 35 kg.

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Table 18.

Consumption of Fodder by Sources per Livestock per year as well as per day in Fiscal Year 1982-83.

Panchayats	Fodder Consumption per Livestock per Yr. (qui)	Fodder Consumption per Livestock per day in kg.		
		Total Fodder	Lopping tree branches	Cutting grass
1. Syanikhal	11.647	3.19	1.582	1.608
2. Lekhpokhare	8.98	2.462	2.133	0.329
3. Damachaur	13.57	3.718	2.767	0.951
4. Jhimpe	5.54	1.518	0.986	0.532
5. Chhayachhetre	4.51	1.345	0.828	0.517
Total:	44.647	12.233	8.296	3.937

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Table 19.

Possibility of Livestock Development by Species in the Ilaka 2 of Salyan District.

(Weighted no.)

V. Pancha yats / Livestock Species	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
1. Cows	280	100	80	-	1291	1751
2. She-buffaloes	95	160	20	1250	183	1708
3. Bullocks	150	100	-	-	556	806
4. He-buffaloes	2	-	2	6	65	75
5. Goats	17850	5900	4400	20400	4750	53255
6. Sheep	12050	2100	400	9300	2260	26110
7. Pigs	250	-	2	-	113	365
8. Chicken	27300	200	950	-	13680	42130
9.	500	50	-	-	524	1074
Total:	18382	4385	2597.2	16106	7053.9	48525.4

Table 20.

Landslides and Soil Erosion in Ilaka 2 of Salyan District.

Panchayats	No. of Landslides	Area Affected by Landslides in (ropani)
1. Syanikhal	5	38 (18.8)
2. Lekhpokhara	7	22 (10.9)
3. Damachaur	2	9 (4.4)
4. Jhimpe	6	30 (14.8)
5. Chhayachetra	15	103 (50.9)
Total:	35	202

Note: Percentages are shown in the parenthesis.

Table 21.

Forest Type and Area in Ilaka 2 of Salyan District in 1983.

(in ropanis)

Types of Forest / Panchayats	Dense Forest	Scrub Forest	Patch Forest	Barren Forest	Total
1. Syanikhal	9190	12550	530	739	23009 (30.1)
2. Lekhpokhara	22460	6432	600	4642	34134 (44.7)
3. Damachaur	5550	2500	-	150	8200 (10.7)
4. Jhimpe	4305	1600	900	1	6806 (8.9)
5. Chhayachhetra	965	1335	755	1150	4205 (5.5)
Total:	42470 (55.6)	24417 (31.9)	2785 (3.6)	6682 (8.7)	76354 (100.0)

Note: Percentages are shown in the parenthesis.

Table 22.

Requirement and Supply Situation in Forest Products in the Village Panchayats in Salyan District.

V. Panchayats / Items	Number of wards																	
	Syani-khal			Lekh pokhara			Dama chaur			Jhimpe			Chhaya-chhetra			Total		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
24.1 At Present																		
1. Firewood	-	8	1	-	7	2	-	7	2	-	5	4	-	1	8	-	28	17
2. Fodder	-	8	1	-	6	3	-	4	5	-	1	8	-	2	7	-	21	24
3. Timber	-	4	5	-	3	6	-	5	4	-	1	8	-	2	7	-	15	30
4. Tree Branch for roofing & compost making.	-	9	-	-	-	9	-	-	9	-	5	4	-	5	4	-	37	8
24.2 Future																		
1. Firewood	-	2	7	-	-	9	-	3	6	-	-	9	-	-	9	-	14	31
2. Fodder	-	2	7	-	-	9	-	1	8	-	-	9	-	-	9	-	3	42
3. Timber	-	2	7	-	-	9	-	-	9	-	-	9	-	-	9	-	2	43
4. Tree Branches for roofing & compost making.	-	4	5	-	2	7	-	4	5	-	-	9	-	-	9	-	10	35

A = More than Enough.

B = Just Enough.

C = Not Enough.

Table 23.

Number of Trees Planted Till Now in Ilaka 2 of Salyan District.

(No. of Trees)

Panchayats	No. of Trees Planted Till Now					No. of Dead Trees	%
	Around the upland	Around the lowland	Around the Houses	Other	Total		
Syanikhel	400	-	-	-	400	50	12.5
Lekhpokhara	1300	-	2650	-	3950	2375	60.
Damachaur	600	100	200	-	900	300	33.3
Jhimpe	-	-	-	-	-	-	-
Chhayachhetra	3018	-	1480	-	4498	1256	27.9
Total:	5318	100	4330	-	8448	3981	47.1

Table 24.

Potentials for Afforestation in Ilaka 2 of Salyan District,

in the Fiscal Year 1984-85.

Panchayats	Area in Ropanis	No. of Benefitting Families	Estimated costs in Rs.	Main Species
1. Syanikhal	3002	425	138900	Sal, Pine, Butterfruit
2. Lekhpokhara	875	340	70000	Sal, Popular, Pine, Lali Gurans, Champ.
3. Damachaur	733	460	77000	Sal, pine, Popular
4. Jhimpe	86	750	81600	Popular, Sal, Pine.
5. Chhayachhetra	479	651	239000	Sal, Pine, Khayar, Chanp.
Total:	5224	2635	606500	Sal, Pine, Butterfruit, Popular, Lali Gurans, Chap, Khayar.

Table 25.

Consumption of Timber Poles and Firewood in Ilaka 2 of Salyan in the Fiscal Year 1982-83.

Panchayats	Large Timber (Cu.m.)	Slender Poles (quintals*	Firewood (quintals*)	Total (Cu.m.)
1. Syanikhal	1550	672 (97)	31682 (4581)	6228
2 2. Lekhpokhara	8000	4147 (599)	35490 (5132)	13731
3. Damachaur	8000	875 (126)	35725 (7768)	15894
4. Jhimpe	16600	4025 (582)	56350 (8148)	25330
5. Chhayachhetra	1180	2392 (346)	25830 (3735)	5261
Total:	28130	12111 (1751)	203077 (29365)	66444

* One load is equal to 35 Kg.

Note: Amounts in the parenthesis are in cubic meters

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Table 26.

Consumption of Firewood by Sources of Supply in Ilaka 2 of Salyan in the Fiscal Year 1982-83.

(in quintals)

Sources of Supply of Firewood. / V. Panchayats	Syani-khal	Lekh-pokhara	Dama-chour	Jhimpe	Chhaya-chhetra	Total
1. Collecting Wastes from Forest.	43545	11970	50659	27440	17850	151464
1.1 Within Ward	20270	2870	50120	24990	10465	108715
1.2 Outside ward within Panchayat	23275	9100	539	2450	5600	40964
1.3 Another panchayat	-	-	-	-	1785	1785
2. Cutting trees from Forest	-	3430	753	7490	1295	12968
2.1 Within ward	-	1610	753	4900	595	7858
2.2 Outside ward within panchayat		1820	-	2590	700	5110
3. Collecting Agriculture Wastes	78750	72	16345	11697	917	107781
3.1 Within ward	78750	72	16345	11452	917	107536
3.2 Outside ward within panchayat	-	-	-	245	-	245
3.3 Outside Panchayat	-	-	-	-	-	-
4. By Burning Cow-dung	-	-	7	-	35	42
Total:	122295	15472	67764	46627	20097	272255

Table 27.

Existing Irrigation Facilities in Ilaka 2 of Salyan District.

Irrigation facilities / V. Panchayats	Lyani-khal	Lekh-pokhara	Dama-chaur	Kimpe	Chhaya-chhetra	Total
1. From Traditional Canal						
1.1 No. of Canals	5	1	3	1	9	19
1.2 Area Covered (Ropanis)	125	15	38	100	170	448
1.3 No. of Beneficiaries (household)	173	25	104	54	211	567
2. Under the Govt. Scheme						
2.1 No. of Projects	2	-	-	2	-	4
2.2 Area covered (Ropanis)	500	-	-	2350	-	2850
2.3 No. of beneficiaries (household)	190	-	-	230	-	420
Total:	625	15	38	2450	170	3298

Table 28.

Potentials For Irrigation in Ilaka 2 of Salyan District.

Potential Projects / Panchayats	No. of Project	Average Area per Project (Ropanis)	No. of beneficiaries H.H. per pro.	Average Estimated costs/ project '000
1. Syanikhal	-	-	-	-
2. Lekhpokhara	5	1350	173	365
3. Damachaur	9	3070	303	331
4. Jhimpe	2	110	32	80
5. Chhayachhetra	13	3815	486	1334
Total:	29	8345	994	2110

Table 29.

Drinking Water Facilities in Ilaka 2 of Salyan District.

V. Panchayats / Govt. aided Drinking Water Projects.	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
1. Total no. of Projects	3	2	-	2	-	7
2. No. of not working projects	-	-	-	-	-	-
3. No. of taps under working projects	13	6	-	7	-	26
4. No. of Beneficiaries of working projects	148	58	-	100	-	306
5. Total households without access to working projects	-	-	-	27	-	27

Table 30.

Requirement of Drinking Water Projects in Ilaka 2 of Salyan.

Requirement of Water project / Panchayats	No. of Project	Average no of beneficiaries		Average Estimated cost per projects (Rs. in '000
		No. of villages	No. of house-holds	
1. Syanikhal	5	25	1053	6750
2. Lekhpokhara	7	13	251	484
3. Damachaur	7	11	617	1365
4. Jhimpe	8	29	695	4410
5. Chhayachhetra	1	6	84	100
Total:	28	84	2900	13109

Table 31.

Water Mills and Their Beneficiaries in Ilaka 2 of Salyan District.

Panchayate	No. of Water Mills	No. of beneficiaries (H.H.)
1. Syanikhal	10	407
2. Lekhpokhara	-	-
3. Damachaur	-	-
4. Jhimpe	-	-
5. Chhayachhetra	-	-
Total:	10	407

Table 32.

Adult Literacy* in the Ilaka 2 Salyan District.

Adult Literacy / Panchayats	Male	Female	Total
1. Syanikhal	56	15	71 (23.1)
2. Lekhpokhara	52	21	73 (23.7)
3. Damachaur	37	6	43 (14)
4. Jhimpe	73	47	120 (39)
5. Chhayachhetra	-	-	-
Total:	218 (71)	89 (28.9)	307 (100)

* Population of 19 years and above, who can read letters and reply.

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Table 33a.

Education Facilities and Enrolment in thellaka 2 of Salyan District.

V.Panchayats / Education Facilities & enrolment	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
A. Educational Institutes:						
1. Primary School	3	5	4	4	4	20
2. Lower S.School	1	-	-	1	-	2
3. High School	-	-	1	-	1	2
B. Enrolment:						
1. Primary	240	473	329	773	533	2348
a. Boys	175	397	293	611	445	1921
b. Girls	65	76	36	162	88	427
2. Lower S. School	217	-	-	415	-	632
a. Boys	185	-	-	400	-	585
b. Girls	32	-	-	15	-	47
3. High School	-	-	350	-	364	714
a. Boys	-	-	310	-	335	645
b. Girls	-	-	40	-	29	49

Table 33b.

Student-Teacher Ratios in the Ilak 2 of Salyan District.

(Student per Teacher)

School \ V. Panchayats	Syani-khal	Lekh-pokhara	Dana-chaur	Jhimpe	Chhay-achhetra	Total
1. Primary School	40	47	41	85	99	49
2. Lower Secondary School	36	-	-	83	-	57
3. High School	-	-	35	-	33	34

Table 33c.

Trained and Untrained Teachers by Sex in Educational Institutes of Ilaka 2 of Salyan District.

(Numbers)

V. Panchayats / Teachers	Syani-khal	Lekh-pokhara	Dama-Chaur	Jhimpe	Chhaya-Chhetra	Total
1. Primary Schools	6	10	6	11	9	42
1.1 Trained	2	5	3	6	3	19
a. Male	2	4	2	6	3	17
b. Female	-	1	1	-	-	2
1.2 Untrained	4	5	3	5	6	23
a. Male	4	5	3	5	4	21
b. Female	-	-	-	-	2	2
2. Lower Secondary Schools	6	-	5	-	-	11
2.1 Trained	4	-	3	-	-	7
a. Male	4		3	-	-	7
2.2 Untrained	2		2	-	-	4
a. Male	2	-	2	-	-	4
3. High School	-	-	10	-	11	21
3.1 Trained	-	-	4	-	2	6
a. Male	-	-	4	-	2	6
3.1 Untrained						
a. Male	-	-	5	-	7	12
b. Female	-	-	1	-	2	3

Table 34.

Distances to be Covered to get Services and Facilities.

Services & Facilities / Panchayats	Distance in Km.					Places, Panchayat and Districts
	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-Chhetra	
1. Chemical Fertilizer	4	5	10	11	3	Salyan/Triveni.
2. Improved Seeds	4	5	10	11	3	Salyan
3. Loans	4	5	10	11	3	Salyan
4. Market	31	32.5	3[illegible]	35	30	Dang/Tulsipur
5. High School	4	2	-	6	-	Salyan/Panch[illegible] Sankhamul, (Chhayachetra)
6. Health Centre Hospital	4	5	3	2	3	Salyan/Lekhpokhara
7. Veterinary Hospital	4	5	10	11	3	Salyan
8. Post Office	4	5	-	2	..	Salyan Lekhpokhara, Shankhamul
9. Banks	4	5	10	11	3	Salyan.

Table 35.

Loans Taken by Household of Ilaka 2 of Salyan District up to Now

Loan Type \ V. Panchayats	Syani-khal	Lekh-pokhara	Dama-chaur	Jhimpe	Chhaya-chhetra	Total
1. Agriculture Loans from Bank	90	32	20	139	32	313
1.1 No. of Debtors	90	32	20	139	32	313
1.2 Total loans taken	140000	45500	16500	271500	17500	461000
2. Loans from Sajha						
2.1 No. of Debtors	66	-	-	-	113	179
2.2 Total loans taken	86000	-	-	-	3620	89620
3. Loans from Money lenders						
3.1 No, of Debtors	181	288	520	353	350	1692
3.2 Total loans taken	174500	312400	362000	385000	104000	1,337500
	350,500	357,900	389,500	656,500	125,120	1,888,520

Table 36.

Sources of Revenue of Village Panchayats of Ilaka 2 of Salyan Dis

V. Panchayats / Sources of Revenue	Amounts (Rs.)					Total
	Syani-khal	Lekh-pokhara	Dama-chour	Jhimpe	Chhaya-chhetra	
1. Licensing & its renewable (radio guns, water mill)	870	300	775	650	250	2845
2. Applications	20	350	50	50	400	870
3. Recommendations	100	200	100	60	-	460
4. Fines	200	300	500	-	500	1500
5. House Tax	700	600	500	-	500	2600
6. Others	-	-	-	-	200	200
Total:	1890	1750	1925	760	2150	8475

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Table 37.

Potential Cottage Industries As Demanded in the Ilaka 2 of Salyan District.

Type of Industries	Location	Estimated cost in Rs.	Capacity	No. of People to be employed	Sources of raw material	Where to sell
1. Leather Factory	Pakhapani	100,000	-	100	Rukum &Locally Salyan.	
2. Weaving	Pakhapani	20,000	-	15	Dang/Nepal gunj	,,
3. Weaving	Pokha ridaha	10,000	-	20	,,	,,
4. Weaving	Mulkhola	12,000	-	6	,,	,,
5. Soap Factory	Shankhkul	30,000	-	35	,,Locally	,,
6. Ginzer Prod.	Damachour	50,000	-	10	,,	,,
7. ,, ,,	Shankhmul	30,000	-	45	,,	,,
8. Shaw Mill	Gatchhe	50,000	-	20	Locally	,,
9. Fisheries	Damchour	50,000	-	10	Agri.Dept.	,,
10.Cotton Weaving	Shankhmul/ Chhayachhetra	30,000	-	30	Dng/Nepal-gunj & locally	,,

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Table 38.

Location Specific Requirement of Bridges in the Ilaka 2 of Salyan District.

Name of Trail	V.P. Panchayat	River	Tupes of Bridge: Estimated Suspension	Tupes of Bridge: Estimated on wooden	Estimated Cost Rs in '000	No. of Beneficiaries (house holds)
1.Khalanga (Salyan)	Syanikhal	Sarada	-	-	20,000/-	10,000
2.Tirpanighat (patare)	Lekhpokhara	Mokhola	-	-	25,000/-	5,200
3.Chhirnekula	Damachour	Mokhola	-	-	15,000/-	5,200
4.Triteni	Damachour	Dahakhola	-	-	1,00,000/-	263
5. ,,	,,	Khalikhola	-	-	1,00,000/-	235
6.Chakhlighat	Jhimpe	Chaklikhola	-	-	50,000/-	725
7.Domarkhola	,,	Domaikhola	-	-	40,000/-	,,
8.Jayachour	,,	Mulkhola	-	-	40,000/-	,,
9,Jumlibagh	,,	Mulkhola	-	-	50,000/-	,,

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Table 39.

Requirement for the Improvement of Trails in the Ilaka 2 of Salyan District.

Name of Trail	Panchayats	Length of Trail (km)	No. of Beneficiaries (Households)
1. Sagarmul-Ultara	Syanikhal	3	10,000
2. Syangujiula	Syanikhal	5	10,000
3. Mayani-Damachaur	Lekhpokhara	1	400
4. Kaltar Kande	Lekhpokhara	3	600
5. Baghkhore-Nuwagaon	Jhimpe	6	800
6. Lekaswana-Sasuvas	Jhimpe	16	3,000
7. Jhimpe-Baile	Jhimpe	16	7,250
8. Salleri-Kalurpur	Jhimpe	16	6,300
9. Shankhmul-Khasruwas	Jhimpe	22	10,000
10. Kapurkot-Khaula	Jhimpe	76	15,000

Table 40.

Projects Listed in Terms of Priority by Village Panchayats of the Ilaka 2 of Salyan District.

Name of Projects	Priority (Ranks)	Bases for Assigning Priority	Location		Capacity	No. of Beneficiaries (Households)	Estimated cost Rs. in
			Village	Panchayats			
1. Drinking Water	1	Scarcity	Bhirma	Syanikhal	20 taps	400	22,000/-
2. Drinking Water	1	,,	Pakhapani	Lekhpokhara	5 taps	32	25,000/-
3. Health Post	1	,,	Damachour	Damachour	Whole PV	Whole VP	50,000/-
4. Drinking Water	1	,,	Khahgroroldada	Jhimpe	30 taps	256	40,000/-
5. Drinking water	1	,,	Godikhola	Chhayachhetra	15 taps	135	200,000/-
6. Ginger Production	2	,,	Syanikhal	Syanikhal	-	Whole VP	100,000/-
7. Drinking Water	2	,,	Lekhpokhara	Lekhpokhara	3 taps	50	50,000/-
8. Post Office	2	,,	Damachour	Damachour	Whole VP	Whole VP	30,000/-
9. Health Post	2	,,	Mulkhola	Jhimpe	Whole VP	Whole VP	50,000/-
10. Drinking Water	2	,,	Sankhmul	Chhayachhetra	5 taps	55	300,000/-
11. Drinking Water	3	,,	Syanikhal6.7	Syanikhal	6 taps	105	50,000/-
12. Sus. Bridge	3	difficult to cross stream	Tirtire	Lekhpokhara	-	52	60,000/-
13. Sajha Sanma	3	Scarity	Damachour	Damachour	-	Whole VP	50,000/-
14. Suspension Bridge	3	difficult to cross stream	Sankhmal	Chhayachhetra	2 VP	2 VP	175,000/-
15. Godown	4	Scarcity	Pakhapani	Lekhpokhara	-	Whole VP	15,000/-
16. Cottage Industry	4	,,	Pokhgridada	Lekhpokhara	-	Whole VP	200,000/-

APPENDICES

PIUTHAN DISTRICT (TABLES)

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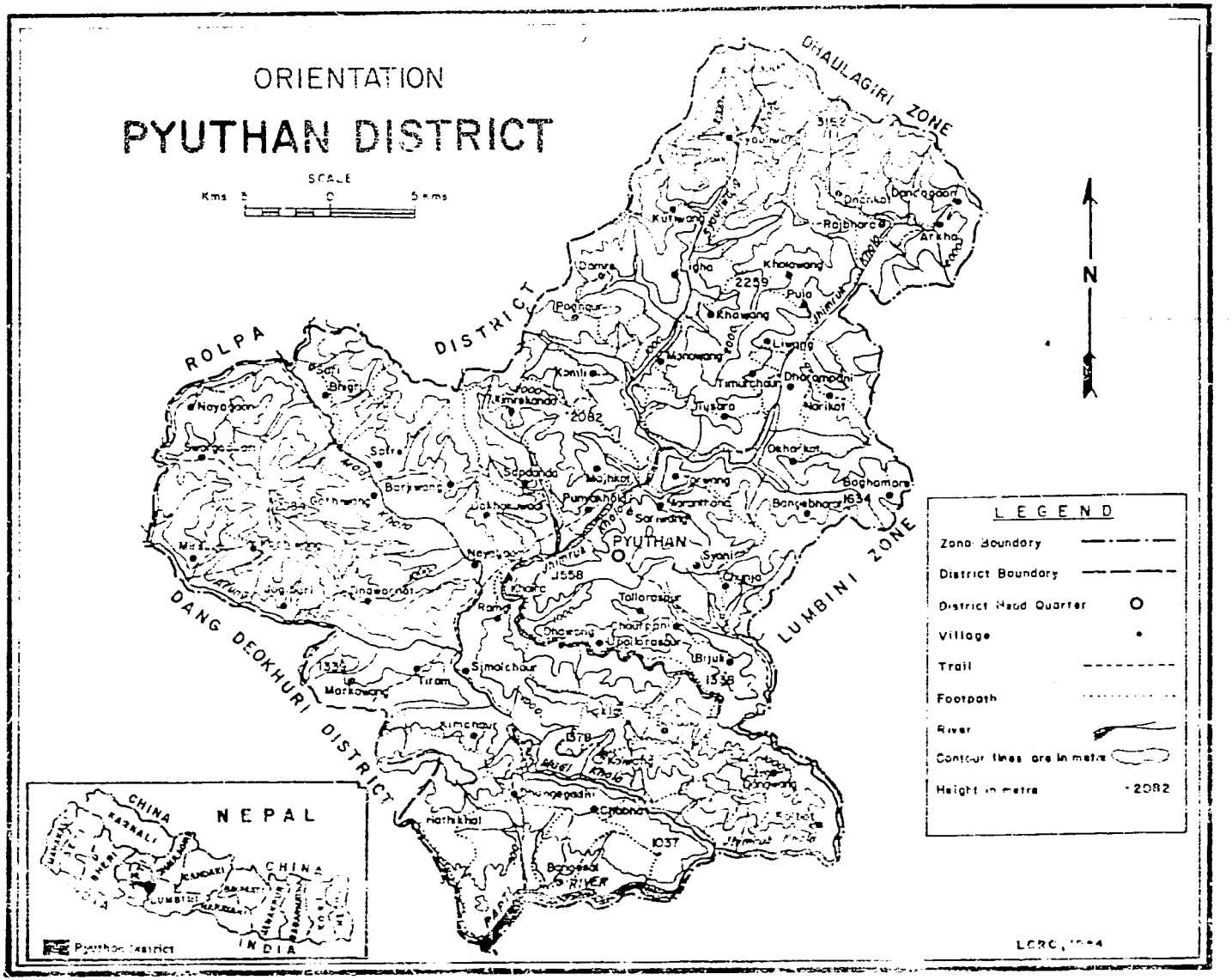
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SCALE
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ROLPA DISTRICT
DANG DEOKHURI DISTRICT
LUMBINI ZONE
PYUTHAN
Sarwang
Khalanga
Tallarasour
Simalchaur
Tiram
Markawang
Kimchaur
Chaubang
Bijuli
Bangebhar
Boghamara
Dhorampani
Tusara
Timurchaur
Liwang
Khalawang
Pula
Kutawang
Rajbhara
Arkha
Dangagaon
Kimrakanda
Sapdanda
Majhkot
Pumdikot
Jhimruk
Khola
Rapti
RIVER
2259
2082
1634
1558
1538
1037
LEGEND
Zone Boundary
District Boundary
District Head Quarter
Village
Trail
Footpath
River
Contour lines are in metre
Height in metre
2082
NEPAL
CHINA
INDIA
Pyuthan District
LGRC, 1994

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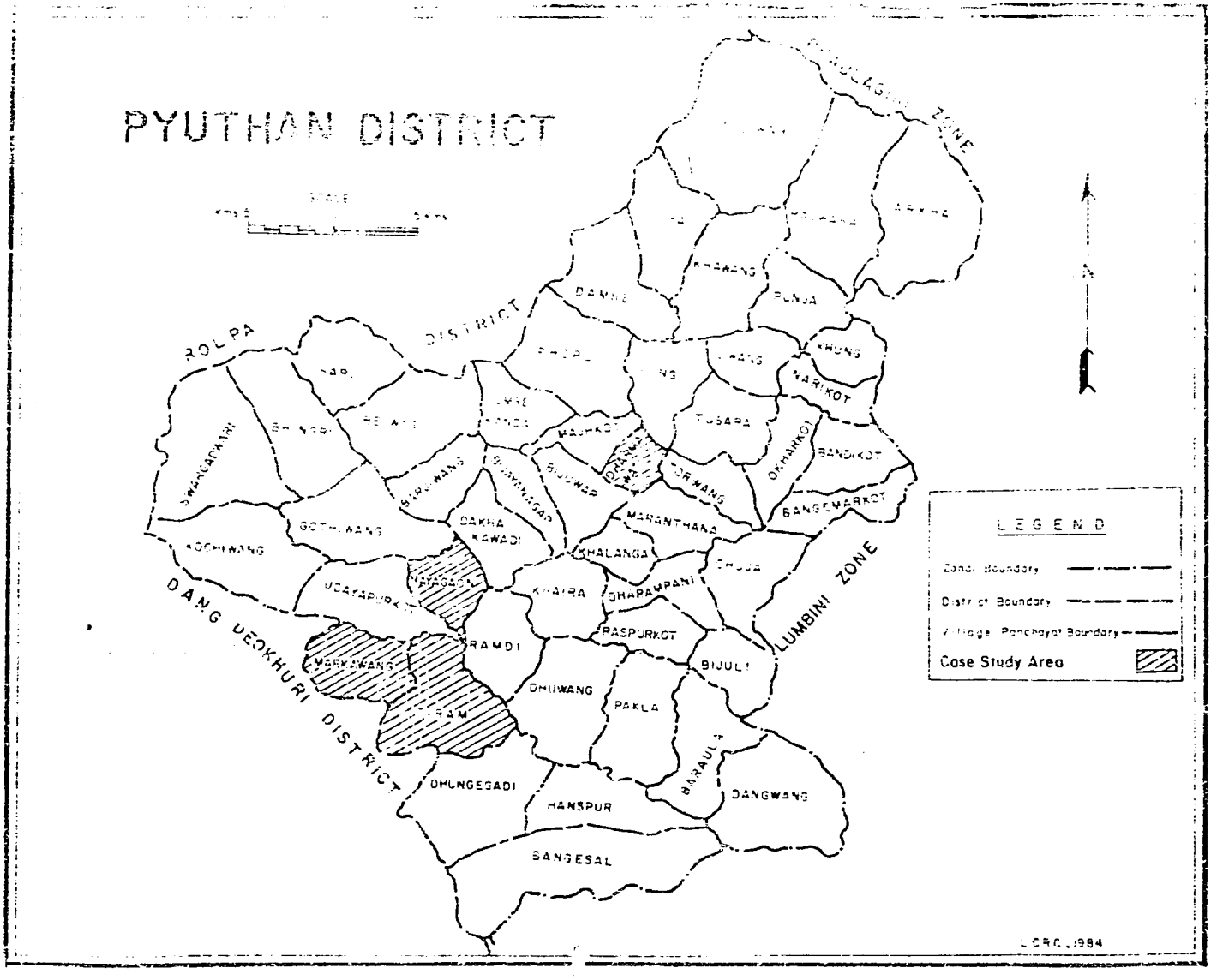
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ROLPA DISTRICT
DANG DEOKHURI DISTRICT
LUMBINI ZONE
DANDE
KHUNG
NARIKOT
TUSARA
BANDIKOT
BANGEMARKOT
MARANTHANA
KHALANGA
KHAIRA
DHAPAMPANI
RASPURKOT
BIJULI
PAKLA
DHUWANG
HANSPUR
SANGESAL
DANGWANG
DHUNGESADI
GOTHIWANG
KOCHIWANG
DAKHA KAWADI
LEGEND
Zonal Boundary
District Boundary
Village Panchayat Boundary
Case Study Area
LGRC, 1984

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Table 1.

Number of Households by Caste and Number of Villages in Four Panchayats of Kiuthan District in 1983.

Panchayats / Main Caste	Dharma-wati	Tiram	Markaw-ang	Nayagoan	Total	Percentage
1. Magar	17	355	116	113	601	29.9
2. Chhetri	211	61	135	143	550	27.3
3. Brahman	119	176	42	24	361	17.9
4. Sarki	87	8	10	3	108	5.4
5. Damai	18	22	26	10	76	3.8
6. Kami	22	32	23	20	97	4.8
7. Gaine	75	-	-	-	75	3.7
8. Giri	31	23	2	17	73	3.6
9. Sunar	12	12	5	25	54	2.7
10. others	12	2	-	4	18	0.9
Total :	604	690	359	360	2013	100.0
No. of Villages	57	22	19	19	117	

Note:

Others:- Thakuri, (8), Gurung (2), Muslim (1), Matwala (3) and Newar (4),

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Table 2.

Number of Persons Employed in Occupati ns other than own-farming in the Village Panchayats of Piuthan District in 1983

Type of Occupation	Dharma - wati	Tiram	Marka- wang	Nayagaon	Total	Percentage
1. Agriculture Labour	152	32	190	197	571	34.8
2. Porterage	125	242	113	64	544	33.2
3. Construction	93	41	73	74	281	17.1
4. Service	87	45	35	38	205	12.48
5. Trade	3	6	11	19	39	2.38
6. Industry	1	-	-	1	2	0.12
Total:	461	366	422	393	1642	100.00

Table 3.

Temporary and permanent Migration in the Village Panchayats Of Piuthan District in 1983.

Panchayats	Number of Migration			
	Less than one year		More than One year	
	out-migration	Immigration	out-migration	Immigration
1. Dharmawati	125	10	-	90
2. Tiram	98	-	-	71
3. Markawang	27	2	-	159
4. Nayagaon	26	-	3	111
Total:	276	12	3	431

Table 4a.

Land Use Pattern in the Village Panchayats of Piuthan District in the Fiscal Year 1982-83

(Ropanis)

Land Use	Dharma-wati	Tiram	Marka-wang	Nayagaon	Total	%
1. Cultivated Area	5551	2903	1130	2963	12552	26.7
1.1Khet	2975	1141	290	1118	5524	11.8
1.2Pakho	2576	1767	840	1845	7028	14.9
2. Cultivable barren	20	312	-	40	372	0.3
3. Uncultivable waste	305	[illegible]	-	502	1208	2.6
4. Forest	10900	2472	2990	2016	18418	39.2
5. Pasture	10052	157	2140	1261	14411	30.7
Total:	27,869	6250	6260	6702	46961	100.0

Table 4b.

Land Availability per Household for Selected Categories of Land in the Village Panchayats of Piuthan District in FY 1983 - 83

(Ropanis)

Land Type	Dharmawati	Tiram	Markawang	Nayagaon	Total
1. Cultivated Land	9.2	4.2	3.3	8.2	6.2
1.1Khet	4.9	1.6	0.8	3.1	2.7
1.2Pakho	4.3	2.6	2.3	5.1	3.6
2. Forest Land	18.0	3.6	8.3	5.6	9.1
3. Pasture Land	17.9	0.22	5.9	3.5	7.1
Total1	45.1	8.02	17.3	17.3	22.4

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Table 5.

Size of Land Holding in the Village Panchayats of Piuthan District in FY 1982-93

(No. of Families)

(Percent)

V. Panchayat / Land Holding size catagories	Dhamawati	Tiram	Markawang	Nayaggon	Total
1. Landless	13 (2.1)	8 (1.2)	11 (3.06)	5 (1.4)	37 (1.8)
2. Less than 4 ropanis	210 (34.7)	302 (43.7)	107 (29.8)	84 (23.3)	703 (34.9)
3. 4-10 ropanis	207 (43.7)	245 (35.5)	158 (44.0)	131 (36.4)	741 (36.9)
4. 10-20 ,,	112 (18.5)	85 (12.3)	69 (19.3)	73 (20.3)	339 (16.8)
5. More than 20 ,,	62 (10.3)	(7.3)	14 (3.8)	67 (18.6)	193 (9.6)
Total:	604 (100.00)	690 (100.00)	359 (100.00)	360 (100.00)	2013 (100.00)

Note: Percentage are given within the parenthesis.

Table 6.

Food Sufficiency in Village Panchayats of Piuthan District in FY 1982-83.

(No. of Households)

(Percentage)

V.P. / Duration of Food Suffiency (in month)	Dharmawati	Tiram	Markawang	Nayagaon	Total
12	71(11.7)	60 (8.6)	35(9.7)	83(23.0)	249(12.4)
9	156(25.8)	99 (14.3)	74(20.6)	103(28.6)	432(21.5)
6	135(22.4)	245 (35.5)	146(40.6)	118(32.8)	644(32.05)
4	165(27.3)	278 (40.3)	93(25.9)	46(12.8)	582(28.9)
Less than 4.	77(12.7)	8 (1.2)	11(3.1)	10(2.8)	102(5.5)
Total	604(100)	690(100)	359(100)	360(100)	9009(100)

Note: Figures in the Parenthesis refer to percentages.

Table 7.

Area, Total Production and Productivity of Main Crops in the Village Panchayats of Piuthan District in FY 1982-83.

Panchayats / Main Crops	Total			Dharmawati			Tiram			Markawang			Nayagaon		
	A	TP	Pt	A	TP	Pt	A	TP	Pt	A	TP	Pt	A	TP	Pt
1. Paddy	5371	4406	82	2975	3120	104	988	577	58	290	236	81	1118	473	42
2. Wheat	6703	3807	56	2890	1861	64	1475	781	53	310	360	116	2028	805	39
3. Maize	6224	3967	64	2576	1865	72	1500	984	66	305	361	118	1843	757	41
4. Millet	370	306	83	310	275	89	10	7	70	50	24	48	–	–	–
5. Potato	488	344	70	110	83	75	100	71	71	100	62	62	178	128	72
6. Ginger	35	88.5	252	1	15	150	21	21	100	13	66	507	–	–	–
7. Soyabean	200	557	278	80	47	59	–	–	–	20	60	50	100	500	500
8. Mustard	2243	710	32	820	218	27	682	250	37	100	129	129	641	113	18
9. Groundnut	43	27	63	3	3	100	–	–	–	5	8	160	35	16	46
10. Barley	1537	314	20	410	103	25	197	99	50	40	15	37	890	97	11
11. Blackwheat	15	17	113	5	9	180	–	–	–	10	8	80	–	–	–
Total:	23229	14526.5		10180	7689		4979	2790		1243	1279		6833	2889	
Cropping Intensity	1.88			1.83			1.71			1.10			2.31		
	1.85			1.83			1.71			1.10			2.31		

Note: A = Area in Ropanis;
TP = Total production in quintals;
PT. = Productivity in Kg. per Ropani

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Table 8a.

Use of Improved Agricultural Technology in the Village Panchayats of Kiuthan District in FY 1982-83.

V.Panchayats / Improved Agri. Technology	Dharmawati	Tiram	Markawang	Nayagaon	Total
1. Improved Seeds (kg)	1450	-	485	450	2385
1.1 Wheat	890	-	95	100	1085
1.2 Maize	460	-	155	50	665
1.3 Potato	100	-	70	200	370
1.4 Paddy	-	-	165	-	165
2. Chemical Fertilizer (kg)	3400	-	653	-	4053
2.1 Wheat	2360	-	175	-	2535
2.2 Paddy	740	-	240	-	980
2.3 Maize	300	-	175	-	475
2.4 Potato	-	-	63	-	63
3. Pesticides/Insecides (Liters)	26	-	5	-	31

Table 8b.

Use of Improved Technology per Ropani in Village Panchayats of Siuthan District in FY 1982-83

(kg. per Ropani)

V.Panchayats / Improved seeds	Dharmawati	Tiram	Markawang	Nayagaon	Total
1. Improved Seeds (kg)					
1.1 Wheat	.31	-	.31	.05	.16
1.2 Maizze	.18	-	.51	.03	.12
1.3 Potato	.91	-	1.40	1.12	.76
1.4 Paddy	-	-	.57	-	.03
1.5 Millet	-	-	-	-	-
2. Chemical Fertilizer (kg)					
2.1 Wheat	.82	-	.56	-	.38
2.2 Paddy	.23	-	.83	-	.18
2.3 Maize	.12	-	.57	-	.08
2.4 Potato	-	-	1.01	-	.13

Table 9.

Demand for Improved Agricultural Technology in Village Panchayats of Pishkan District for FY 1984-85

V.Panchayats / Improved Agri-Technology	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1. Seeds (Kg.)	4013	4100	3325	5100	16548
1.1 Paddy	1165	1050	555	5000	7870
1.2 Wheat	1450	1450	1480	1500	5930
1.3 Maize	953	950	795	950	3650
1.4 Pulses	280	650	405	700	2035
1.5 Millet	163	-	-	-	163
2. Chemical Fertilizer (Kg.)	6560	10300	3205	4300	24465
2.1 Wheat	2930	2500	1090	2150	8670
2.2 Maize	530	5200	240	300	6270
2.3 Paddy	1750	1200	1000	300	4250
2.4 Millet	1350	1400	875	950	4575
2.5 Millet	100	-	-	-	100
3. Pesticides (litres)	275	40	63	4	382
4. Improved Implements (Rs.)	17500	-	55000	-	725000

Table 10

Production of Main Vegetables in the Village Panchayats of Piuthan District in FY 1982/83.

Main Vegetables	Dhar-mawati	Tiram	Mark-awang	Naya-gaon	Total
1. Winter Vegetables	50291	4197	17789	11275	83552
1.1 Radish	18790	1675	3662	2475	26602
1.2 Rape mustard	2300	1470	9850	3742	17362
1.3 Tomato	10772	185	793	377	12127
1.4 Onion	7536	190	460	197	8473
1.5 Garlic	5536	67	177	37	5817
1.6 Cauliflower/ Cabbage	3184	270	1341	860	5655
1.7 Other leaf vegetable	165	200	500	2050	2815
1.8 Chilli	1186	110	637	212	2145
1.9 Pea	330	25	125	1335	1815
1.10 Egg plant	492	5	244	-	741
2. Main Summer vegetables	19901	3812	14887	8335	46325
2.1 Pumpkin	5075	1410	8975	3950	19410
2.2 Cucumber	4312	1000	1560	650	7522
2.3 Sponge Gourd/ snake gourd	2572	325	1432	1870	6499
2.4 Ginger	5092	145	488	25	5750
2.5 Cow pea	1462	507	1975	1650	5594
2.6 Turmeric	578	125	146	90	939
2.7 Christophine	200		311	100	611
2.8 Lady's finger	610	---	---	--	610
Total	70192	8009	32676	19610	129877

Table 11.
Demand for Vegetable Seeds in the Village Panchayats of Piuthan District for FY 1984-85

V. Panchayats / Vegetables Seed Types	Dharmawati	Tiram	Markawang	Nayagaon	Total
1. Onion	224	16	1	6	241
2. Cowpea	67	1	6	-	74
3. Cauliflower	32	16	5	13	66
4. Pea	45	-	4	2	61
5. Radish	5	33	2	11	51
6. Egg plant	23	5	6	-	34
7. Rape Mustard	-	21	-	9	30
8. Lady's finger	11	-	10	1	22
9. Tomato	14	-	-	7	21
10. Chilli	6	7	-	2	15
11. Coriander	-	7	2	-	9
12. Cucumber	-	-	4	-	4
13. Pumpkin	1	1	1	-	3
Total	428	107	41	51	627

Table 12.

Number of Main Fruit in the Village Panchayats of Piuthan District in 1983.

V.Panchayats / Fruit Tree Type	Dharmawati	Piram	Markwang	Nayagaon	Total	Percentage
1. Banana	4430	1275	220	920	6845	66.2
2. Mango	780	430	60	530	1800	17.4
3. Papaya	339	57	62	131	589	6.0
4. Jack Fruit	337	-	22	64	423	4.0
5. Guava	150	12	65	230	307	3.0
6. Lemon/Lime/ Jyamir	212	25	10	17	264	2.6
7. Tangerine/ Orange	-	-	74	-	74	.72
8. Pine apple	35	-	-	-	35	.34
9. Pear/Apricot plum	8	2	-	-	10	.10
Total:	6291 (60.8)	1801 (17.4)	513 (4.9)	1892 (18.3)	10347	100.00

Table 13.

Demand for Fruit-Trees in the Village Panchayatof Piuthan District for the FY 1984-85.

V. Panchayats / Fruit Tree Type	Dharmawati	Tiram	Markawang	Nayagaon	Total %
1. Mango	676	650	85	730	2141 (25.6)
2. Jyamir/Lime	777	210	150	448	1585 (19.)
3. Jackfruit	410	330	290	290	1320 (16.)
4. Tangerine/ Orange	158	450	440	-	1048 (11.8)
5. Apple	-	250	470	-	720 (8.0)
6. Guava	150	100	-	218	468 (5.6)
7. Banana	-	100	40	300	440 (5.2)
8. Mat met	100	150	30	-	280 (3.3)
9. Lichi	230	-	25	-	255 (3.05)
10. Pear/apricot plum	27	-	40	25	92 (1.1)
Total1	2528 (30.2)	2240 (27)	1570 (18.8)	2011 (24.0)	8349 (100.00)

Table 14.

Livestock Population of Village Panchayat of Viuthan District in1983

V. Panchayats / Livestock Type	Dharmawati	Tiram	Marka-want	Nayagaon	Total	Percentage
1. Cows	795	870	405	800	2870	29.1
2. Bullocks	535	965	230	742	2472	25.1
3. She-buffaloes	378	359	170	369	1276	12.9
4. He-buffaloes	1	11	10	7	29	.002
5. Sheep	-	-	166	-	166	1.7
6. Goats	665	535	365	540	2105	21.4
7. Pigs	14	5	-	213	229	2.3
8. Chicken	231	146	151	159	687	6.9
9. Ducks	4	-	-	1	5	.0001
Weighted Total:	2070.5	2489.6	1095.6	2310.5	7966.2	
	25.99	31.25	13.75	29.00	100.00	

Following weights used while adding:

Nos 1-4 =1.0

Nos 5-7 = 0.5

Nos 8-9 = 0.1

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Table 15.

Main Livestock Diseases in the Village Panchayats of Tiuthan District in 1983.

(No. of Livestock affected

V. Panchayats / Livestock Diseases	Dharmawati	Tiram	Marawang	Nayagaon	Total
1. Foot & Mouth disease	354	305	135	445	1239
2. Cholera	150	45	305	420	920
3. Liverfluke	310	118	110	144	682
4. Haemorrhagic Septicaemia	250	56	55	65	426
5. Sixth month disease sheep and goat	70	15	128	135	348
6. Black quarter	96	17	35	173	321
7. Rinderpest	27	-	15	37	79
8. Tick-borne disease	14	-	-	-	14

Table 16

Production and Sale of Livestock Products in the Village Panchayat of Piuthan District in FY 1982-83.

V.Panchayats & Prod. Sale / Livestock prod.	Dharmawati		Tiram		Markawang		Nayagaon		Total	
	Production	Sale	Production	Sale	Production	Sale	Production	Sale	Production	Sale
1. Milk (litre)	125	1.5	6.9	-	17.5	1.7	21	1	170.4	4.2
2. Wool (kg)	-	-	-	-	-	-	-	-	-	-
3. Ghee(Quintal)	52.4	21.6	3.5	1.2	3.6	-	19.8	1.6	79.3	24.4
4. Egg (No.)	24300	5950	16550	5200	950	220	7220	550	49020	11920
5. Sheep/Goats (no.)	985	265	203	89	85	15	64	34	1337	403

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Table 17.

Consumption of Fodder in the Village Panchayats of Piuthan District in FY 1982-83.

(in Quintals)

V.Panchayats / Sources of Fodder	Dharmavati	Tiram	Markawang	Nayagaon	Total
1. Own-farm	763230	51467	29775	398202	1242674 (97.6)
1.1 Lopping tree branches	46524	28475	10875	82502	(20.7)
1.2 Cutting grasses	29796	22992	18900	315700	(79.3)
2.From the Forest	5355	13843	3710	7350	30,258 (2.4)
2.1 within the ward	-	-	-	-	-
2.1.1 Lopping tree branches	4900	5128	7[illegible]5	4025	
2.1.2 Cutting grasses	-	6965	175	3325	
2.2 Outside the ward but within panchayat					
2.2.1 Lopping tree	455	1750	1750		
2.2.2 Cutting grasses	-	-	1050		
Total of lopping tree branches	51879	32353	13360	86527	(21.3)
Total Cutting grasses	29796	29957	20125	319025	(78.7)
Total	81675	62310	33485	405552	(100.00)

Note: (a) One load is assumed to equal 36 kg.
(b) Percentages are shown in the parenthesis.

Table 18.

Consumption of Fodder by Sources per Livestock per year as well as per day in FY 1982-83.

Fodder consumption / V.Panchayats	Fodder Consumption per Livestock per Yr. in quintal	Fodder Consumption per Livestock per day in kg.		
		Total Fodder	lopping Tree branches	Cutting grass
1. Dharmawati	31.22	8.55	5.43	3.12
2. Tiram	21.55	5.99	3.07	2.48
3. Markawang	22.37	6.13	2.45	3.68
4. Nayagaon	143.25	39.25	6.37	30.33
Total:	218.39	59.92	19.32	39.97

Table 19.

Possibility of Livestock Development by Species in the Village Panchayats of Kiuthan District.

V.Panchayats / Livestock Species	Dharmawati	Tiram	Markawang	Nayagaon	Total
1. Cows	228	570	95	648	1541
2. Bullocks	232	340	80	210	862
3. She-buffaloes	138	360	104	323	825
4. He-buffaloes	8	21	18	73	120
5. Sheep	-	-	345	-	345
6. Goats	910	2730	680	976	5296
7. Chicken	2787	750	1160	860	5557
8. Ducks	50	-	-	-	50
Total:	4353	4671	2482	3090	14596

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Table 20.

Landslides and Soil Erosion in the Village Panchayats of Piuthan District Till Now.

Landslides & area affected / V. Panchayats	No. of landslides	Area Affected by Landslides in Ropani
1. Dharmawati	6	82 (27.7)
2. Tiram	7	172 (58.1)
3. Markawang	2	5 (1.7)
4. Nayagaon	2	37 (12.5)
Total.	17	296 (100)

Note: Percentages are given in the parenthesis

Table 21.

Forest Type & Area in the Village Panchayats of Piuthan District in 1983.

(in Ropanis)

Forest Type / Panchayats	Dense Forest	Scrub Forest	Patchy Forest	Barren Forest	Total
1. Dharmawati	5458	2400	2040	1126	11024 (33.7)
2. Tiram	7620	1410	1070	1020	11120 (33.9)
3. Markawang	7860	30	50	170	8110 (24.8)
4. Nayagaon	535	1200	625	10	2460 (7.5)
Total:	21473 (65.6)	5130 (15.7)	3785 (11.6)	2326 (7.1)	32714 (100.0)

Note: Percentages are given in the parenthesis.

Table 22.

Requirements and Supply Situation of Wards in Forest Products in the Village Panchayats of Siuthan District.

Panchayats / Item	Number of Wards														
	Dharmawati			Tiram			Markawang			Nayagaon			Total		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
24.1 At present															
1.Firewood	-	-	9	-	3	6	1	5	3	-	3	6	1	11	24
2.Fodder	-	-	9	-	2	7	-	7	2	-	3	6	-	12	24
3.Timber	-	-	9	-	1	8	1	5	3	-	1	8	1	7	28
4.Tree branches (for roofing & compost making)	-	1	8	-	2	7	1	6	2	-	4	5	1	13	22
24.2 Future															
1.Firewood	-	-	9	-	1	8	-	1	8	-	-	9	-	2	34
2.Fodder	-	-	9	-	-	9	-	1	8	-	-	9	-	1	35
3.Timber	-	-	9	-	-	9	-	1	8	-	-	9	-	1	35
4.Tree branches (for roofing & compost making)	-	-	9	-	-	9	-	1	8	-	-	9	-	1	35

A = More than enough.

B = Just enough.

C = Not enough.

Table 23.

Number of Trees Planted till now inthe Village Panchayats of Piuthan District.

Panchayats	No. of trees planted till now					No. of trees Dead	
	Around the upland	Around the lowland	Around the house	other	Total Total	Number Number	Percentage Surviving.
1. Dharmawati	1200	20	250	1120	2690 (94.7	975 (96.5)	63.8
2. Tiram	20	20	25	-	50 (1.8)	20 (2.0)	60.0
3. Markawang	-	-	-	-	-	-	-
4. Nayagaon	100	-	-	-	100 (3.5)	15 (1.5)	85.0
Total:	1320	40	275	1120	2840 (100.0)	1010 (100.0)	64.4

Table 24.

Potentials for Afforestation in the Village Panchayat of Piuthan District in the FY 1984-85

Panchayats	Area Ropanis	No. of Benefitting Families	Estimated Cost in Rs	Main Species Preferred
1. Dharmawati	181	442	74000	Pine, Chiuri, Sal
2. Tiram	83.5	440	49000	Sal, Sallo
3. Markawang	3	46	5000	Sal, Sallo
4. Nayagaon	137	99	45700	Sal, Sallo, Khaer
Total:	404.5	1027	173700	Sal, Sallo, Khaer, Pine, Chiuri.

Table 25.

Consumption of Timber, Poles and Firewood in the Village Panchayats Of Piuthan District in the FY 1982-83.

Panchayats	Large Timber (Cu.m.)	Slender Poles Quintals(Cu.m	Firewood Quintals (Cu.m	Total (Cu. m.)
1. Dharmawati	2970	1803(260.7)	35928(5195.2)	8425.9
2. Tiram	150	84(12.1)	23100(3340.3)	3502.4
3. Markawang	1480	1474(213.1)	31220(4514.4)	6207.5
4. Nayagaon	710	2726(294.2)	38935(5632.9)	6737.1
Total:	5310	6087(880.1)	129203(18682.1)	24872.9

* One load is equal to 35 kg.

Note: Amounts in the parenthesis are in cubic metres.

Table 26.

Consumption of Firewood by Sources of Supply in Village Panchayats of Pithoragarh District in the FY 1982-83.

(Quintals)

Sources of Supply of Firewood / V. Panchayats	Dharma-wati	Tiram	Marka-wang	Naya-gaon	Total
1. Collecting wastes from Forest	48250	21000	57900	56000	183150
1.1 Within Ward	31300	13300	42000	37500	124100
1.2 Outside ward within panchayat	16950	7600	15500	18500	58550
1.3 Other Panchayats	-	100	400	-	500
2. Cutting Trees from Forest	10800	17450	8300	5600	42150
2.1 Within ward	6500	16700	6100	2300	31600
2.2 Outside ward but within panchayat	-	750	2200	-	2950
2.3 Other Panchayats	4300	-	-	330	7600
3. By Collecting Agri. Waste	42550	2370	24000	26600	95520
3.1 Within ward	37000	920	21950	26600	86470
3.2 Outside ward but within panchayat	5000	1050	2050	-	8100
3.3 Other panchayats	550	400	-	-	550
Total:	101600	40820	90200	88200	320820

Table 27.

Existing Irrigation Facilities in Village Panchayats of Piuthan District in 1983.

Irrigation Facilities / V.Panchayats	Dharmawati	Tiram	Markawang	Nayagaon	Total
1. From Traditional Canal.					
1.1 No. of Canals	4	4	2	4	14
1.2 Area Covered in ropanis	485	360	30	732	1607
1.3 No. of Beneficiaries (households)	189	165	25	108	487
2. Under the Government Scheme.					
2.1 No. of Projects	1	-	-	-	1
2.2 Area covered in ropanis	100	-	-	-	100
2.3 No. of Beneficiaries (households)	25	-	-	-	25

Table 28.

Potentials of Irrigation in Village Panchayats of Piuthan District.

Potential Projects / V.Panchayats	No. of Projects	Average area per project (ropanis)	No. of Beneficiaries per Project*	Average Estimated costs per Project Rs. in '000
1. Dharmawati	8	770	134	29
2. Tiram	5	825	207	21
3. Markawang	3	350	121	92
4. Nayagaon	4	290	82	47
Total:	20	2235	544	189

* Households.

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Table 29.

Drinking Water Facilities in Village Panchayats of Piuthan District in 1983.

V. Panchayats / Govt. Aided Drinking Water Scheme	Dharmawati	Tiram	Markawang	Nayagaon	Total
1. Total No. of Projects	2	2	1	-	5
2. of which, no. of new Projects	-	-	-	-	-
3. No. of taps under working	10	15	2	-	27
4. Beneficiaries of working Projects (Households)	150	100	26	-	276

Table 30.

Requirement of Drinking Water Projects in the Village Panchayats of Piuthan District.

Requirement of Water projects / V. Panchayats	No. of Projects	No. of Beneficiaries		Average Estimated costs per project (Rs. in '000)
		No. of Villages	No. of Households	
1. Dharmawati	7	17	250	210
2. Tiram	2	5	224	80
3. Markawang	1	4	59	50
4. Nayagaon	6	16	264	230
Total:	16	42	797	

Table 31.

Adult Literacy* in the Village Panchayats of Piuthan District in 1983.

Adult Panchayat / Panchayats	Male	Female	Total
1. Dharmawati	585	158	743 (36.7)
2. Tiram	615	115	730 (36)
3. Markawang	182	41	223 (11.00)
4. Nayagaon	248	80	328 (16.2)
Total:	1630 (80.5)	394 (19.4)	2024 (100.00)

* Population of 10 years and above, who can read letters and reply.

Note: Percentage are shown in the parenthesis.

Table 32 a.

Educational Facilities and Enrolment in Village Panchayats of Piuthan District in 1983.

(Number)

V. Panchayats / Edu. Facilities & enrolment	Dharmawati	Tiram	Markawang	Nayagaon	Total
A Educational Institutes:					
1. Primary School	4	5	2	2	13
2. Lower Secondary School	-	1	1	2	4
3. High School	1	1	-	-	2
B. Enrolment:					
1. Primary	495	725	75	130	1420
(a) Boys	380	585	65	105	1135
(b) Girls	115	140	10	25	290
2. Lower Secondary School	-	250	150	390	790
(a) Boys	-	200	135	300	635
(b) Girls	-	50	15	90	155
3. High School	550	250	-	-	800
(a) Boys	350	200	-	-	550
(b) Girls	200	50	-	-	250

Table 32 b.

Student-Teacher Ratios in Village Panchayats of Piuthan District in 1983.

V. Panchayats / School	Dharmawati	Tiram	Markawang	Nayagaon
Primary School	41	80	19	43
Lower S. School	-	50	21	39
High S. School	39	23	-	-

Table 32 c.

Trained and Untrained Teachers by Sex in Educational Institutes of Village Panchayats of Siuthan District in 1983.

(Number)

V. Panchayats / Teachers	Dharmawati	Tiram	Markawang	Nayagaon	Total
1. Primary School	12	9	4	3	28
1.1 Trained	-	-	-	-	-
a. Male	1	2	1	1	5
b. Female	1	-	-	-	1
1.2 Untrained					
a. Male	10	7	3	2	22
b. Female	-	-	-	-	-
2. Lower Secondary		5	7	10	22
2.1 Trained	-	-	-	-	-
a. Male	-	1	3	4	8
b. Female	-	-	-	-	
2.2 Untrained					
a. Male	-	4	4	6	14
b. Female	-	-	-	-	-
3. High School	14	11	-	-	25
3.1 Trained	-	-	-	-	-
a. Male	2	5	-	-	7
b. Female	1	-	-	-	1
3.2 Untrained					
a. Male	9	6	-	-	15
b. Female	2	-	-	-	2

Table 33.

Distances to be Covered to get Services & Facilities.

V. Panchayats / Services & Facilities	Distance in Km.				Places, Panchayat and District.
	Dharmawati	Tiram	Markawang	Nayagaon	
1. Chemical -Fertilizer	1.6	9.6	9.6	9.6	Dharmawati, Khanga
2. Improved Seeds	1.6	9.6	9.6	9.6	Khalanga ,,
3. Loans	9.6	9.6	9.6	9.6	,,
4. Market	9.6	9.6	9.6	9.6	
5. High School	1.6	9.6	9.6	9.6	Bagdula
6. Health Centre	9.6	9.6	9.6	9.6	Khalanga
7. Veterinary Hospital	9.6	12.8	1200	12.8	,,
8. Post Office	9.6	12.8	12.8	12.8	,,
9. Bank	9.6	12.8	12.8	12.8	,,

Table 34.

Godowns in the Village Panchayat of Biuthan District in 1983.

Panchayats	No. of Godowns	No. of Villages Using Godowns	Total Capacity of Godowns(qui.)
1. Dharmawati	-	-	-
2. Tiram	-	-	-
3. Markawang	2	90	60
4. Nayagaon	-	-	-
Total:	2	90	60

Table 35.

Co-operatives in the Village Panchayats of Piuthan District in 1983.

Panchayats	Sajha No.	Membership no.	No. of Active Sajha	No. of Inactive Sajha
1. Dharmawati	1	19	1	-
2. Tiram	-	-	-	-
3. Markawang	-	-	-	-
4. Nayagaon	-	-	-	-
Total :	1	19	1	-

Table 36.

Potential Cottage Industries as Demand in the Village Panchayats of Piuthan District.

Types of Industries	Location Village, ward and Panchayat	'000 Estimated cost in Rs	Capacity	No. of People to be Employe	Sources	Where to sell?
1. Water Mill	Sagdula, Dharmawati	5	10 horse power	2	Local	Local
2. Soap Factory	,,	150	-	10	Local	Local
3. Furniture	Debistnan, Tiram	5	-	8	Dang	Dang
4. Hosiery	Tiram	5	-	5	Dang	Dang
5. Cottage Industry	Thanklong, Tiram	10		10	Dang	Dang
6. Cotton Weaving Indus.	Gahatar, Nayagaon	30	-	5	Dang	Dang

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Table 37.

Loans Taken by Households of the Village Panchayats of Piuthan District Up to Now.

V. Panchayats / Loan Type	Dharma-wati	Total	Marka-wang	Naya gaon	Total
1. Agriculture Loans from Bank:					
1.1 No. of Debtors	4	-	-	-	4
1.2 Total Loans taken	2000	-	-	-	2000
2. Consumption Loans from Bank					
2.1 No. of Debtors	276	-	-	64	340
2.2 Total Loans taken	62000	-	-	26500	88500
Total: No. of Debtors	280	-	-	64	344
Total amt. of loan taken from Bank	62000	-	-	26500	88500

Table 38.

Projects Listed in terms of Priority by the Village Panchayats of Piuthan District.

Name of Projects	Priority (Rank)	Basis for Assigning Priority	Location		Capacity	No. of Beneficiary households	Estimated costs in Rs.
			Village	Panchayat			
1. Drinking Water	1	Scarcity	Gijwang	Dharma	10 taps	64	15,000/-
2. Irrigation	1	Inconvinent	W.no.5	Markawang	-	28	35,000/-
3. Drinking Water	1	Scarcity		Nayagaon	5 taps	52	50,000/-
4. Drinking Water	2	Scarcity	Chandeshim	Dharma	50 taps	90	3,00,000/-
5. Drinking Water	2	Scarcity	Gogap	Markawang	15 taps	59	50,000/-
6. Trail Path	3	Scarcity	Machrote	Dharma	-	90	50,000/-

APPENDICES

ROLPA DISTRICT (TABLES)

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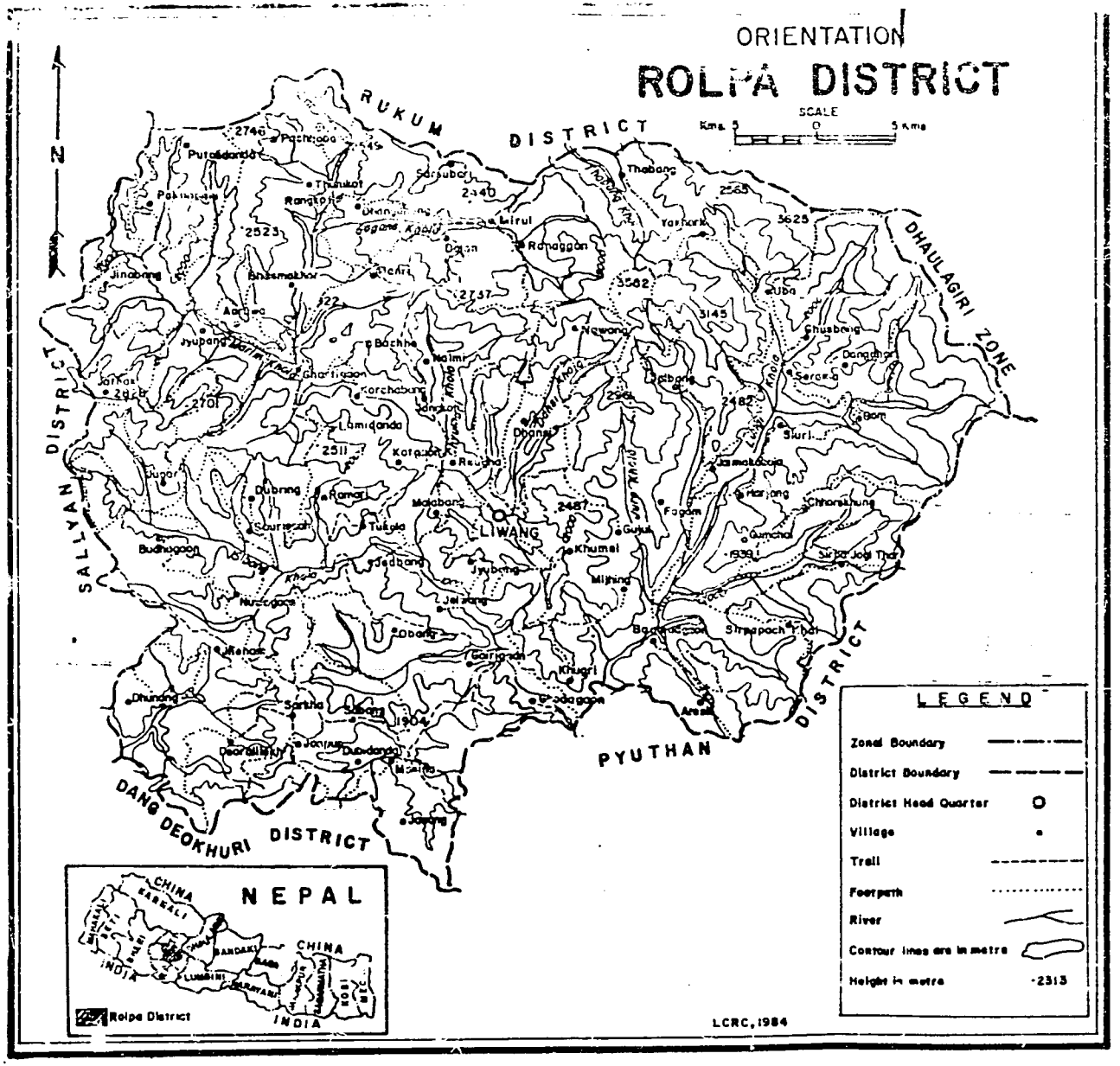
ORIENTATION
ROLPA DISTRICT
SCALE
Kms 5 0 5 Kms
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RUKUM DISTRICT
DHAULAGIRI ZONE
SALLYAN DISTRICT
PYUTHAN DISTRICT
DANG DEOKHURI DISTRICT
LIWANG
Thabang
Sarsubot
Birul
Ranaggan
Yarkhark
Uba
Chusbang
Newang
Bachha
Nalmi
Jetbang
Dhanni
Lamidanda
Korchabang
Korabot
Reudha
Jaimatkuna
Sluri
Harjang
Chhorsbang
Fagam
Gukul
Khumal
Milyang
Jyubing
Jelkang
Oberi
Garigaon
Khuari
Bodagaon
Sirpapoch Thati
Mehas
Dhundang
Sartha
Sibang
Jaimas
Dubdanda
Malma
Jaimang
Budhagaon
Dubring
Ramai
Tulsla
Jedbang
Nuntagaon
Jinabang
Jyupang
Jaikot
Pachhaoa
Thaukot
Rangkot
Dhanjang
Dhan
Ghartigaon
Aarbang
Pokhrasen
Putadanda
2746
2523
2440
2565
3625
3562
3149
2737
2701
2511
2482
2487
2464
2313
1904
NEPAL
CHINA
INDIA
Rolpa District
LEGEND
Zonal Boundary
District Boundary
District Head Quarter
Village
Trail
Footpath
River
Contour lines are in metre
Height in metre
LCRC, 1984

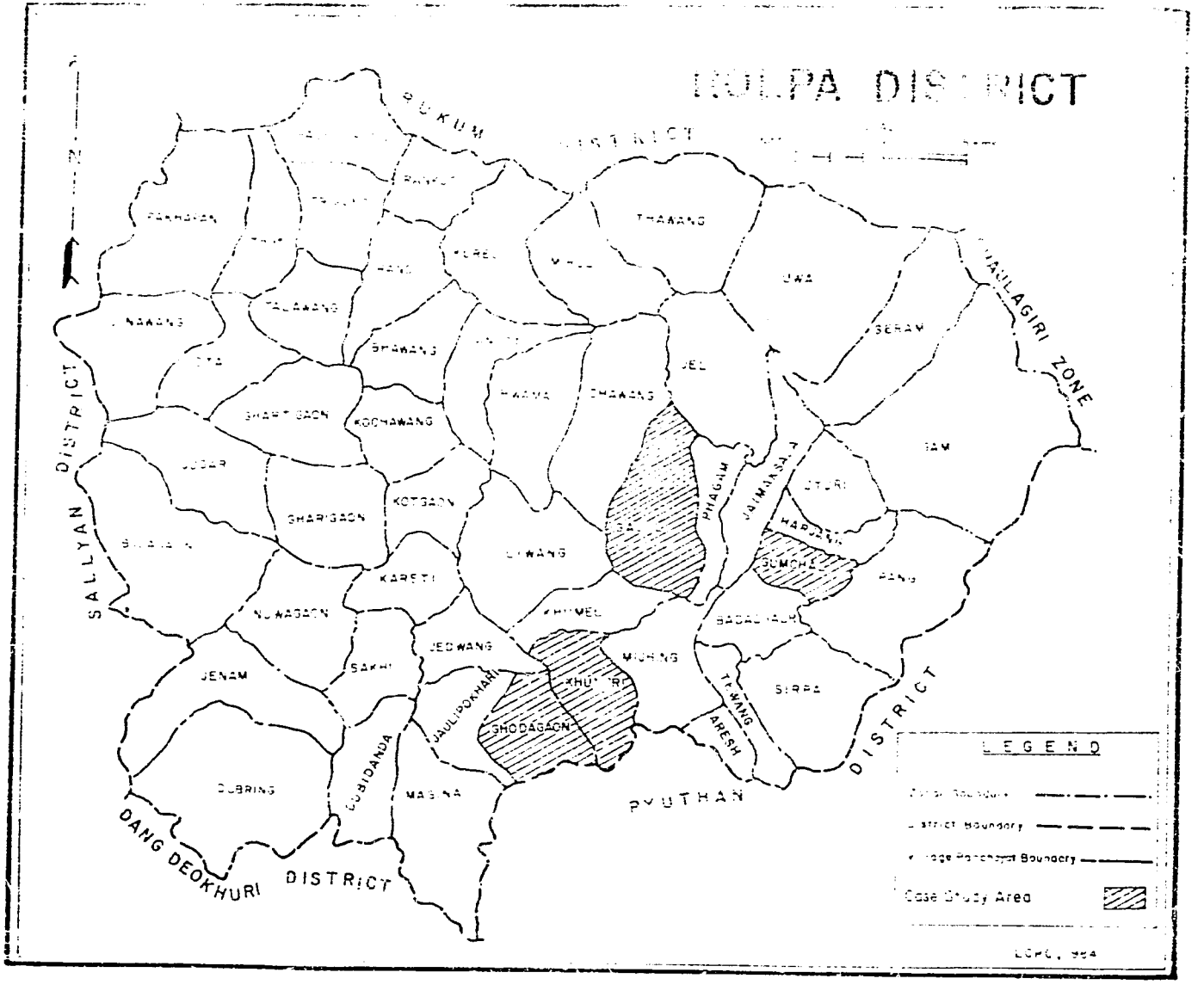
ROLPA DISTRICT
N
PUKUM
DISTRICT
THAWANG
JWA
SERAM
JEL
THAWANG
PHAGIM
JAIMANSALA
JTURI
HARDANG
SUMCHE
RANG
SHARFGAON
KOCHAWANG
JUGAR
SHARIGAON
KOTGAON
LIWANG
KARETI
NUWAGAON
JENAM
SAKHI
JEDWANG
MIJHING
SIRPA
JAULIPOKHARI
SHODAGAON
GUBIDANDA
DUBRING
MASINA
TRIWANG
ARESH
PYUTHAN
DISTRICT
DANG DEOKHURI
DISTRICT
SALLYAN
DISTRICT
DHAULAGIRI ZONE
LEGEND
District Boundary
Village Panchayat Boundary
Case Study Area

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Table 1.

Number of Households by Caste and Number of Villages in Each Village Panchayats of Kolpa District.

V.Panchayats / Main Caste	Ghodagaun	Gumchal	Gajul	Khungri	Total	%
1. Chhetri	162	308	281	39	790	37.7
2. Magar	81	95	176	156	508	24.0
3. Kami	33	40	91	94	258	13.0
4. Giri	-	-	-	155	155	7.4
5.Brahman	17	1	84	28	130	6.0
6.Thakuri	22	-	18	59	99	4.7
7.Damai	8	12	21	25	66	3.0
8.Sarki	36	-	-	6	42	2.00
9.Sunar	19	8	-	4	31	1.5
10. Others	3	-	5	9	17	0.8
Total:	381	464	676	575	2090	100.00

Note: Newar- (4), Bohara- (9), Tamang -(1) and Pode- (3)

Table 2.

Numbers of Persons Employed in Occupations other than Own-farming in the Village panchayats of Kolpa District in 1983.

V.Panchayats / Type of Occupation	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. Porterage	186	-	47	31	264
2. Cottage Industry	59	12	84	2	157
3. Construction	6	-	85	62	153
4. Service	34	-	44	55	133
5. Agricultural	72	-	6	44	122
6. Trade	16	-	25	9	50
7. Others	332	-	-	-	332

Table

Temporary and Permanent Migration of Village Panchayats of Rolpa District in 1983.

(Number of Migration)

No. of Migrants / Panchayats	Less than one year		More than one year	
	Out-migrants	In-Migrants	Out-migrants	In-Migrants
1. Ghodagoan	NA	NA	NA	NA
2. Gumchal	487	3	-	-
3. Gajul	67	1	308	1
4. Khungri	115	500	432	
Total:	699	504	740	

N.A. No. answer

Table 4a.

Land Use in Villages Panchayats of Rolpa District.

(In Ropani)

Land Use / Panchayats	Cultivated Area			Cultivable Barren	Uncultivable Waste	Forest	Pansture	Others	Total
	Khet	Bari/ Pakho.	Total						
Ghodagaon	478	1687	2165	522	-	4335	1735	-	8757
Ghmchal	1005	3850	4855	205	720	480	450	395	7105
Gajul	2600	6240	8840	3055	17095	36075	16505	-	81570
Khungri	403	3952	4355	1417	1755	8827	3276	-	19630
Total:	4486	15729	20215	5199	13570	49717	21966	395	117062

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Table 4b.

Land Availability Per Household for Selected Catagories of Land in Village Panchayats of Kolpa District.

(in Ropani)

V.Panchayats / Land Type	Ghodagoan	Gurchal	Gajul	Khunchi	Total (Ropanis)
1. Cultivated Land.	5.7	10.5	13.0[illegible]	7.6	9.6
1.1 Khet	1.3	2.2	3.8	0.7	2.1
1.2 Pakho	4.4	8.3	9.2	6.9	7.5
2. Cultivated Barren	1.4	0.4	4.1	2.5	2.5
3. Uncultivated Barren	-	1.6	25.28	3.1	9.3
4. Forest	11.4	1	53.36	15.4	23.7
5. Pasture	4.6	1.0[illegible]	24.41	5.7	10.5
6. Others	-	0.9	-	-	0.2
Total::	22.9	15.3	120.66	34.2	55.9

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Table 5.

Size of Land Holding in Study Area of Kolpa District.

(No. of Families in percent)

Land Holding Size categories / Panchayats	Ghodagoan	Gumchal	Gajul	Khungri	Total
1. Land-less	43 (11.3)	38 (8.2)	12 (1.77)	45 (7.83)	138 (6.68)
2. Less than 4 Ropanis	125 (32.8)	111 (23.91)	122 (18.04)	275 (47.82)	633 (30.20)
3. 4-10 Ropanis	180 (47.24)	164 (35.34)	107 (15.83)	130 (22.61)	581 (27.72)
4. 10-20 Ropanis	33 (8.66)	145 (31.25)	446 (36.44)	125 (21.74)	549 (26.2)
5. More than 20 Ropanis.	--	6 (1.3)	189 (27.96)	-	189 (9.2)
Total :	381 (100.00)	464 (100.00)	676 (100.00)	575 (100.00)	2096 (100.00)

Note: Percentages are given within the Parenthesis.

Table 6.

Food Sufficiency in the Study Area of Rolpa district.

(No. of Households)

V. Panchayat / Duration of Sufficiency in month	Ghodagaon	Gumchal	Gajul	Khungri	Total
12	78 (20)	153 (33)	210 (31)	94 (16)	535 (25.5)
9	90 (24)	103 (22)	230 (34)	125 (22)	548 (26.[illegible])
6	125 (33)	150 (32)	126 (19)	164 (28)	565 (27)
4	74 (19)	38 (8)	91 (13)	102 (18)	305 (14.50)
Less than 4	14 (4)	20 (4)	19 (3)	90 (16)	143 (7.[illegible])
Total:	381 (100.0)	464 (100.0)	676 (100.0)	575 (100.0)	2096 (100.0)

Note: Figures in the Parenthesis refer to Percentages.

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Table 7.

Area, Total Production and Productivity of Main Crops in Village Panchayats of Rolpa District.

Main Crops in Panchayats	Total			Ghodagaon			Gumchal			Gajul			Khungri		
	Area	Production in Quantity	Productivity	A	TP	P	A	TP	P	A	TP	P	A	TP	P
1. Maize	5821	31631	543	1545	24068	1558	3650	243	67	1015	206	20	1156	731	63
2. Wheat	2565	4480	175	1533	1655	107	365	249	68	435	7274	1672	232	1844	794
3. Paddy	1714	6344	370	478	714	149	1005	5804	57	200	4648	2324	31	400	1290
4. Barley	807	1016	126	37	21	57	805	520	65	51	77	151	14	31	286
5. Millet	367	3259	888	–	–	–	225	574	225	140	2682	1916	–	–	–
6. Sugarcane	352	16	5	–	–	–	330	5	2	18	10	57	4	1	23
7. Taro	102	1126	1104	27	21	80	–	–	–	62	856	1382	13	248	1913
8. Soyabean	101	1236	1224	16	8	3	–	–	–	70	1134	1620	15	93	626
9. Potato	82	1275	1555	10	24	248	–	–	–	65	1088	1674	7	186	2665
10. Groundnut	35	1091	3118	–	–	–	–	–	–	20	987	4936	15	104	–
11. Buckwheat (Phhapar)	25	70	283	–	–	–	20	16	81	5	54	1080	–	–	–
12. Mustard	20	418	2093	–	–	–	–	–	–	20	418	2093	–	–	–
Total:	11991	51962		3646	26511		6400	7411		2101	19434		1487	3638	

Note: A = Area in Ropani, TP = Total Production in Quintal., P = Productivity in Kg. per Ropani.,

Table 8a.

Used of Improved Agricultural Technology in the Village Panchayats of Kolpa district in the Fiscal Year 1982-83.

Diff. Fertilizers \ V.Panchayats	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. Improved Seeds (in kg).	-	-	-	350	350
1.1 Maize	-	-	-	50	50
1.2 Wheat	-	-	-	300	300
2. Chemical fertilizers (in kg.)	-	-	-	52	52
1.1 Maize	-	-	-	2	2
2.2 Wheat	-	-	-	50	50
2.3 Paddy	-	-	-	-	-
3. Pesticides Insecticides (in litr.)	-	-	-	-	-
4. Improved Seeds/implements (in Rs.)	-	-	-	-	-

Table 8b.

Use of Improved Technology per Ropani in Village Panchayats of Rolpa District in 1982-83.

(Kg. per Ropani)

V.Panchayats / Improved fertilizer	Shodagaon	Gumchal	Gajul	Khungri	Total
1. Improved Seeds	-	-	-		
1.1 Maize	-	-	-	.04	.0007
1.2 Wheat	-	-	-	1.3	0.116
1.3 Paddy	-	-	-	-	-
2. Chemical Fertilizer					
2.1 Maize	-	-	-	.002	.0003
2.1 Wheat	-	-	-	0.2	0.2
2.3 Paddy	-	-	-	-	-

Table 9

Demand for Improved Agricultural Technology in the Village Panchayats of Rolpa District for the Fiscal Year 1984-85.

V.Panchayats / Improved Agricultural Technology	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. Seeds (Kg.)	9113	1769	3330	11980	26692
1.1 Wheat	3767	318	1250	4100	9935
1.2 Paddy	1928	780	640	3370	6718
1.3 Maize	2643	396	850	2750	6639
1.4 Potato	675	250	590	1760	3275
1.5 Millet	100	25	-	-	125
2. Chemical Fertilizer	18898	5900	8155	8155	41108
2.1 Maize	9600	1300	2440	3265	16605
2.2 Paddy	5808	2100	2095	825	10828
2.3 Wheat	2140	1600	2600	3780	10120
2.4 Potato	1350	900	1020	285	3555
3. Pestidides	1908	55	382	3201	5546
4. Implements (Rs)	12800	49000	16700	190500	268000

Table 10.

Production of Main Vegetables in the Village Panchayats, of Rolpa District in the Fiscal Year 1982-83.

(in Kg.)

V.Panchayats / Main Vegetables	Ghodgaon	Gumchal	Gajul	Khungri	Total
1. Winter Vegetables	4844	5577	13165	12150	35736
1.1 Rape & Mustard Leaves	700	5200	9050	1250	16200
1.2 Onion	55	-	300	5200	5555
1.3 Radish	2524	31	1600	650	4805
1.4 Cauliflower/ Cabbage	180	2	990	3250	4422
1.5 Other leaf vegetables	700	305	450	760	2215
1.6 Tomato	174	35	100	370	677
1.7 Egg-plant	138	4	220	280	642
1.8 Garlic	196	-	210	225	631
1.9 Chilli	96	-	235	165	496
1.10 Pea	80	-	10	-	90
2. Other Vegetables	7092	17332	28681	9901	63006
1. Pumpkin	900	7500	21450	3780	33630
2. Sponge gourd snake	1142	9400	965	130	11637
3. Cow Pea	953	227	4690	408	6278
4. Ginger	167	5	400	3780	4252
5. Christophine	1350	200	-	1025	2575
6. Turmeric	2100	-	300	133	2533
7. Cuccumber	480	-	876	645	2001
GRAND TOTAL:	11936	22909	41846	22051	98472

Table 11

Demand for Vegetable Seeds in the Village Panchayats of Rolpa District for the Fiscal Year 1984-85.

(in k g.)

V.P. Panchayats / Types of Vegetable Seeds	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. Potato	2556	217	400	700	3873
2. Cauliflower/Cabbage	42	25	22	29	118
3. Onion	42	42	13	-	97
4. Pumpkin	39	-	29	14	82
5. Radish	42	-	2	18	62
6. Cow Pea+Simi	30	-	-	11	41
7. Pea	20	-	-	20	40
8. Chilli	-	4	3	25	32
9. Rape & Mustard	-	8	15	-	23
10. Egg - Plant	-	6	18	-	24
11. Tomato	-	-	2	19	21
Total:	2771	302	504	836	4413

Table 12.

Number of Trees of Main fruits in the Village Panchayats o Kolpa District.

(No. of Trees)

V.Panchayats / Types of Fruits	Ghoda - gaon	Gumchal	Gajul	Khungri	Total	%
1. Banana	13800	4300	5500	17200	40800	56.8
2. Tangerine/ Orange	7090	475	1520	600	9685	13.5
3. Mango	1161.	-	5	6210	7376	10.3
4. Pear/Apricot/ Peack/Plum	56	2	154	5510	5722	7.97
5. Papaya		-	150	2425	2575	3.6
6. Pineapple	12	100	415	1005	1532	2.1
7. Guava	97	-	203	944	244	1.7
8. Lemon/Lime/ Jyamir	-	50	454	635	1139	1.58
9.Jack Fruit	3	-	207	622	832	1.16
10.Apple	-	-	200	600	800	1.11
Total: & %	22219 (31.1)	4927 (6.68)	8808 (12.28)	35766 (49.86)	71720 (100.00)	100.00

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Table 13.

Requirement of Horticultural Saplings in the Village Panchayats of Kolpa District.

(No. of Trees)

V.Panchayats / Types of Fruit Trees	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. Orange+Taggerine	2580	1725	3570	7400	15275
2. Pear	306	-	1180	9900	11386
3. Lemon	1043	360	300	7960	9663
4. Mango	1000	-	70	7800	8870
5. Pineaple	120	850	150	7200	8320
6. Apple	1392	570	1700	4150	7812
7. Jack fruit	130	-	150	4500	4780
8. Banana	1000	-	-	3300	4300
9. Papayat Guava	-	-	500	1500	2000
10. Grapes	1234	-	-	100	1334
GRAND TOTAL:	8805	3505	7620	53810	73740

Tablee 14.

Livestock & Fodder

Discription of Livestock in the Village Panchayats of Rolpa District.

(In Numbers)

V.Panchayats / Types of Livestock	Ghodagaon	Gumchal	Gajul	Khungri	Total
Total - 1	3886	3755	5720	4033	17394
Rank - 1					
1. Cow	2560	1670	4000	1695	9925
2. Bullock	835	900	1160	1600	4495
3. She-buffalo	461	900	528	727	2616
4. He-buffalo	18	285	32	11	346
5. Chauri-Yak	12	-	-	-	12
Total - 2	892.5	126.5	2068.5	796	3883.5
Rank - 2					
6. Goat	1760	1550	2700	1312	7322
7. Sheep	25	950	1300	280	2555
8. Pig	-	30	137	-	167
Total: - 3	285.5	320.0	390.0	550.0	1545.5
Rank - 3					
9. Chicken	2850	3200	3900	5450	15400
10. Duck	5	-	-	50	55
Weights Total*	5064	4201.5	8178.5	5379	22823

* Following weights used while adding:-

Item Nos. 1 -5= 1.0

Item Nos. 6- 8= 0.5

Item Nos9-10-=. 0.1

Table 15.

Description of Livestock Products and Their Sale in the Village Panchayats of Rolpa District.

V. Panchayats / Livestock Productio	Ghodagaon		Gumchal		Gajul		Khungri		Total	
	P	S	P	S	P	S	P	S	P	S
1. Milk (per kiloliter)	17.6	2	6.6	-	30.8	4.1	3.7	2	58.7	8.1
2. Wool (Kg.)	-	-								
3. Ghee (Kg.)	10750	6800	253	138	145	145	190	-	598	238
4. Egg (No.)	700	700	2600	6000	3530	1950	1130	300	42210	15050
5. Sheep/goats. (No.)	9550	5300	8500	-	2750	1250	21600	3000	33550	22500
6. Other Specify	-	-	625	177	2030	360	642	75	12847	9512

P = Production.

S = Sale.

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Table 16.

Description of Diseases to Cattle in the Village Panchayats of Rolpa District.

(No of Livestock Suffering from Diseases)

V.Panchayats / Diseases of Livestock	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. Cholera (Chicken)	201	700	60	2480	3441
2, Foot & Mouth disease	865	-	100	1540	2505
3. Liverfluke	454	515	-	250	1219
4. Black quarter	575	620	-	-	1205
5. Hacanorrhagic Septicaemia	955	260	-	273	928
6. Sixth month disease Sheeps/goat	170	7	-	290	477
7. Tick-borne disease	-	-	-	270	270
8. Rinder pest	-	105	-	10	115

Table 17

Consumption of Fodder in the Village Panchayats of Kolpa District, in 1982-83.

(in quintal)

Sources of Fodder \ V. Panchayats	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. Own-farm	4592	38500	44275	39630.5	126997.5
1.1 Lopping tree branches	4592	16450	16975	16278.5	
1.2 Cutting grasses	-	22050	27300	23352	
2. From the Forest		6650	24745	24486	55881
2.1 Within the Ward	-	3325	10430	21938.	
2.1.1 Lopping tree branches		3325	14315	2548	
2.1.2 Cutting grasses	-	-	-	-	
2.2 Outside the ward but within the panchayat	5904.1	7560	15365	5985	34813.1
2.2.1 Lopping tree branches	5904.1	175	5425	5915	
2.2.2 Cutting grasses	-	6685	9940	70	
2.3 Outside the panchayat	-	4935	-	7630	12565
2.3.1 Lopping tree branches		3325	-	7630	
2.3.2 Cutting grasses	-	1610	-	-	
Total of lopping tree branches	10495.1	23975	32830	51761.5	119061.6 (51.7)
Total of cutting grasses	-	33670	51555	25970	111195 (48.3)
Total	10495.1	57645	84385	77731.5	230256.6 (100.00)

Note: a) One load is assumed to equal to 35 kg.

b) Percentages are shown in the parenthesis.

Table 18.

Possibility of Livestock Development by Species in the Village Panchayats of Rolpa District.

(Weighted Number)

V.Panchayats / Livestock Species	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. Cow	123	2010	5240	752	8125
2. Bullock	10	1465	1055	251	2790
3. She-buffallo	59	1220	326	150	1755
4. He-buffallo	5	141	8	-	158
5. Goat	139	900	2950	1800	5789
6. Sheep	30	825	1200	351	2406
7. Pig	-	112.5	75	-	187.5
8. Chicken	129.5	305	11700	20	12864.5
9. Duck	52	-	50	25	127
10. Other specify					
a) Pork	-	-	35	-	35
b) Fishery	-	-	-	100	100
Weighted Total:	557.5	6988.5	22639	4149	34334

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Table 19.

Landslides and Soil erosion in the Village Panchayats of Rolpa District .

Panchayats	No. of Landslides	Area effected by landslides (in kopanis)	Soil Conservation works No.	Beneficiaries No. of households.
Ghodagaon	7	25 (.4)	-	-
Gumchal	14	685 (10)	-	-
Gajul	3	5520 (88)	1	625
Khungri	1	10 (.16)	5	-
Total:	25	6240 (100.00)	6	625

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Table 20.

Forest Type and Area in the Village Panchayats of Kolpa District.

Types of Forest / Panchayats	Dense Forest	Scrub Forest	Patch Forest	Barren Forest	Total
Ghodagaon	245	-	1190	112	1547(20%)
Gumchal	295	1090	650	29	2064(35%)
Gajul	185	-	865	3	1053(18%)
Khungri	75	-	1170	-	1245(21%)
Total:	800 (13.5)	1090 (18.4)	3875 (65.5)	144 (2.5)	5909 (100.00)

Table 21

Number of Trees Planted Till now in the Rolpa District.

Panchayats	No. of Trees Planted till now					No. of Trees dead %
	Around the up-land.	Around the low-land.	Around the House	Other	Total	
Ghodaggon	NA	NA	NA	NA	NA	NA
Gumchal	23000	7000	6800	-	36800	
Gajul	500	400	300	-	1200	225(18.75)
Khungri	NA	-	NA.	-	-	-
Total:	23500	7400	7100	-	38000	225(.59)

Note: NA- No Answer

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Table 22.

Potentials for Afforestation in the Village Panchayats of Rolpa District in the F/Y. 1984-85.

Panchayats	Area in Ropani	No. of benefitting households	Estimated Cost in Rs.	Main Species
Ghodagaon	4	108	1600	Sal
Gumchal	9385	439	70,000	Sal
Gajul	567	1680	-	,, Sallo, Uttis Khay Khayar.
Khungri	51	1279	55,500	Sallo, Simal, Bamboo, Chiuri, Mango
Total:	10007	3506	128100	Sal, Sallo

Table 23.

Consumption of Timber Poles and Firewood in the Village Panchayats of Kolpa District in the Fiscal Year 1982-83.

Panchayats	Large Timber (Cubic meter)	Slender poles (Quintals)	Fire-wood (Quintals)	Total (Cubic meters)
Ghodagaon	NA	N A	N A	NA
Gumchal	3900	14000 (2021.6) cu.m.	22750 (3286 cu.m)	9207.6
Gajul	1540	900 (129.9) cu.m.	20475 (2957.4) cu.m.	4627.3
Khungri	5245	1850 (267.2) cu.m.	54567 (7881.6) cu.m.)	13393.8
Total:	10685	16750 (2419.37) cu.m.	97792 (14125) cu.m.	27209.4

Note: 1. One load is equal to 35 kg.

2. Amount in the parenthesis are in cubic meters.

N.A. No answer

Table 24.

Consumption of Firewood by Sources of Supply in the Village Panchayats of Rolpa District in the F/Y 1982-83.

(in Quintals)

Sources of Supply of Firewood / V. Panchayats	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. Collecting waste from Forest .		6440	10178.5	16441	33059.5
1.1 Within ward	-	-	10069.5	12715	22784.5
1.2 Outside ward	-	2380	109	86	2575
1.3 Within Panchayat	-	4060	-	3640	7700
2. Cutting trees from forest	2825	35	-	1064	3924
2.1 Within ward	2825	35	-	1064	3924
2.2 Outside ward but inside panchayat	-	-	-	-	-
2.3 Another Panchayat	-	-	-	-	-
3. Collecting Agri. Wastes	3535	4375	1547	-	9457
3.1 Within ward	-	-	1442	-	1442
3.2 Outside ward within Panchayat	-	4340	-	-	4340
3.3 Outside Panchayat	-	-	70	-	70
3.4 By burning cowdung	3535	35	-	-	3570
3.5 Other	-	-	35	-	35
Grand Total:	6360	10850	11725.5	17505	46440.5

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Table 25.

Description of Existing Irrigation and Water - mill in the Village Panchayats of Rolpa District.

V.Panchayats / Irrigation, water-mill and Drinking water	Ghodagaon	Gunchal	Gajul	Khungri	Total
1. Irrigation					
1.1 From traditional canal	-	10	4	-	14
1.1.1 No. of Canals	-	948	-	8	956
1.1.2 Area covered(ropani)	-	-	206	500	706
1.1.3 Benefitting households		308	400	404	1112
1.2 Under the Govt. Scheme	-	1	-	-	1
1.2.1 No. of Projects	-	5	-	-	5
1.2.2 Area covered (ropani)	-	40	-	-	40
1.2.3 Benefitting households		-	-	-	-
1.3.No. of Working Canals	-	-	-	-	-
1.3.1 No of not working canals	-	-	-	-	-
1.3.2 Area covered by then Ropani	-	-	-	-	-

Table 26.

Potential for Irrigation in the Village Panchayats of Rolpa District.

Panchayats	No. of Projects	Area to be Covered in Ropani	Beneficiaries (households)	Estimated length of the canal(m	Estimated Cost in Rs.
Ghodagaon	3	NA	61	NA	33,000
Gumchal	4	3220	437	18	260000
Gajul	7	350	1250	19	271500
Khungri	8	1127	624	70	1670000
Total:	22	4697	2372	107	2,23,4,500

Note: NA- No Answer

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Table 27.

Government Aided Drinking Water Projects in the Village Panchayats of Kolpa District.

V.Panchayats / Projects	Ghodagaon	Gumchal	Gajul	Khungri	Total
2.1 Total No. of projects	NA	5	3	2	10
2.2 Of which, no. of not working projects	NA	-	-	-	-
2.3.1 No. of taps under working projects.	NA	4	-	-	4
2.3.2 Beneficiaries of working projects (households)	NA	246	125	91	472
2.4 Total no. of taps under not working projects	NA	-	-	-	-
2.5 Total households without access to working projects	NA	-	-	-	-
3. Water - mill		-			
3.1 No. of water-mill	NA	-	1	-	1
3.2 Beneficiaries (households)	NA	-	50	-	50

NA - No Answer

Table 28.

Requirement of Drinking Water Projects in the Village Panchayats of Kolpa District.

Requirement of Water project / Panchayats	No. of Projects	No. of Beneficiaries		Length of the project (mile)	Estimated Cost in Rs.
		Village	Households		
Ghodagaon	4	14	183	-	90,0000
Gumchal	6	68	295	11	1,37,000
Gajul	4	10	221	27	3,11,000
Khungri	8	39	500	13	1,18,000
Total:	22	131	1199	51	6,56,000

Table 29.

Adult Literacy in the Village Panchayats of Rolpa District.

(Number)

No. of Adult Literacy / Panchayats	Male	Female	Total
Ghodagaon	NA	NA	NA
Gumchal	550	27	577
Gajul	1395	331	1726
Khungri	540	210	750
Total:	2485	568	3053

N.A. No Answer

Population of 10 years and above, who can read letters and reply.

Table 30a.

Education Facilities and Enrolment in the Village Panchayats.

of Rolpa District.

(Number)

V. Panchayats / Institutes	Ghodagaon	Gumchal	Gajul	Khungri	Total
A. Educational Institutes:					
1. Primary Schools	1	1	6	2	10
2. Lower S. Schools	-	1	-	1	2
3. High Schools	1	-	1	-	2
B. Enrolment:					
1. Primary	50	65	810	112	1037
a. Boys	25	60	620	62	767
b. Girls	25	5	190	50	270
2. Lower S. Schools	-	89	-	250	339
a. Boys	-	80	-	200	280
b. Girls	-	9	-	50	59
3. 3. High Schools	150	-	550	-	700
a. Boys	100	-	500	-	600
b. Girls	50	-	50	-	100

Table 30b.

Student - Teacher Ratios in the Village Panchayats of Rolpa District.

Level of School \ V.Panchayats	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. Primary School	16.6	32.5	50.6	22.4	39.9
2. Lower S. School	-	11.1	-	16.7	14.7
3. High School	18.8	-	27.5	-	25.00

Table 30c.

Trained and Untrained Teachers by Sex in the Educational Institutes in the Village Panchayats of Rolpa District.

Teachers \ V.Panchayats	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. Primary School	3	2	16	5	26
1.1 Trained	1	2	10	2	15
a. Male	-	1	7	2	10
b. Female	1	1	3	-	5
1.2 Untrained	2	-	6	3	11
a. Male	1	-	6	3	10
b. Female	1	-	-	-	1
2. Lower Secondary School	-	8	-	15	23
2.1 Trained	-	4	-	6	10
a. Male	-	2	-	1	3
b. Female	-	2	-	5	7
2.2 Untrained	-	4	-	9	13
a. Male	-	4	-	9	13
b. Female	-	-	-	-	-
3. High School	8	-	20	-	28
3.1 Trained	3	-	16	-	19
a. Male	2	-	15	-	17
b. Female	1	-	1	-	2
3.2 Untrained	5	-	4	-	9
a. Male	4	-	4	-	8
b. Female	1	-	-	-	1

Table 31.

Distances to be Covered to get Services and Facilities From Village Panchayats of Rolpa District.

Services & Facilities / Panchayats	Distance of Services & Facilities in Km.				
	Distance to go to health post.	Distance to go to health centre.	Distance to go to hospital	Distance to go to Kabiraj.	Distance to go to Dhami and Jhakri
Ghodagaon	15	-	30	-	-
Gumchal	28	-	-	-	-
Gajul	52	32	-	-	29
Khungri	25	-	-	-	-
Total:	120	32	30	-	29

Table 32.

Other Services, Facilities and Market for the Village Panchayats of Rolpa District.

Items \ V.Panchayats	Distance in Km.				Place, Panchayat & District.
	Ghodagaon	Gumchal	Gajul	Khungri	
1. Chemical Fertilizer	30	51.2	12.8	20	Liwang, Gajul Liwang Rolpa, Dhorahi.
2. Improved Seeds	30	32	12.8	–	Gajul, Liwang ,, ,,
3. Loans	–	51.2	–	–	,, ,, ,,
4. Market	–	51.2	32	20	,, ,, ,,
5. High School	–	32	–	–	,, ,, ,,
6. Health Center/Hospital	30	51.2	–	–	,, ,, ,,
7. Veterinary Hospital	18	25.6	–	–	,, ,, ,,
8. Post Office	–	25.6	–	–	,, ,, ,,
9. Bank	30	51.2	–	–	,, ,, ,,

Table 33.

Description of Main Existing Cottage Industries in the Village Panchayats of Kolpa District.

Cottage Industries / Panchayats	Industries	Location	Av. Product. in the last 3 Yrs. Capacity	Quality	Value (Rs.
Ghodagaon	-	-	-	-	-
Gumchal	-	-	-	-	-
Gajul	Textile	Thadi Village	5000	54000	--
Khungri	Hosiery	Mahendri		300	8000

Table 34.

Potential Cottage Industries Other than Those Existing Already Village Panchayats of Kolpa District.

V. Panchayats / Potential Cottage Industries.	Ghodagaon	Gumchal	Gajul	Khungri
1. No. of Potential Cottage Industries	NA	Weaving cloths	Textile, Hosiery	Ghee Production
2. Location	NA	Bohari	Thadi, Karma, Kuwani.	Jada 2+5
3. Estimated Cost in Rupees	NA	10,000	11,000	75,000
4. Capacity	NA	-	54,000	-
5. No. of people to be Employed	NA	100	16	230
6. Sources of raw materials	NA	Dang	Liwang	Local
7. Where to Sell	NA	Liwang	Gajul	Khungri

N.A. Anwswer

Table 35.

Sources of Revenue of Village Panchayats of the Kolba District.

Panchayat's / Revenue Sources	Estimated Amt to be Collected (Rs) by Panchayats				
	Ghodagaon	Gumchal	Gajul	Khungri	Total
1. License (Guns & Radios)	400	300	550	550	1800
2. Applications	NA	200	250	500	950
3. Registration	-	-	-	-	-
4. Recommendations	NA	300	-	500	800
5. Fines	-	150	-	2000	2150
6. House Rent	NA	2000	1200	1500	4700
7. Exhibition Tax	-	-	-	450	450
8. Permit	NA	-	400	1000	1400
Total:	400	2950	2400	6500	12250

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Table 36.

Loans Taken by Household of the Village Panchayats Rolpa District up to Now.

(in Kg.)

V. Panchayat / Types of Loan	Ghodagaon	Gunchal	Gajul	Khungri	Total
1. Agriculture Loans from Bank.					
1.a. No. of Debtors	10	-	15	1	16
1.b. Total loans taken (Rs)	19200	-	2000	2500	4500
2. Cottage Industry Loans					
2.a. No. of Debtors	-	-	-	1	1
2.b. Total Loans taken(Rs)	-	-	-	500	500
3. Consumption Loans from Bank.					
3.a. No. of Debtors	-	103	-	-	103
3.b. Total Loan taken(Rs)	-	175000	-	-	175000
3.2 From Money Lenddrs.					
3.2.a No. of Debtors	-	45	-	-	45
3.2.b Total Loans taken (Rs)	-	50000	-	-	50000
Total: No. of Debtors	10	148	15	2	165
Total Amt. of Loan Taken (Rs.	19,200	2,25,000	2,000	3,000	2,30,000

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Table 37.

Location Specific Requirement of Bridges in the Village Panchayats. of Kolpa District.

Name of Trail / V.Panchayats	Village Panchayat	River	Types of Bridge		Estimated Cost. Rs. in '000	No. of Beneficiaries (Households)
			Suspension Bridge	Wooden Bridge		
Ghodagaon	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Gumchal	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Gajul	Khalsing	-	-	-	-	-
Khungri	-	Lungle	Sus. Bridge	-	200,000	77

N.A. No. Answer

Table 38.

Requirement for the Improvement of Trails in the Village Panchayats. of Kolpa District.

Name of Trail / V.Panchayats	Panchayats (Location)	Length of trail (km)	No. of Beneficiaries(households)
Ghodagaon	Dhar Bang. Tile Dhairra	-	69
Gumchal	-	-	-
Gajul	-	-	-
Khungri	Khungrikat to Khungri Par.	4.8	Whole Panchayat

Table 39.

Projects listedin terms of priority by the village panchayats of Rolpa district.

Name of Projects	Priority (Ranks)	Bases for assigning priority	Location: Village panchayats	Capacity	No of beneficiaries (households)	Estimated costs in Rs. '000
1. Madyamic Bidhalaya	1	Scarcity	Ghodagaon	-	54	60
2. Drinking Water	1	,,	Tallo Gumchal	-	50	25
3. Irrigation	1	,,	Ratamata, Gajul	-	120	15
4. Drinking Water	1	,,	Gogan Pani, Khungri	-	42	200
5. Drinking Water	2	,,	Ghodagaon	-	54	10
6. Irrigation	2	,,	Khungri	-	42	5000
7. Drinking Water	2	,,	Kathra	-	50	15
8. Irrigation	2	,,	Chhahare	-	150	2200
9. Renovation of Canal	3	Inconvinent	Ghodagaon	-	54	10
10. Drinking Water	3	Scarcity	Dhaligaon	-	60	50
11. Drinking Water	3	,,	Harigaon	-	66	500