

MIDTERM EVALUATION OF THE COMMUNITY BASED  
INTEGRATED RURAL DEVELOPMENT PROJECT  
IMPLEMENTED BY SAVE THE CHILDREN  
FEDERATION OF U.S.A./NEPAL

Nanda R. Shrestha

Badri N. Kayastha

N-F DEVELOPMENT CONSULTANTS

P.O. Box 3445

Kathmandu

Nepal

MAY 25, 1984

## TABLE OF CONTENT

	Page
PREFACE	1
SUMMARY OF SAVE THE CHILDREN EVALUATION	1
1. INTRODUCTION	4
Objective of the Present Study	4
2. CBIRD METHODOLOGY - A GENERAL DISCOURSE	7
CBIRD Methodology and its Application in Deurali	7
Deurali as a Pilot Panchayat	7
A Baseline Survey	8
Formation of the Village Development Committee (VDC)	8
Functions of the Village Development Committee	9
General Evaluation of the CBIRD Methodology in -he Deurali Context	10
Project Formulation	10
Project Implementation	11
Project Maintenance - The Next Stage in STC's Community Based Development Institution-Building Effort	13
Project Evaluation & Reinforcement/Modification	15
Project Continuation and Expansion	16
Project Flexibility	16
3. FORMAL QUESTIONNAIRE INTERVIEW FINDINGS	18
Socio-Demographic Characteristics of the Sample Population	18
Villagers' Participation in Project Decision-Making	20
Villagers' Participation in STC Projects	21
Implementation of Projects Demanded by Villagers	22
Villagers' Attempt to Implement New Projects Through STC	23
Need to Improve STC Projects	24
Success of Failure of STC Projects	24
Villagers' Ability to Successfully Continue Projects After STC's Departure	25
Commercial Progress After STC's Arrival	26
Personal Benefits from STC Projects	26
Community Benefits from STC Projects	27
Villagers' Impression of STC Projects and Save the Children Itself	27

4. AN INTEGRATED APPROACH TO RURAL DEVELOPMENT - SERVICE-SPECIFIC FINDINGS IN DEURALI PANCHAYAT	29
Drinking Water	29
Health Care, Sanitation, and Nutrition	33
Curative Approach and Measures	33
Preventive Approach and Measures	35
Community Health Leaders & Female Health Volunteers	35
Nutrition and Malnutrition	37
Immunization of Children	38
Regular Medical Check-up of Pregnant Women	38
Use of Smokeless Chulho (Oven)	39
Construction of Latrines	40
Family Planning - A Model Story	41
Day Care Centers	44
Educational Improvement	46
Formal Education	46
Adult Literacy	46
Agriculture	47
Crops Grown in the Khet Land	47
Early Rice	48
Early Maturing Variety of Maize 'Arun'	48
Early Maturing Variety of Wheat 'RR21'	49
Crops Grown in the Pakho Land	49
Maize Production	49
Cash Crops	50
Vegetable Crops	50
Seeds	50
Availability of Seeds	51
Price of Seeds	51
Quality of Seeds	51
Chemical Fertilizers	53
Use of Organic Manure	53
Agro-Pesticides	54
Agricultural Tools	55
Community Agricultural Leaders	55
Farm Level Grain/Seed Storage	55
Credit Facilities	57
Livestock	57
Indirect Impacts of STC Projects	58

- Table 25. Villagers' Impression of STC Itself
- Table 26. Sources of Drinking Water
- Table 27. Clinic Visits by Villagers, 1983
- Table 28. Health Problems in the Family
- Table 29. Reported Incidences of Diseases, 1983
- Table 30. Degree of Malnutrition Based on Arm Tape Measurement, 1983
- Table 31. Food Supplement for Brest-fed Babies
- Table 32. Immunization of Children
- Table 33. Regular Medical Check-up of Pregnant Woman
- Table 34. Use of Smokeless Chulho (Oven)
- Table 35. Use of Latrines
- Table 36. Adoption of Permanent Birth Control in Deurali Panchayat, 1982 and 1983
- Table 37. Adoption of Permanent Birth Control (Vasectomy and Laparoscopy) in Deurali Panchayat, 1982-83
- Table 38. Adoption of Family Planning Devices in Deurali Panchayat
- Table 39. Day Care Center Population and Attendance, 1984
- Table 40. Crops Grown in Deurali
- Table 41. Vegetable Crops Grown in Deurali
- Table 42. Use of Improved Seeds in Deurali
- Table 43. Use of Fertilizers in Deurali
- Table 44. Seeds/Grains Storage Structures in Deurali
- Table 45. Stored Grain Loss in Deurali
- Table 46. Preventive Measures Taken by the Farmers to Reduce Losses
- Table 47. Livestock Ownership in Deurali
- Table A. Politico-Spatial Distribution of STC Projects in Takukot Panchayat, 1984
- Table B. Politico-Spatial Distribution of STC Projects in Lakuribot Panchayat. 1984

## LIST OF TABLES

- Table 1. Population Distribution in Deurali Panchayat by Community Health Leader (CHL) Area, Age, and Sex, 1984
- Table 2. Spatial Distribution of STC Projects by Ward
- Table 3. Villagers' Ability to Successfully Continue Projects after STC's Departure
- Table 4. Villagers' Ability to Successfully Continue Projects after STC's Departure (by Landholding Class and Caste).
- Table 5. Socio-Demographic Characteristics of the Sample Population by Landholding Class
- Table 6. Socio-Demographic Characteristics of the Sample Population by Caste
- Table 7. Landholdings of the Sample Population by Caste
- Table 8. Villagers' Participation in the Process of Decision-Making Concerning STC Projects
- Table 9. Villagers' Participation in the Process of Decision-Making Concerning STC Projects (by Landholding Class and Caste)
- Table 10. Participants in Discussion Concerning STC Projects
- Table 11. Villagers' Participation in STC Projects
- Table 12. Villagers' Participation in STC Projects (by Landholding Class and Caste)
- Table 13. Implementation of Projects Demanded by Villagers
- Table 14. Implementation of Projects Demanded by Villagers (by Landholding Class and Caste)
- Table 15. Villagers' Desire/Attempt to Implement New Projects Through STC
- Table 16. Villagers' Desire/Attempt to Implement New Projects Through STC (by Landholding Class and Caste)
- Table 17. Any Need to Improve STC Projects ?
- Table 18. Any Need to Improve STC Projects (by Landholding Class and Caste)
- Table 19. Failure of STC Projects
- Table 20. Commercial Progress After STC's Arrival
- Table 21. Personal Benefits from STC Projects
- Table 22. Personal Benefits from STC Projects (by Landholding Class and Caste)
- Table 23. Community Benefits from STC Projects
- Table 24. Villagers' Impression of STC Projects

- Table 25. Villagers' Impression of STC Itself
- Table 26. Sources of Drinking Water
- Table 27. Clinic Visits by Villagers, 1983
- Table 28. Health Problems in the Family
- Table 29. Reported Incidences of Diseases, 1983
- Table 30. Degree of Malnutrition Based on Arm Tape Measurement, 1983
- Table 31. Food Supplement for Brest-fed Babies
- Table 32. Immunization of Children
- Table 33. Regular Medical Check-up of Pregnant Woman
- Table 34. Use of Smokeless Chulho (Oven)
- Table 35. Use of Latrines
- Table 36. Adoption of Permanent Birth Control in Deurali Panchayat, 1982 and 1983
- Table 37. Adoption of Permanent Birth Control (Vasectomy and Laparoscopy) in Deurali Panchayat, 1982-83
- Table 38. Adoption of Family Planning Devices in Deurali Panchayat
- Table 39. Day Care Center Population and Attendance, 1984
- Table 40. Crops Grown in Deurali
- Table 41. Vegetable Crops Grown in Deurali
- Table 42. Use of Improved Seeds in Deurali
- Table 43. Use of Fertilizers in Deurali
- Table 44. Seeds/Grains Storage Structures in Deurali
- Table 45. Stored Grain Loss in Deurali
- Table 46. Preventive Measures Taken by the Farmers to Reduce Losses
- Table 47. Livestock Ownership in Deurali
- Table A. Politico-Spatial Distribution of STC Projects in Takukot Panchayat, 1984
- Table B. Politico-Spatial Distribution of STC Projects in Lakuribot Panchayat. 1984

## PREFACE

The present study is a mid-term evaluation of the rural development project in Deurali Panchayat of Gorkha District, which was implemented by Save the Children Federation/USA in collaboration with the Social Service National Coordination Council of Nepal. In the course of data collection and field survey several people have provided valuable assistance and advice. We extend our special thanks to STC staff members, namely Mr. Amrit Sunar, Mr. Jaya Singh Pal, Mr. Krishna Sob, and Mr. Sharad Babu Shrestha, who have been extremely cooperative and helpful throughout this present study. STC's Deurali field staff nurse, Ms. Dhana Malla, and female health motivator, Ms. Renuka Gurung, were also very helpful in providing various data for us. To them our sincere thanks. We are particularly appreciative of the Deurali villagers for their cooperation, willing participation, help, and hospitality all of which made our short stay in Deurali pleasant and joyful. On behalf of N-F Development Consultants, we would also like to thank Mr. C. B. Gurung of the Council for sharing his views regarding community development with us and Dr. Pratima Kale and Mr. Gary Shaye for giving us the opportunity to evaluate the Save the Children Project in Deurali.

### Members of the Evaluation Project Team

Dr. Nanda R. Shrestha, Project Leader  
Dr. Badri N. Kayastha, Agronomist  
Dr. Paul F. Kaplan, Sociologist  
Mr. Hari Bhakta Pradhan, Health Specialist

### Research Assistants

Mr. Shiva Gurung  
Mr. Jhag B. Gurung  
Mr. Birendra Sherpa  
Mr. Basu L. Maharjan

## SUMMARY OF SAVE THE CHILDREN EVALUATION

Save the Children Federation of the U.S.A. (hereafter called STC) has been operating a small-scale rural development project in Deurali panchayat of Gorkha District of Nepal for the past three years. This evaluation team has set two primary objectives in reviewing the STC project:

- 1) Whether progress has been made toward establishing a self-reliant community-based institutional structure, and
- 2) how successful has the project been in terms of implementation and impact.

The first objective required a review of the CBIRD methodology of STC, i.e. a Community-Based Integrated Rural Development approach and the effectiveness of the Village Development Committee(s) established by STC.

It is apparent in Deurali that there has been widespread community participation in the process of project implementation. This has been provided often in terms of local labor, especially for infrastructure projects like drinking water systems. Project formulation also seems to be equally shared between STC staff and the Village Development Committee. From field observation, it seems clear that STC has laid a sound institutional foundation in which the whole community is involved. Fifty-six percent of our sample survey of households responded affirmatively when asked whether or not they could successfully maintain and carry on projects after STC departure. Sixty percent of the households said that they had decided on which projects would be implemented by STC in their community. Sixty-four percent of the respondents said that they had participated in STC projects. We find these results quite encouraging and positive.

X  
4

Regarding specific project implementation, STC has been very active in Deurali. Eighty-two percent of the sample said they had derived some benefit from STC projects. Eighty-six percent had a favorable impression of STC.

The projects implemented by STC include: 8 improved springs and 22 dharas (stand pipes); a new health clinic; a Community Health Leader and Female Health Volunteer outreach program established; a self-supporting community medical shop; Family Planning motivation; the establishment of six Day Care Centers; teacher training; the training of local villagers to build and install smokeless chulos, school construction; and the provision of adult literacy classes.

In the future, the areas of agriculture and income-generation will need more attention. Some work has begun in these two sectors (namely the recent introduction of a Community Agriculture Leader's project and the marketing of chakatis (straw mats) from one village in Deurali); this should be expanded.

There also needs to be more attention paid by STC staff on project maintenance, Community-based structures, one of the most promising aspects of the STC program, need to be established or strengthened for all sectoral projects, drinking water, health, Day Care Centers. Some exist now, others should be established. These will serve to increase community self-reliance and lessen community dependence on STC.

From observation and interviews with local leaders, villagers and STC staff, it appears that the STC expansion into two new, more remote panchayats has been very effective. Within one year of program implementation there are already projects begun in agriculture, health, adult literacy and drinking water. Two new VDCs have received training and assisted in FY '84 project formulation and implementation. Certain issues of cooperation and jurisdiction, however, must be resolved with other agencies.

Save the Children has clearly profited from lessons it learned in its first three years in Deurali. These have been applied to its process of community development and actual project implementation in these new panchayats, as well as Deurali.

Overall, the work of STC has proven quite effective both as a catalyst for establishing community organization and in implementing multi-sectoral projects with the local villagers. The methodology of the agency, the flexibility of the structure, and the dedication of the staff are commendable.

## 1. INTRODUCTION

Three years ago Save the Children Federation of USA (hereafter STC), in collaboration with the Social Service National Coordination Council of Nepal, decided to implement a small-scale rural development project. Deurali Panchayat of Gorkha District was selected as a model area for several reasons some of which are discussed in the survey-proposal "A Proposal for an Operational Grant ....." (1981). Since then Save has expanded its development activities into two more panchayats - Takukot and Taku Majh Lakurikot - in the same district. The Save the Children Project is based on the philosophical and methodological framework of what is called Community Based Integrated Rural Development or CBIRD. The CBIRD methodology is designed to build a grass-roots level institution for development. That is, the whole community is involved in the process of its socioeconomic development in an integrated fashion.

The underlying objective of the CBIRD methodology is to create an institutional atmosphere to enhance community cooperation and self-reliance and, consequently, reduce external dependency. It is interesting to note that, in the case of Nepal, the CBIRD methodology appears quite similar to community-based informal institutions that existed in the past. Such informal institutions were developed to fulfill community needs. For example, if a community needed an irrigation facility, an institutional framework would be created to mobilize voluntary labor and other necessary resources for the construction and periodic maintenance of canals and channels for water distribution. Resource mobilization would be based on the individual capacity as well as the degree of service utilization by individual families. Even today one can observe instances of community cooperation and self-reliance in some rural areas of Nepal.

### 1.1 Objective of the Present Study

The overall objective of the present study is to evaluate the STC Project in Deurali. Our evaluation primarily revolves around two issues:

1) Whether STC has been able to develop a community-based institutional framework within which the Deurali community can successfully carry on the Project after Save the Children's departure, and 2) Service-specific performance and impact of the Project.

Evaluation of a development project can be conducted from a number of different perspectives. In the present study we deliberately focus on the institution-building aspect of the STC Project. There are two primary reasons for adopting this approach. First, the CBIRD methodology itself places emphasis on the creation of a community-based institutional infrastructure as well as the socio-economic infrastructure. Second, the institutional perspective primarily looks at the community-wide impact and sustained viability of a development project.

Within this overall conceptual framework of institution -building, the STC Project has been evaluated by utilizing the data collected in the field. The following methods were used to collect field data:

1. Formal questionnaire method.
2. Participant observation.
3. Informal discussions with villagers.
4. Official statistics and documents.

For the purpose of the formal questionnaire interviews, a sample population was selected utilizing a stratified sampling procedure. The population was divided into 3 landholding classes: 0-4 ropanies, 4-10 ropanies, and over 10 ropanies. In each of the 9 wards in the panchayat, a number of villagers were interviewed, representing all 3 classes. Altogether 78 heads of households were interviewed. This sample population represents over 10 percent of the total population of the panchayat.

The resulting analysis has been conducted from two different angles:  
1) observation of objective-conditions including reliable statistics (records) kept at the STC field office regarding various undertakings,

and 2) villagers' subjective perceptions of the Project and their role in the Project. It is important to note that villagers' subjective perceptions may vary depending on the objective conditions, expectations, socioeconomic backgrounds and positions, and/or group relationships.

## 2. CBIRD METHODOLOGY: A GENERAL DISCOURSE

This chapter deals with general issues concerning the CBIRD methodology and its application, suitability, implementation, and evaluation. Appendix A provides a discourse of the conceptual model of the development process which has been developed for the present evaluation study. The main text then presents a discussion of the application of the CBIRD methodology in Deurali with references to its evaluation against the model.

### 2.1 CBIRD Methodology and Its Application in Deurali

As already pointed out, the philosophical basis of the CBIRD methodology is to motivate and maximize action-oriented community involvement in fulfilling local needs and solving local problems. The focus is on shifting the role of local people from being dependent passive recipients to self-reliant active participants in all stages of the life-cycle of a project. This would eventually lead to community cooperation, organization and institutional formation based on the principle of self-reliance.

#### 2.1.1 Deurali as a Pilot Panchayat

With the above philosophical assertions in mind, the CBIRD methodology was applied in Deurali Panchayat which was selected as a pilot project area. Located in the southwestern corner of Gorkha District, it has a total population of 4,184 persons of whom 2,079 are males and 2,105 are females (see Table 1). Although it has a significant percentage of dependent population, especially under the age of 10, our field observation indicated no shortage of labor. Economically speaking, the panchayat can be considered slightly above average by Nepalese standard although the local economy overall remains subsistence-based. Although it is hard to ascertain the actual number, quite a few people leave the panchayat in search of cash-generating employment elsewhere -- some

seeking long-term employment in India and some looking for seasonal employment opportunities in other parts of Nepal during the agricultural slack season. Ethnographically, the panchayat is composed of several ethnic groups some of which are Brahmins, Chhetris, Magars, professional caste groups (Kamis, Sunars, and Damais), Darais and Newars.

### 2.1.2 A Baseline Survey

Before the planning and implementation of the community-based integrated rural development project in Deurali, a baseline survey was conducted in close consultation and collaboration with the Social Service National Coordination Council to assess local needs and situations. This survey was conducted before STC staff were hired and placed in Deurali.

Our informal discussions with some local people and STC staff revealed that the community showed little interest at the outset in the idea of voluntary participation, labor services, and cooperation, all of which were a prerequisite for the initiation of the STC Project. Nevertheless, the study identified health care and drinking water as the two major problems facing the people of Deurali.

### 2.1.3 Formulation of the Village Development Committee (VDC)

Once the program was set up in Deurali, a Village Development Committee (VDC) was formed to play a leadership role and to serve as a forum of discussion and project decision-making, planning, and implementation. This committee is an integral part of the STC approach to rural development. The field team works with this committee closely in formulating and implementing programs.

The Village Development Committee in Deurali is composed of 9 members representing all 9 wards in the panchayat. To select these members informal meetings are held in each ward. Villagers in each ward select their representative to the Committee. Out of these 9

members a chairman and a vice-chairman are selected. These nine members appoint 4 additional representatives to represent 4 special interest groups: women's group, marginal groups, elite group, and remote area residents. In addition, Save the Children appoints 2 representatives and the Lion's Club of Pokhara, which was appointed by the Community Service Coordination Committee of the Council to be the Save the Children sponsoring agency, appoints 2 representatives to the VDC. However, the Lion's Club of Pokhara has not sent any representative to attend any VDC meeting in the last 2 years. As a result, the committee at the present time consists of only 15 regular members, although it is supposed to have 17. Actually, there are only 13, because no arrangement has been made as of the time of the field survey to replace the 2 members who have passed away.

#### 2.1.4 Functions of the Village Development Committee

The basic functions of the Committee are to represent the general public, identify needs, set priorities, motivate widespread support for local projects, and mobilize voluntary labor and locally available resources to implement projects. The Committee also decides where specific projects should be implemented in the community. The degree of overall success is largely determined by the leadership ability and dedication of the Committee. However, in some cases, STC sets the priorities and submits them to the Committee for approval. When Save the Children wishes to "introduce" a project, it is usually done on a demonstration basis. For instance, Smokeless Chulhos (ovens) were first introduced in 2 households selected by the VDC. Later, after the community members evaluated the merits of the Chulho the VDC decided to implement a Chulho project. Thus, it is the Committee that has the final say to approve or reject an initiative proposed by STC.

Once the plans are ready to be implemented, the Committee is responsible for mobilizing voluntary labor and other locally available resources. Save the Children provides necessary capital, training and

expert or skilled help. Save the Children also plays a vital role in strengthening the Committee's institutional function and foundation through the process of nonformal education and training. The educational process emphasizes that the Committee and the community determine the pace and the nature of development to fulfill local needs as well as to suit local environmental conditions and the sociocultural context.

## 2.2 General Evaluation of the CBIRD Methodology in the Deurali Context

This section provides a general evaluation of the CBIRD methodology in the Deurali context. The evaluation is conducted within the conceptual framework of the model discussed in Appendix A.

### 2.2.1 Project Formulation

Since the establishment of the Save the Children Office, a number of projects have successfully been implemented and completed (these projects are discussed in detail in the next chapter). These projects can be classified into 2 categories: ones identified by the Village Development Committee and villagers and the others initiated by Save the Children. Despite this distinction in needs assessment, both parties are equally involved in the process of project formulation (planning).

One main reason why STC initiates some of these projects is because villagers are generally concerned about their most immediate needs, for example, health care and drinking water in the case of Deurali. They tend to be somewhat indifferent to needs which exist and are important, but are not felt by them on a daily basis; for example, the construction of latrines and sanitation. For the sake of simplicity we call the first type of needs "expressed needs" and the second type "latent needs". Save the Children staff believe that these two types of needs are interrelated and while they are active in the community it is important to initiate both in an integrated, fashion in order to provide long-term solutions to the problems.

Let us take health care problem as an example. Health care delivery alone will not provide a long-term solution to the health care problems unless something is done about such basic elements as sanitation, because it is directly related to many diseases. A curative approach, i.e., health care delivery, will be much more effective and long lasting if it is complemented by a preventive approach, i.e. sanitation, immunization, etc.

### 2.2.2 Project Implementation

In the process of implementation, STC has been careful not only about local needs and their coordination, but also about the nature and scale of the projects. It has taken into consideration such issues as: whether the local people are willing to mobilize available resources and successfully implement projects; whether the projects are suitable for the local environment and can be sustained by the resources available within the community; and whether they can efficiently be absorbed and utilized by the local people. These issues are very important because, if the local people are not willing to mobilize available resources to implement projects and if the projects cannot be sustained by the resources available within the community, they are bound to fail sooner or later. In view of these considerations STC has kept its projects relatively small in scale and operation so that they can easily be managed and sustained by the community.

In addition, STC has taken the community interest into account, rather than individual or group (class) interests. As a result, everybody, regardless of caste or class affiliation, has personal interests in their success. For instance, when a drinking water project is successful, no one is excluded from sharing its benefits.

As in project formulation and planning, the whole community is involved in the process of implementation. At the outset there was a great deal of pressure on Save the Children to complete as many projects as possible, as soon as possible. If something tangible was not done so

that people could immediately realize some benefits, it would have been difficult to convince them of the long-term advantage of community cooperation and to keep them involved in the mobilization of available resources. Thus, from the very start Save the Children sought to involve the VDC in both project formulation and implementation.

For these early infrastructure projects Save the Children provided the necessary capital and resources (including training and technical skill), while it was the responsibility of the community to mobilize voluntary labor and other locally available resources, including raw materials. It is STC policy that until and unless the community does this, no project is implemented. Voluntary workers are responsible for transporting all materials within the panchayat, e.g. roofing slate and hardware, etc., provided by STC, to project sites from Majuwa Khaireni where these materials are dropped off.

The amount of labor a family provides for a given project depends on such factors as the type of project, physical ability of a family, and whether the family is a service user. Families living in the area where the project is going to be undertaken are generally required to provide more units of labor than others, unless the project has panchayat-wide use, for example, a high school. Families which are physically handicapped or for some reason unable to provide voluntary labor are also exempted from such services. These specific issues are discussed by the VDC or actual project management committees within the panchayat.

From our field observation it is clear that STC has not only laid a sound institutional foundation in which the whole community is involved as active participants rather than passive recipients; it has also successfully implemented various projects, significantly benefitting the community as a whole. Not all wards and/or their residents have equally benefitted from the STC projects (see Table 2), but then STC has only been active in Deurali for three years. In addition, there are always resource limitations, physiographic constraints, and in some

situations necessarily lengthy discussions with the local villagers on levels of community participation. When the STC staff and the VDC have felt that participation has been lagging, the project leadership has encouraged thorough discussions at the village level so the villagers themselves agree on the pace for their development.

### 2.2.3 Project Maintenance: The Next Stage in STC's Community-Based Institution-Building Effort

Our findings suggest that Save the Children after having initiated a variety of successful community-based projects needs now to concentrate on developing a community-based institutional infrastructure for project maintenance.

STC has taken initial steps to monitor and maintain completed projects, although these are not yet finalized. We did observe a few unmaintained projects, namely some day care center buildings, a water pressure break tank cover, and a couple of water taps. However, there are other projects in which STC has taken steps toward long-term maintenance. The Health Clinic, which began by providing free medicine to the community, has now organized a self-supporting community-based medical shop where medicines prescribed by the Clinic can be purchased at a reasonable rate. Such a socially beneficial operation goes forward into the future without continuous STC intervention. As the baseline states, before the STC program began there was no local source for basic medicines and people walked 3-5 hours or went all the way to Kathmandu or Pokhara for medicines.

Institutional structures need to be established, through the VDC or a user's committee, to oversee and take responsibility for each project after its initial implementation stage. This is one of the most difficult stages in the long-term success for a truly community based development project.

An institutional basis for project maintenance, however, does seem to exist. A total of 78 households in all 9 wards were interviewed. They were asked whether or not they could successfully maintain and carry on the projects after STC's departure. Fifty-six percent of them responded affirmatively. Only 32 percent gave a "No" answer and 12 percent were not sure. Those giving a negative answer mentioned financial difficulty as being the main reason for their inability to carry on the projects. The same question was cross-tabulated by land-holding class divided into 0-4 ropanies, 4-10 ropanies, and over 10 ropanies and also by caste in order to see if there was any class or caste variation in responses. We did find some variations in responses. The 0-4 ropanies class and the Newar caste and professional caste members showed the greatest degree of concern about their ability to carry on the projects (see Tables 3 and 4). This concern probably reflects their socioeconomic positions and weaknesses.

The affirmative respondents were asked what projects they could successfully carry on. Twenty-one people said drinking water projects, 19 said schools, 11 said health clinic, 8 said day care centers, and 6 said others.<sup>2/</sup> Those who said they could not successfully maintain and carry on the projects after Save's departure were asked why they could not do so. Interestingly 10 said they could not do so because of the lack of cooperation among the villagers (see Table 3). This reason is definitely a matter of concern, but we consider the number of respondents too small to be significant.

Overall we consider villagers' responses to our questions about their willingness and ability to successfully maintain and carry on the projects after STC's departure quite encouraging and positive. It

---

<sup>2/</sup> These numbers are not going to match the total number of affirmative respondents because each could mention more than 1 project which they thought they could carry on.

certainly indicates that a sound community-based institutional foundation for project maintenance can be built, if careful attention is paid to this issue.

Despite some concern expressed by a few villagers, nobody should cast any doubt on the villagers' ability to successfully continue the existing projects in case STC stops funding these projects or departs from Deurali. However, it is important to point out the basic content of the following discussion in order to keep the matter of maintenance in proper perspective. During an informal conversation with some VDC and Panchayat members concerning the issue of maintenance and long-term viability of the projects, we sensed some confusion as to which party is responsible for project maintenance. Some VDC members feel that the panchayat should look after the matters of maintenance, especially after the projects are handed over to them. One panchayat member present at the conversation appeared somewhat disturbed about the VDC members' argument. It was felt that both parties tended to express what one might want to call "passing-the-buck mentality."

Since the issue of maintenance is still relatively new, perhaps it was natural to notice some confusion. This confusion might have led each party to pass the buck on to somebody else. Nevertheless, such a confusion has to be addressed as soon as possible. If necessary, STC may even have to steer both parties in a positive direction. They have to understand that the projects implemented in Deurali are community properties and it is their responsibility to maintain them just like it is their responsibility to formulate and implement them.

#### 2.2.4 Project Evaluation and Reinforcement/Modification

Evaluation is a part of the process of development. The purpose of periodic evaluation is to find out the direction in which projects are moving -- whether they are effective or whether they have shortcomings. The main reason is to provide reinforcement, if they are

effective, or to make necessary corrections and modifications, if they have shortcomings. This present study is the first evaluation of the Deurali project and is intended to discern its strengths and weaknesses and provide a set of procedural and technical recommendations for the future direction and expansion.

#### 2.2.5 Project Continuation and Expansion

Three years after its initiation, the Save the Children Project in Deurali is not merely monitoring what it has already achieved, but also continuing to formulate and implement new projects, e.g., the construction of an annex to the existing High School building and the implementation of an agricultural component to its project.

Also, about one year ago Save the Children expanded its community based rural development activities into Takukot Panchayat and a few months later into Taku Majh Lakuribot Panchayat of Gorkha District. Since STC started implementing projects in these two adjacent panchayats only about 6 months ago, most of our analysis will be based on Deurali Panchayat. We will, nonetheless, make general comments on STC's activities in these newer panchayats based on our observations and discussions. This we do in Chapter 5.

#### 2.2.6 Project Flexibility

The rural development project implemented by Save the Children Federation is quite flexible in a number of different areas:

- a. There is no fixed target regarding the number and size of projects (services) to be completed. Since the projects are identified and requested by the VDC (in most cases in accordance with the request made by the other villagers), there is no predetermined target, although the program might be fixed once decided by all parties involved. For example, if the priorities are set and the decision

is finalized to build day care centers, they will be built. But the number of day care centers to be built and their capacity (size) will be determined based on needs assessment, local environmental feasibility, resource availability, and fund availability. These decisions are actually made in the field, with consultation from Kathmandu.

- b. Once the projects are decided, there is no fixed deadline within which they have to be completed or else be found wanting in evaluation. Their implementation can be carried out immediately or delayed and postponed, depending on the local situation or labor availability and, most importantly, this decision is made by the villagers themselves. For instance, out of 6 day care centers in Deurali 5 were built in 2 months and one took 1 year to be completed. There was no interference from STC staff, letting the process take its own course. The idea here is to maximize community participation in all projects. In addition, projects themselves (before implementation) can be reformulated, if necessary, to incorporate or address situational changes.
- c. The project budget is not frozen; nor does it have to be spent within a fixed period of time. If necessary, the budget can, with the consent of the involved parties, be moved around from one line item to another, reallocated, deferred, or added to the next budget.

This flexibility is important and helps the field staff/implementors focus on priorities rather than target achievement. The budget can be utilized prudently and put to the best possible use, emphasizing local needs and the quality of work, rather than the quantity of delivery instances or completed projects.

### 3. FORMAL QUESTIONNAIRE INTERVIEW FINDINGS

These findings specifically deal with the villagers' perceptions of, and role in, STC projects. A total of 78 household heads were interviewed and several questions were asked concerning the projects and procedures. Before analyzing villagers' responses to specific questions, it is useful to present a brief demographic and socio-economic profile of the sample population.

#### 3.1 Socio-Demographic Characteristics of the Sample Population

The sample population of 78 households has a total population of 488 persons which is 12 percent of the total panchayat population. The sample population has an average family size of 6.3 persons. However, this average family size varies according to both the landholding class background and caste affiliation. The people belonging to the landholding class of 0-4 ropanies have the smallest family size with an average of 4.8 persons, whereas the other two classes have averages of 6.8 and 6.7 persons, respectively (see Table 5). Average family sizes also vary by caste groups. The Brahmins and Chhetris collectively have the smallest family size with an average of 5.9 persons and the Newars have the largest family size with an average of 7.3 persons per family. The professional caste group and the Darais have relatively high family sizes with averages of 6.5 and 6.6, respectively. The Magars have on the average only 6.0 persons per family (see Table 6). In the total sample population there is a greater number of males (55%) than females (45%).

In terms of educational status the sample population can be considered above the national average. Only 56 percent of the population are illiterate, whereas for Nepal the overall illiteracy rate is about 75 percent. Of the literate population, 11 percent can read and write, but have received no formal education, whereas 33% have received some level of formal education: 24 percent having completed somewhere

85

between first and fifth grade and 7 percent sixth and tenth grade. Only 2 percent have achieved an educational level of S.L.C. (High School diploma) or higher.

The educational status of the sample population varies according to its socio-economic status and caste. The general pattern is that the higher the socioeconomic class status, the higher the educational level, at least in terms of literacy and illiteracy. Sixty percent of the population belonging to the landholding class of 0-4 ropanies are illiterate, but this illiteracy rate decreases to 54 percent for the landholding class of over 10 ropanies. In addition, those who have achieved at least an SLC degree are all from the upper landholding class (see Table 3). Similarly, the higher the caste status, the higher the level of educational achievement. The Brahmins and Chhetris with the highest caste status have an illiteracy rate of only 52 percent, whereas it is as high as 64 percent among the professional caste group and the Darais. Only the Newars have a lower illiteracy rate (48%) than the Brahmins and Chhetris (see Table 6).

The ethnographic composition of Deurali is quite diversified, as seen from Table 5. The Brahmins and Chhetris together have the largest representation (40%) in the sample followed by the Magars (20%). The professional caste group, the Darais, and the Newars represent 17 percent, 13 percent and 10 percent, respectively, of the total sample population.

The landholding distribution shows no specific pattern, as there is an absence of heavy landholding concentration among any one group. Over 50 percent of the population, on the average, have 10 ropanies or less land with 24 percent having less than 4 ropanies -- the amount of holding which can be considered nearlandless in the hills by any standard. The remaining 49 percent on the average have more than 10 ropanies with 19 percent enjoying 20 ropanies or more. The population belonging to this last category of landholding can generally be considered at least self-sufficient. Among the ethnic groups, only

the professional caste group does not have any member owning more than 15 ropanies (see Table 7). In terms of landownership this group as a whole can be classified as subsistent or below subsistence, but they supplement their household earnings through their professional occupations which every one in the community requires on a fairly regular basis.

### 3.1.1 Villagers' Participation in Project Decision-Making

Although we had already gained an understanding of the process of decision-making with respect to the projects, we wanted to find out how the villagers perceived their role in such a process. A question was asked: who decided on the projects implemented by STC in their community? Sixty percent of the respondents said they did, which is 20 percent higher than the respondents (40%) who said others decided (see Table 8). The response indicates a positive perception on the part of 60 percent of the population, which is important not only for their mobilization and involvement, but more significantly for the long-term viability of these projects. Those, saying the projects were decided by others, were queried: Who decided the projects? Thirteen of them mentioned Pradhan Panch and panchayat members as decision-makers, and 9 mentioned VDC members and 4 said they did not know (see Table 8).

The response to the same question was analyzed in terms of both class and caste status. Interestingly, the lower the landholding class status, the higher the positive perception about their project decision-making role. That is 63 percent of the lower class felt that the projects were decided by them, whereas only 55 percent of the upper class felt so. On the caste side, only a small percentage 32%) of the Brahmins and Chhetris showed a positive perception of their role in decision-making (see Table 9). This relatively inverse relationships between the upper class and higher caste status groups and the lower degree of positive perception may be explained either by an

understanding (or lack of understanding) of the actual process of decision-making on the part of the upper class and higher caste group or by the fact that they are not accorded any preferential treatment by STC. The latter possibility could have led them to view their decision-making role less positively. The higher degree of positive perception in decision-making reported by lower caste respondents may be interpreted as reflecting a difference between the usual powerlessness of such persons in the traditional social structure and their present participatory roles in STC projects.

The villagers' responses reveal their perception of their roles in decision-making. It may also show their lack of understanding of the project decision-making process. This is suggested by the responses they provided to basically the same question formulated differently, i.e. who are the participants in the discussion concerning project decision-making? This time, 33 percent of the respondents mentioned village panchayat members and STC, 30 percent mentioned VDC members and STC, and only 17 percent thought villagers were the participants in decision-making. This lower percentage shows quite a drastic decrease - from the previous 60 percent level to merely 17 percent (see Table 10).

### 3.1.2 Villagers' Participation in STC Projects

The question for this section was designed to find out the actual degree of participation by the villagers in Save the Children Projects. They were asked whether they participate(d) in STC projects. Among the respondents 64% gave an affirmative answer and 36 percent gave a negative response (see Table 11). We found the degree of participation somewhat lower than what we had expected. This could be mainly because the implementation of STC projects in some wards is limited, e.g. Ward 1, 2, 3 and 7 (see Table 2). Most of the projects implemented in the first 3 wards require only limited participation by the villagers in the form of labor donation -- the principal form of participation. Consequently, the degree of participation would not have been as high as elsewhere.

The response to the above question was analyzed from a different perspective to see if there was any variation by class and caste. We did find some noticeable variations. The level of participation was highest among the middle landholding class and the Brahmins and Chhetris and lowest among the lower class and the Magars and the Darais (see Table 12). While we may be able to explain the lower level of participation among the lower class and the Magars, we are unable to explain the other patterns with the existing data. The participation among the Magars could have been low because most of them live in Wards 1 and 2 where STC has implemented fewer infrastructure projects, requiring high labor inputs. As far as the lower class is concerned, it is possible that many male members of these families could have been out of the community in search of employment to supplement their family earnings at the time when participation was sought, as such projects are usually implemented in agricultural slack seasons. These questions require further in-depth studies to determine certainty.

### 3.1.3 Implementation of Projects Demanded by Villagers

This issue is related to the issue of villagers' participation in project decision-making and deals with their actual as well as perceived influence in project implementation. The majority (55%) of the respondents thought that the projects for which they made a demand were actually implemented by STC (see Table 13), but 45 percent did not think so. The affirmative respondents were asked which projects that they had demanded were actually implemented by STC. Twenty-nine of them mentioned schools, 25 said drinking water, 17 said day care centre, and 11 mentioned health clinic. On the other hand, the negative respondents were asked to name the projects which they demanded, but were not implemented by STC. Of these respondents 20 mentioned drinking water, 13 named irrigation, and 10 named school. Other projects which were also mentioned were day care centre, agricultural program and road maintenance.

An analysis of the same issue in terms of class and caste shows that, generally, the degree of positive response is higher among the lower class and caste groups. The Brahmins and Chhetris had the lowest percentage of people who thought the projects demanded by them were actually implemented by STC (see Table 14). One can discern a consistent pattern in the responses provided by the Brahmins and Chhetris. Whenever the question dealt with the subjective perception rather than the objective role, the percentage of negative responses tends to be much higher than that of the positive response. But when the question concerned the objective role, the level of positive responses seems to be higher.

#### 3.1.4 Villagers' Attempt to Implement New Projects Through STC

This study also wanted to find out whether the villagers had made any attempts to implement new projects in the community through STC. According to the response given, 45 percent of the sample population had made attempts to introduce new projects (see Table 15). This implies that through the CBIRD methodology a significant number of villagers are aware of what they may be able to do in the community together with STC. Of these respondents 14 would like to see more drinking water projects implemented and 12 would like to see an irrigation project implemented.

However, a breakdown of the responses to this present question by caste shows that over 70 percent of the professional caste and the Darais had made no attempts to implement new projects through STC (see Table 16). This is quite interesting in that their lack of attempt might be a reflection of how they perceive their socio-political positions in the social structure. Since, traditionally, their socioeconomic and political positions have been much lower than those of many other groups, they might still feel that they do not have any voice in the community.

The apparent contradiction between their high level of perception of their participatory roles in already implemented STC projects and their much lower level of attempts to implement new projects needs clarification. This can be explained by the fact that in the former case they have already played a role greater than traditionally allowed, while the latter case requires their making demands which they may feel their status still does not allow:

### 3.1.5 Need to Improve STC Projects

The purpose here is to detect villagers' assessment or perception of how well the STC projects are functioning or whether there is a need to improve any of the projects. A word of caution about how the villagers might have interpreted this question is necessary. It is possible that at least some villagers might have interpreted the phrase "need to improve?" as meaning "need to implement?"

Assuming that some of them misinterpreted the question, it is not surprising to see a high percentage (58%) of the sample population feeling a need to improve some of the STC projects (see Table 17). Of the remaining, 31 percent felt no need for improvement and 11 percent did not know whether there was any need or not. Since they were not aware of any need, the last category of respondents can logically be grouped with the second category. Eleven of those who felt a need for improvement mentioned drinking water, 9 mentioned maintenance of projects, and 5 thought improvement should be in the provision of free medicines and treatment.

### 3.1.6 Success or Failure of STC Projects

Although clearly there have been many successful STC projects in Deurali, it is important for the purpose of this study to find out whether any of the STC projects has failed at least in the eyes

of the villagers. If any of the projects had failed, it could leave a bad impression and might make it much more difficult for STC and the VDC to mobilize local labor and resources. Psychologically speaking, the negative impact of a minor failure is much more powerful than the positive impact of a major success in swaying people's attitude.

With the above assertion in mind the sample population was asked whether they thought any of the STC projects had failed. The answer confirmed our personal observation of many STC projects. The overwhelming majority (82%) of the respondents did not think any of the projects had failed. Actually, the percentage figure increases to 95 percent, if the "don't know" category is included. And, it can logically be included in the "No" category because, in a small community, if something fails, everybody would know about it. Thus, if they did not know of any project that had failed, it means in their eyes no project has failed so far. Only 5 percent of the sample population gave a "Yes" answer. According to them, some water projects had failed (see Table 19). They thought so mainly due to the fact that some water projects had a problem with the regular flow of water. This could have arisen either because of the maintenance problem or because of the low volume of water available at the source during the dry season (February through May).

### 3.1.7 Villagers' Ability to Successfully Continue Projects after STC's Departure

This is a very crucial issue in community-based development institution-building. Whether the community has become self-reliant and developed an institutional framework depends on whether the villagers are able and organized to successfully continue ongoing projects. If the villagers are able to do so, one can assert with confidence that a solid institutional and organizational foundation for sustained local development has been established.

### 3.1.8 Commercial Progress after STC's Arrival

One would have expected an increase in the level of commercialization or commercial progress as a result of the establishment of Save the Children Federation's field office. Some level of commercial progress has taken place in the form of tea shops, the number of which appears to have increased. STC has also supported two household-scale cottage industrial operations -- one producing envelopes and another producing straw mats and seats (chakati). However, we wanted to question our sample population whether they had seen any commercial progress after STC's arrival. Table 20 shows that only 23 percent of the respondents thought there had been commercial progress made in the forms of increased sales of household products (11) and tea shops (7).

### 3.1.9 Personal Benefits from Save Projects

This question was designed to investigate whether the villagers had derived any personal benefits from STC projects. The overwhelming majority (82%) said they had derived at least some personal benefits mostly in the forms of medical treatment (32), drinking water (27), day care center (23), and school (21).

The groups representing the highest percentages of benefit recipients are the Darais, the Brahmins and Chhetris, and the professional caste among the ethnic groups and the lower and middle classes among the landowners. The group representing the smallest percentage of benefit recipients is the Magars (see Tables 21 and 22). This is understandable given the fact that the vast majority of them live in Wards 1 and 2, where fewer infrastructure projects have been implemented.<sup>5/</sup> From these responses it is clear that there has not been much class or

---

<sup>5/</sup> It should, however, be noted that from these 2 wards have come some female participants for training conducted by the Women's Training Center in Jawalakhel. Furthermore, in Ward 2 the initial emphasis has been placed on income generation activities - the production of chakatis.

caste bias in benefit accrument, although one can notice some spatial bias in project distribution and consequently benefit accrument.

### 3.1.10 Community Benefits from STC Projects

The next question dealt with community benefits from STC projects: Whether the villagers thought the community as a whole has benefitted. Table 23 indicates that the response to this question was most positive; 97 percent thought the community as a whole had benefitted from STC projects. In their views the benefits were received mainly in the forms of medical treatment (44), school (43), day care center (41) and drinking water (38).

### 3.1.11 Villagers' Impression of STC Projects and Save the Children Itself

A clear understanding of this issue is most important for a project like STC's based on community involvement. It is a barometer of community support for STC, its philosophy and methodology, and of how effective it has become and it can remain in mobilizing local resources and building a community-based institutional foundation for sustained local development.

With this assertion we wanted to gain an understanding of the villagers' impression of STC projects and Save the Children itself. In this regard two questions were asked, the findings of which are presented in Tables 24 and 25. In Table 24 we see the villagers' impression of STC projects; 86 percent of the population had a good impression of the projects. Only 14 percent said they were indifferent, but not negative. Table 25 reveals the villagers' impression of Save the Children itself. Here the villagers' overall impression is even more positive. Nine percent of the respondents said their impression is very good and 90 percent said good. Only 1 percent did not have any opinion.

X  
34

This finding clearly shows that Save the Children and its projects enjoy solid, community-wide support in Deurali. Three years have passed since the initiation of STC projects there. During these 3 years the villagers in general have voluntarily involved themselves in labor and locally available resource mobilization for community projects. If the impression of STC is still solid, even after 3 years during which period they have contributed many hours of voluntary service they can be considered full partners in these community development projects. In fact, these projects are primarily the fruits of their own hard work. While the villagers should be very proud of their cooperative spirit and action, Save the Children's role as an effective catalyst is commendable.

35

4. AN INTEGRATED APPROACH TO RURAL DEVELOPMENT: SERVICE-SPECIFIC FINDINGS  
IN DEURALI PANCHAYAT

As previously expressed, Save the Children Federation has adopted an integrated approach to rural development under the rubric of its CBIRD philosophy and methodology. Within the framework of this approach the process of development is viewed as a total system in which different components are interlinked and coordinated to be complementary. With this concept in view STC, in collaboration with the Village Development Committee and villagers, has implemented various projects with specific emphasis on drinking water and health care. A list of these projects is presented in Table 2 along with their politico-spatial distribution. In the following sections we analyze each of these projects (i.e. services) individually as well as in relation to each other. The emphasis is placed on their effectiveness in terms of not only service utilization (or benefits) by the community as a whole, but also mutual complementarity. The discussion of mutual complementarity is primarily based on expert as well as subjective assessments, for there is no objective data or measurement criteria to prove such assessments.

4.1 Drinking Water

Water projects have not only been demanded by the villagers, but also received considerable attention from STC from the very beginning. They are the most important undertaking by STC in terms of actual number.

STC has implemented 2 types of water projects: 1) remodelling and improvement of the existing spring water sources, generally called "padhero" in Nepali, and 2) construction of the piped water system based on the principle of gravitational force. For the sake of convenient distinction we use the Nepali term "dhara" (stand pipes) to characterize the latter system.

Formal interviews were conducted with the sample population with regard to drinking water. Fifty-seven percent said they get their water from dharas or padheros, while 24 percent get it from streams or rivers. The remaining 19 percent get it from wells, called "kuwa" (see Table 26). We further asked them whether they have realized or seen any improvement in drinking water facility since STC's arrival. Interestingly, only 41 percent of the respondents thought the facility had improved. We expected this figure to be much higher, especially given the fact that STC has done a lot in this area and that water projects are quite visible and useful on a daily basis.

Such a low percentage of positive response can probably be explained by the following factors. First, Deurali may not have had as serious a water problem as many other hill communities because it did have several natural water sources which allowed the community to improve its access to and distribution of water. Secondly, since many of beneficial effects of water projects are indirect and intangible, the villagers can not measure such benefits in cash or any other tangible value terms. Consequently, any benefits that people derive in the form of convenience or better accessibility tend to go unnoticed and unrealized. Finally, and most importantly, almost all of the respondents were males who seldom tend to such household chores as carrying water from the water source wherever that may be. Thus, it is possible that they were oblivious to actual improvement in such a facility.

This last point reminds us of a discussion that took place on our way to the STC office from the base of the Deurali hill. At one of the dhara sites we saw 4 persons -- 3 women and 1 man -- some washing their feet and others filling their water containers. We began to ask them a few casual questions one of which was: "How far did you have to walk before the dhara was built?" The man said, "About 15 minutes." One of the women tersely snapped, "Of course, he would know it best! He never had to carry the water. What does he know?" In a calm voice she added, "It took at least 45 minutes one way to get the water. Now, after the construction of this dhara, it takes us only about 5 minutes."

STC has, as of the field survey date, constructed 8 padheros and 22 dharas -- 30 altogether in 30 different locations within the panchayat. Our estimate shows that approximately 2,600 people or over 60 percent of the total population are now served by these 30 water projects on a regular basis. This is a significant achievement given the fact that STC has been in Deurali only for about 3 years. Yet, there are wards, namely 1, 2, and 3, within the panchayat where Save has not implemented any water projects. In the case of Ward 1, STC has decided not to implement a water project because the community is already receiving help in this regard from the Local Development Office which has initiated a drinking water project there.

Even though the VDC and STC have managed to provide drinking water facilities to serve a large number of people, the issue of water itself has become a bone of intervillage conflict in certain cases.

We are talking about a particular case in which some level of intervillage friction arose. Ward 9, which is divided into upland and lowland or "gaun" and "besi", respectively, in Nepali, has 2 adjoining water sources. Both of these sources were being used to irrigate the "besi" land. According to their thinking, the Ward 9 villagers not only had the sole right to the water from the two sources, but also needed it for farming down in the besi.

At the Village Development Committee level and with the active support of the local panchayat a decision was made to divert water from one of the sources in order to provide drinking water in Wards 5 and 8. The project was implemented and necessary things were constructed including a small reservoir at the source. The villagers in Ward 9 were furious about the whole scenario, because they thought it was an infringement on their water rights. We were told that one night they got together, went to the project site, and destroyed almost everything that had been constructed. The VDC had to solicit government assistance through the local panchayat body to ensure the successful completion of the project without any further hinderance. Although the project has been completed and the whole issue has subsided, some animosity and disenchantment still exists on the part of some villagers in Ward 9.

x  
38

In addition to the above event, some technical problems were also observed during field visits. Numerous complaints were heard not only about the engineering aspect of the water project in Yankot, the besi of Ward 4, but also its quality. Some people felt the water had been contaminated because the cattle would also drink water from the same source. Again, this is a problem that is directly related to the issue of organization and project maintenance, already discussed in a previous section. Possibly, the local villagers could have tackled this water sanitation/contamination problem, if STC had involved them more in maintenance from the very beginning. The villagers feel that STC itself should take care of maintenance, and they may be waiting for STC to come and iron out the problem.

This water project in Yankot has an interesting history. When the original water survey was conducted, 2 water sources were identified. One was a natural spring located about 1 kilometer above the village. The other source which, in fact, served the community was a stream. Although the villagers perceived the other source to be cleaner, the quantity of water available was insufficient to meet the community demand. The lower stream had sufficient water and could meet the needs of the community. Even though the community has always collected water from this stream on a daily basis for their needs they preferred the water from the spring for their new water system. Numerous meetings were held in Yankot to discuss whether or not to proceed with this project. Technicians working with STC recommended using the stream and suggested that a sedimentation tank to filter out the sediment be constructed. A second recommendation was to collect the water from the stream at a point where the least contamination would occur.

For about 3 months the Yankot community was undecided on whether or not to initiate this project. Finally, the STC staff was notified that the community wished to proceed and the project commenced. The

technical and social issues faced in constructing this system presented a real challenge to the STC staff. Explaining technical issues such as the quantity of water available and estimated demand was extremely difficult in Yankot - a Brahmin and Chhetri community.

Despite a few setbacks, the overall facility as well as quality of water in large parts of Deurali have markedly improved after STC's arrival and initiation. According to one observer, gastro enteritis problems, still the number one health problem in Deurali, seem to have decreased in the community after the provision of improved drinking water facilities. Nobody can underestimate the health related value of better water facilities, because many diseases are water-borne.

#### 4.2 Health Care, Sanitation, and Nutrition

Another item on the top priority list of the STC project is health care. As previously pointed out, STC has incorporated both the curative and preventive approaches to the health issue. STC has established one health clinic to treat the existing diseases. To complement this curative approach Community Health Leaders and Female Health Volunteers have been recruited to educate villagers about preventive measures such as sanitation, nutrition, and latrines.

##### 4.2.1 Curative Approach and Measures

One principal measure undertaken by STC is the establishment of a health clinic which is small but adequate for the local needs and absorptive capacity. The Clinic is staffed by one health officer trained in Kathmandu, one staff nurse, and one female health motivator. Although the Clinic does not perform any major medical duty, it does provide more than adequate services to deal with common health problems which occur in the community. The Clinic also operates a small drug store carrying medicines for common, or frequently observed diseases.

While some minor medicines such as aspirins are distributed free of charge, village patients have to pay for most medicines.

In order to obtain service at the Clinic, the patient has to pay an initial, one-time registration fee of 1 rupee. After that there is no charge for visits. The record obtained from the Clinic itself shows that the total number of visits to the Clinic in 1983 amounted to 4,103. Monthly visits ranged from the lowest total in the winter month of January (156) to the highest total in the summer month of May (646), with a monthly average of 343 visits (see Table 27). In the sample 50 percent of the respondents said they had members in the family with health problems. Table 28 shows that 72 percent of the affirmative respondents take their ill family members to the Clinic for treatment. The rest use local herbal medicines or utilize the service of a shaman. Before the STC project began (as recorded in the baseline), 62% of the households used the local shaman when someone in the family was sick.

According to the record kept at the Clinic, one health problem treated with the greatest frequency (32%) was related to gastro enteritis (diarrhoea and dysentery). The second most common disease (22%) treated at the Clinic was related to Upper and Lower Respiratory Tract Infections (asthma) followed by skin diseases (13%) (see Table 29).

One day we visited the Clinic with the intention of observing its operation. One that day the health officer was not there (he was in Thailand receiving health management and family planning training) and the nurse examined all cases. We found the Clinic quite busy; in fact, there were people waiting in the line even before the Clinic opened at its regular hour. We observed 15 patients with different health problems, but diarrhoea and worm infestations were the predominant cases.

During an informal conversation we had with the staff nurse, she related to us a dilemma that she sometimes faces. Patients want the nurse or the medical staff to cure their problems as fast as possible, at any cost. However, the nurse does not like to prescribe extra powerful medicines and antibiotics randomly. She prefers a slow, but careful, approach in order to minimize the negative side effects associated with many drugs. The dilemma (or risk) here is that, if the problem is not cured almost in a "magical fashion", the patient has the tendency to label the nurse as being incompetent. While one can perfectly understand the patient's desire to be cured as fast as possible, one can also sincerely appreciate the good and medically responsible attitude of the clinic health staff.

In addition to keeping regular clinic hours, the health staff visit different villages once a week on a rotational basis, providing medical services as well as instructions about preventive measures. The health care project also runs a mini (mobile) Clinic in each of the Community Health Leader (CHL) areas on a monthly basis. This approach is particularly helpful to those who live in distant or even remote places and those who do not have time to visit the main Clinic. As indicated in the baseline study, none of these health-related services or facilities were available in Deurali before the STC project began.

#### 4.2.2 Preventive Approach and Measures

There are several components in the preventive approach undertaken by the community health care project which have been designed to complement the curative measures.

##### 4.2.2.1 Community Health Leaders and Female Health Volunteers

One of the most intensive measures is the recruitment of Community Health Leaders (CHL) and Female Health Volunteers (FHV) on a voluntary

X  
1/2

basis. The whole panchayat is divided into 13 CHL areas and at the present time there are 11 CHLs and 11 FHV's serving these 13 areas. These volunteers are locally recruited and given a periodic training by the STC medical staff and various government personnel on different aspects of the health care issue. The training is purposely kept simple and fundamental. During the training period the trainees are given minimum allowances (comparable to those paid by HMG). The main function of these volunteers is to educate villagers on a continuing basis about preventive measures such as sanitation, nutrition and latrine construction. They also provide some minor medicines when and if needed by the villagers. We were told that the VDC and STC staff are encouraging each of the CHL communities to create a common fund to supply such medicines, before the initial stock which was provided by STC runs out. The communities are allowed to create the replacement fund in whatever manner they choose to do so.

In addition to training CHLs and FHV's, STC provides training to local "Sudenis" (female birth attendants or midwives) to help mothers during the time of child delivery in a more efficient and safer way. In the last 3 years a total of 40 "sudenis" 13 of whom are FHV's have received training. None had received training before the project began, even though 79% of the women in Deurali acknowledged using sudenis during the baseline survey.

In addition to the utilization of services provided by the above volunteers, STC has appointed one Female Health Motivator who is a paid medical staff member of STC. She pays regular visits to all villages on a rotational basis (5 days a week), making careful observations of various sanitary conditions, latrine situation, other health care problems, and nutrition. She confers with the villagers about the advantage of sanitary care and about family planning with eligible couples. Our personal observation indicates that she performs all these duties with conviction and regular repetitions. We understand that this particular service or approach is probably the most intensive and effective of all in the area of prevention.

#### 4.2.2.2 Nutrition and Malnutrition

One of the primary health care issues concerns the adequacy of nutrition and the level of malnutrition among young children. From a medical point of view it is argued that the degree of malnutrition plays a paramount role in the overall growth and development of children and their susceptibility to various diseases. In order to determine the degree of malnutrition and advise the parents of malnourished children, the health care project sends the female health motivator and others to take weight (gain/loss) and arm tape measurements of children between the ages of 1 and 5. This is done with regularity. Based on the arm tape measurement data (1983) kept at STC's Deurali Clinic, 10 percent of the total children population were found severely malnourished and an additional 39 percent suffered from mild malnutrition. The remaining 51 percent or 181 children were found normal or healthy (see Table 30).

Malnutrition can directly be related to either the poor socio-economic condition or the parents' perception, attitude, and misunderstanding of the nutritional requirement for child growth and development. While it may take longer to deal with the poor socio-economic condition, attitude and misunderstanding are being dealt with more immediately. The sample respondents were asked about the need of supplementary food for breast-fed babies. The majority (68%) thought it was needed, but 66 percent of this majority said it was needed only after babies reach the age of 6 months or more. The respondents who thought it was needed for 3-6 month old babies accounted for only 34 percent (see Table 31). We cannot say with any degree of certainty how much the lack of food supplement at a very young age, e.g. below 6 months, affects the level of baby's malnutrition at a later age. However, a large majority of the respondents do not think supplementary food is required for babies below the age of 6 months.

#### 4.2.2.3 Immunization of Children

There is little doubt that one of the most effective measures of reducing infant mortality among children is immunization. The health care project cooperates with EPI which provides immunization services in the panchayat. The formal interview survey shows that the vast majority (86%) of the respondents have immunized their children. Of these respondents, 54 percent (36) had their children immunized by the field visiting medical team from EPI and 46 percent (31) at the immunization camp EPI established at the STC Clinic (see Table 32).

#### 4.2.2.4 Regular Medical Check-up of Pregnant Women

Pregnancy and delivery complications also contribute to the problems of health care. Many of these complications can significantly be reduced or even avoided by means of regular check-ups during pregnancy. On one hand, as previously discussed, the health care project has trained 40 "sudenis" to help women during delivery. On the other hand, it provides prenatal check-up services, advice, and necessary help within its capacity, all of which are parts of the preventive measure package.

In the course of the field survey we found 51 percent of the respondents who utilize, or have utilized, pregnancy check-up services provided by the STC Clinic (see Table 33). We were told that the female health motivator together with the "sudenis" play an important role in motivating pregnant women to go for regular check-ups. One result of these activities was that in 1983 there were no maternal deaths during delivery. These women are given vitamins as dietary supplements and certain inoculations to prevent potential problems.

We also made inquiries about the provision of better, more nutritious food for pregnant woman. There were 66 respondents (85%) in the sample who said they do provide better food for the pregnant members of

their families, although we have no idea about the extent of such provision (see Table 33). It, however, came as a pleasant surprise to us, because we did not expect the percentage to be so high. Given that better food is provided on a regular basis during the course of pregnancy, it should certainly help the healthy growth of the fetus. Perhaps, this is a positive result of the general health education which is an ongoing component of the project.

#### 4.2.2.5 Use of Smokeless Chulho (Oven)

Use of smokeless Chulho is one of the latent needs felt by Save the Children. STC and the VDC have launched a campaign to install smokeless chulhos in as many houses as possible. We believe one of the reasons for launching this chulho campaign is to minimize the use of firewood and thereby reduce the rate of deforestation. In our sample 9 percent of the population have already installed such chulhos (see Table 34).

According to the data given to us by the STC staff, so far a total of 125 chulhos have been installed in the whole panchayat. Fifteen of them have been repaired and 3 are no longer in use. None existed in the panchayat before STC began its work.

STC makes these chulhos available at no cost to any family wanting to install it, as long as they are willing to carry the clay stove pipe from Majuwa Khaireni, a nearby market center located a close distance from the base of the Deurali hill. Each family has to pay a minimal installation charge of 10 rupees. Some families, however, are still unconvinced of the benefits of the chulho and have been concerned about potential fire hazards to their homes because of the chimney pipe.

Regardless of the extent of its application by the villagers or its objectives, its use has the potential to make a contribution to

general health care. In Table 29 upper and lower respiratory infections (asthma) were found to be a major health problem, second to only gastro enteritis in terms of the frequency of occurrence. We were told that smoke can aggravate this problem. If, this is true, installation of smokeless chulhos should help ease this problem or even cut down the number of its incidences. Another advantage of the chulhos is the reduced chances of children suffering burns from the open traditional fire.

#### 4.2.2.6 Construction of Latrines

One of the STC campaigns that can make a definite contribution to the preventive approach is the construction of latrines -- another example of latent needs felt by STC, but not by all the villagers. A significant number of diseases are air-borne. It has been contended that the villagers' "open-space-latrine habit" is one of the causes of air and water contamination in many areas. Anybody who breathes and drinks contaminated air and water, respectively, becomes susceptible to a number of different diseases. It is accepted that such susceptibility can significantly be reduced by adopting a habit of going to a spatially confined latrine for both urination and defecation.

It appears that the villagers' "open-space-latrine habit" is gradually changing. Probably this is attributed to the repeated emphasis placed on this by STC health care motivators during their field visits. We were told that in the last 3 years a total of 109 latrines have been constructed in the whole panchayat. Although this number could be higher, old habits die hard. With the passage of time we can, with a degree of certainty, expect this number to increase. Interestingly, in the sample 41 percent of the respondents said they used latrines (see Table 35). Whereas during the baseline only 16% of the households said they had a pit hole latrine.

#### 4.3 Family Planning: A Model Story

The issue of family planning has received a great deal of attention from both the national government and international agencies. Despite vigorous emphasis placed on the diffusion of family planning, the recent trend suggests that the population of Nepal has been growing at the annual rate of 2.6 percent. The current growth rate shows an increase of 0.3 percent over the growth rate of the last decade which was 2.3 percent. One can, however, take consolation in the fact that Nepal's population would probably have grown at a much faster rate, had the family planning project not emphasized the reduction of the population growth rate.

In the midst of this generally gloomy scenario, there is a bright picture which we want to discuss in this section. Save the Children's health care program and its staff have been instrumental in developing this bright picture.

The focus of the present analysis is not on the determinants of family planning adoption or fertility reduction. Adoption of family planning is a function of socioeconomic conditions, medical and demographic factors (mortality situation), cultural practices, availability of family planning services and others. Here our intention is to merely present the picture of a successful family planning story in terms of figures and statistics.

In Deurali Panchayat there are a total of 745 households and in the last 2 years (1982 - 83) 160 of these households have adopted permanent family planning - 69 females and 91 males (see Table 36). This figure represents 21 percent of the total households. Thirty-six percent of the female adopters fall within the 26 - 30 age cohort, and another 32 percent in the 31 - 35 age cohort. The remaining adopters belong to the next 2 age cohorts - 20-25 (19%) and 36 and over (13%). Eighty-six percent of these adopters have at least 2 sons. Interestingly, 3 adopters have no son (see Table 37).

On the male side, 47 percent of the adopters are from the 31 - 40 age group, 22 percent from the 26 - 30 group, 22 percent from the 41 - 50 group, 5 percent from 51 + group and the remaining 4 percent belong to the 20 - 25 group. The percentage of adopters with at least 2 sons is 73 which is 13 percent lower than the same figure for the female adopters. There are 3 male adopters without a son (see Table 37).

For the 1984 mobile family planning clinic operation, STC's health care team has identified 126 eligible couples (see Table 38). There are two eligibility criteria: 1) couples with 2 sons one of whom has to be at least 5 years old and 2) absence of chronic diseases. For this year the STC health care team has targeted to motivate at least 50 percent of these 126 eligible couples to adopt permanent family planning.

How does the STC health care team go about motivating these couples? First, the STC team is notified by FP/MCH's mobile team about its scheduled visit to Deurali which generally takes place around October. From what we understand there are 2 basic reasons for this particular timing: 1) during this time people are not involved in heavy agricultural work so they do not have to be concerned about daily work requirement, and 2) since this is a festival time - the Dashain festival - and some harvest is already in, people's intake level of nutritious foods is generally higher.

Second, once the notice is received, STC's health team (including CHL and FHV volunteers) intensifies its activities, frequently visiting eligible couples, motivating them, coaxing them about the advantage and need of family planning. In some cases they even show documentary films related to family planning. The staff nurse and female health motivator told us that repeated visits and encouragement are imperative and have been responsible for their remarkable success rate which has been consistently much higher than their original targets.

Third, once the mobile family planning team arrives in Deurali, the STC health team further intensifies its activities. They visit every eligible couple and ask (one of) them to go with them for family planning. They apply persuasive pressure as much as possible. If the husband comes, a vasectomy is performed in Deurali. If the wife decides to have the procedure, a laparoscopy has to be performed, they take her to the main family planning clinic in the town of Gorkha about 30 kilometers away from Deurali. The roundtrip transportation service to Gorkha is provided by STC at no cost. The family planning team of FP/MCH gives those adopting permanent family planning 100 rupees each as an incentive (actually this amount is an incentive for others to adopt family planning). It is the observation of the health team that in certain cases this incentive does help them motivate a few couples.

Fourth, once the family planning operation is completed, the health team frequently pays follow-up visits to all couples adopting family planning. STC gives them necessary vitamins for 15 days at no cost and looks after the health of these couples' children. The parents also show extra concern for the health of their children after family planning. This phase of STC's family planning emphasis is quite important not only to ensure that all the necessary help is provided to adopters in case some complication arises, but also to gain villagers' trust in STC's programs. This will help motivate potential adopters as well, because of their realization that STC will help them out should complications arise.

Who are the adopters ? While there is no statistical data on the socioeconomic status of the Deurali adopters at this point, the health team's observation indicates that the majority of them are from low-to-middle class backgrounds including lower caste groups. One interesting observation made by the health team is that the vast majority of the female adopters come from the families in which male members are engaged in hard and heavy manual work on a daily basis. The general myth (or perhaps the truth) is that males become weaker after vasectomy

and hence cannot perform heavy work. In such families females are the ones to adopt family planning. As a result, laparoscopy is more popular among the Darai, Kami, and Magar families. On the other hand, vasectomy is more popular among the families in which males do not have to perform heavy work. These families include service holders, upper class and high caste groups such as the Brahmins and Chhetris.

Permanent birth control is by far the most popular family planning device among the Deurali Villagers. They do not prefer temporary devices - a fact which is quite clear if one looks at the number of people adopting such devices. There are only 20 persons or 3 percent of the total households in the whole panchayat using such devices (Table 38).

One final observation concerning STC's family planning operation is that it has been successful not only in terms of statistics and making people aware of it. One crucial thing that STC, through its intensive emphasis on family planning, has helped achieve is the fact that the terms "family planning, birth control, condoms, etc." are no longer a social taboo which they were until a few years ago. These days families talk about different aspects and methods of family planning in front of their daughters, sons, wives, husbands and parents and even neighbours without any qualm. Additionally, the feeling that family planning is necessary is increasingly growing among Deurali's population. If this feeling continues to grow and is translated into actual behavior and if STC continues to maintain its success rates, it is our estimate that within the next 10 years the natural population growth rate of Deurali will be below 1 percent per annum.

#### 4.4

#### Day Care Centers

Day care centers are an example of "latent needs" externally felt, but not internally demanded. Now that they have been introduced and internalized into the local system, their benefits have been realized by the villagers utilizing this service. The demand for this service seems

to be growing. For instance, the villagers in Ward 2 have been attempting to have one day care center established in their ward for some time.

Altogether there are 6 day care centers in Deurali (see Table 2) with a total registered population of 226 children served by 12 teachers - 2 for each center. However, the average attendance record (42%) appears somewhat lower than what we had expected (see Table 39).

Our discussion with a few teachers revealed that the attendance record was much better - close to 90 percent - until about 5 months ago. Since then attendance has declined. According to the teachers the decline is attributed to the lack of milk provision. In these centers children used to receive as snack, milk and nutritious flour supplied by Nepal Bal Sangathan's central office and transported by STC. But for the last 5 months Bal Sangathan was out of stock for milk and, consequently, the day care center children were able to receive only wheat-soy blend. After the completion of the field survey we were informed that, beginning in April, milk powder has again been made available.

We made some informal inquiries with quite a few villagers, mainly females, about the advantage of sending children to day care centers. The most common response was that it frees them and allows them to do other things. Some of them said children's health has improved - a reference to the fact that sometimes they receive nutritious snacks, something definitely lacking in most households. Others mentioned that they have received well-rounded preschool training.

Despite all these advantages realized by many villagers, we observed some lack of maintenance of buildings and teaching aid materials. The wall plasters in the day care center buildings we visited had begun to badly peel off. The teaching materials also showed signs of extensive use, but also lack of maintenance.

#### 4.5 Educational Improvement

Save the Children has also emphasized the overall improvement in the area of education. Save's educational improvement program is divided into 2 categories: formal education and an adult literacy drive.

##### 4.5.1 Formal Education

STC has been taking steps to improve schools to the only high school in the panchayat. It has been trying to improve the community's educational qualities and facilities in 3 ways:

- a. Through the provision of school furniture,
- b. Through the provision of educational materials, and
- c. Through the construction of school buildings.

In the area of school building construction, the most significant undertaking is the ongoing construction of a 3-room annex to the existing High School building. Once this building is completed, there should be more class or office space available for the students. To further assist the educational process, STC has created a scholarship fund out of which a small number of students' fees are paid. Improvement in school facilities, as indicated by their response presented in Table 21, is certainly one of the personal benefits the villagers have derived.

##### 4.5.2 Adult Literacy

Adult literacy is quite important and STC is currently running 5 adult literacy centers (see Table 2). While we do not know the actual degree of benefits accrued to individual participants or to the community it is our understanding that this program is somewhat limited and could be broadened. Once individuals pass through the literacy course,

there should be a follow-up program to further their education. We feel that the adult literacy program which has had substantial village participation is somewhat incomplete and further educational opportunities should be provided for those individuals who have enrolled in these programs. STC has recently hired a new staff member whose responsibility is to more closely monitor the literacy program.

#### 4.6 Agriculture

Since Save the Children's agricultural development program in Deurali has only recently begun due to its initial priority on health care and drinking water improvement, we have chosen not to make any formal evaluation of this particular program. However, since agriculture is such an important issue, we will make some informal observations and provide certain concrete suggestions that STC can implement within its means in the coming years.

Agriculture in Deurali Panchayat indicates a pattern of subsistence. Even though the occupational distribution shows heavy dependency on agriculture for living, because of low productivity and poor soil condition many villagers were found dependent on outside income sources to supplement their farm outputs. Goats, chicken and blackgram were mentioned as their main items for export. In light of the present trend of declining agricultural production, emphasis must be placed on increasing agricultural productivity and total production of small farmers who make up the majority of those living in Deurali.

##### 4.6.1 Crops Grown in the Khet Land

One hundred percent of the farmers expressed rice as the main crop grown in the khet land (see Table 40). Only 35 percent of the farmers cultivated winter crops (e.g. wheat, potato, garlic, onion, etc.) in the khet land. Maize was grown in the khet land by only 15 percent of the farmers. The possible crop rotations for the khet land

are: (a) Maize - Rice - Wheat; (b) Rice - Rice - Wheat; (c) Rice - Wheat; and (d) Rice - winter vegetables.

If appropriate crop rotation is emphasized with increased cropping intensity, the total production from the khet can easily be increased. In addition, the total production increase can be achieved by replacing low yielding local varieties with high yielding improved varieties such as CH 45 - an early variety of rice, Arun - an early variety of maize and RR 21 and other early maturing varieties of wheat.

#### 4.6.2 Early Rice

A few farmers have already tried "Judo" or 'Chaite Dhan', the terms commonly used in the panchayat for early rice, which is transplanted during March and harvested in June-July. The improved rice variety 'CH 45' is also gaining popularity among some farmers. This variety is popular particularly in the lower river basins where irrigation during the spring season is available. The farmers in these areas could easily grow three crops per year, i.e., Rice (CH 45) - Rice (Aapjhutte) - and Wheat (RR 21). In such locations, making the seeds of CH 45 rice variety available on time is important. Testing and demonstration of rice seed treatment with warm water to enhance the germination and seedling growth processes is the second item to be extended to the local farmers. Application of green leaves of the locally grown plant 'Ashura' to cover rice seed beds is useful and popular in some locations and this knowledge can be transmitted to the farmers of other locations through demonstration.

#### 4.6.3 Early Maturing Variety of Maize, "Arun"

Paddy and wheat crop rotations are very common in the khet. Some farmers have tried to apply a local early maturing variety of maize "Sathia" in the khet. This is a good indication of at least partial water availability in the Spring for 'Sathia' Maize. In these areas farmers have successfully grown three crops per year with the 'Sathia'

maize variety. This 'Sathia' maize variety could easily be replaced by 'Arun', an early maturing higher yielding variety of maize. Here the only effort is to replace 'Sathia' with 'Arun', so the crop rotation will be Maize (Arun to replace 'Sathia') - Rice (Aapjhutte) - Wheat (RR 21).

#### 4.6.4 Early Maturing Variety of Wheat, "RR 21"

Good seeds of RR 21, a wheat variety, if made available on time for cultivation in the khet land of Deurali, will be quite popular. A few popular characteristics of RR 21 wheat are: (a) it can be grown even after Aapjhutte rice; (b) it can do better than local varieties even in low soil fertility and rainfed conditions; (c) it can be grown with well decomposed organic manure; (d) it is an early maturing variety to fit crop rotation patterns; and (e) in case of late rice it can be broadcast 15 days before rice harvesting.

#### 4.6.5 Crops Grown in the Pakho Land

In Pakho land, maize is the most common crop followed by rice (mainly upland), millet, blackgram, mustard, soybean, etc. Improvement in maize variety followed by improvement in millet, blackgram, soybean, mustard, and upland rice should be planned (see Table 40).

#### 4.6.6 Maize Production

Maize is a popular crop in the panchayat. Some improved varieties of maize have been tried by a few farmers. These improved varieties have yielded more but the farmers found it harder than local maize varieties to handle during harvesting and to store safely. Rampur composite, Khumal Yellow, and Hetauda Composite varieties of maize have performed better in certain areas of the panchayat. Steps can be taken to make seeds of these varieties available in appropriate location and to teach the method of safe storage. Application of compost is also very popular with maize crop. Therefore, techniques of composting

should also be extended vis-a-vis high yielding varieties of maize.

#### 4.6.7 Cash Crops

Blackgram locally known as 'Mash' is a very popular crop in the panchayat. This crop is grown as a cash crop. A good local variety of blackgram is already available. Maintenance of these local varieties and testing them in different locations should be planned. Ground nut is another potential cash crop and the red soil of Deurali may turn out to be a potential site for this crop.

#### 4.6.8 Vegetable Crops

Winter vegetables are more popular in the Panchayat than others. The most common vegetable crops are mustards and radishes followed by chillis, garlicks, onions, ginger and potatoes. During the summer season tomatoes are grown in some parts of the Panchayat for domestic consumption as well as export (see Table 41).

When asked about the sources of vegetable seeds 88 percent of the farmers mentioned local traditional seed sources. Only 12 percent of the farmers have used seeds from the institutional sources such as STC and JTAs.

#### 4.6.9 Seeds

New improved varieties of crops such as CH 45 of rice (as a Spring rice), RR 21 of wheat, Rampur Composite and Hetauda Composite of Maize have been tested in certain locations of the Panchayat and they have performed well. Most of the farmers are subsistent with little cash in hand. Many of them cannot afford to buy improved seeds. As a result, application of improved seeds is low, as seen from Table 42.

Only 14 percent of the farmers interviewed have used improved seeds. Less than 5 percent of the farmers interviewed have used seeds supplied through the institutional sources. However, 9 percent of the farmers have managed to use new seeds available locally. The remaining 86 percent of the farmers interviewed have used local varieties. This is a clear indication of the farmers' dependence on local varieties and sources for seeds.

The traditional seed network (seed distribution system) has an advantage as far as availability and prices are concerned, but the quality is poor.

#### 4.6.10 Availability of Seeds

In the traditional system the elite farmers are the ones who generally sell the seeds to marginal and submarginal farmers. These farmers generally make only left over seeds available which may delay other farmers' planting. A sense of pride on the part of the elite farmers as seed suppliers is missing.

#### 4.6.11 Price of Seed

The price of seeds in the traditional system is generally determined by the market process of supply and demand. However, the prices in the traditional system are usually cheaper than institutionally provided seeds. In addition, it can be paid for in kind or with labor. Those who cannot purchase seeds through institutional sources due to cash constraints can obtain seeds through the traditional network.

#### 4.6.12 Quality of Seeds

The main defect in this traditional system is the poor quality of seeds. Some of the factors contributing to poor quality are:

- a. Farmers have been using their own local seeds for years without any qualitative improvement.
- b. Farmers receiving minikits or demonstration kits lack the necessary knowledge on quality control so the quality of even these improved seeds deteriorates over time.
- c. Farmers' local seeds have been found damaged in the process of harvesting, threshing and cleaning. In particular, threshing by means of stick-beating, when the grain is either too wet or too dry, causes potential loss in the quality.
- d. Farmers lack proper facilities for processing grains.
- e. Storage facilities, in general, are still in a primitive stage at the farm level. Damage caused by insects and rodents is a major cause of quality deterioration. Wheat and maize are specially affected by the lack of proper storage facilities. The high temperature and high humidity conditions of the rainy season, which is the time wheat or maize must be stored, are detrimental to the quality of seeds.

In view of farmers' dependence on local seeds, a channel must be developed for the regular supply of high quality seeds to those farmers who normally supply seeds in the traditional system. Since it is the women who are largely involved in seeds production, handling and storage, they must be given practical training. We recommend that the seed demonstration program be introduced in the panchayat with the following objectives:

- a. to make farmers aware of various new varieties available.
- b. to make improved seeds available to farmers including Community Agricultural Leaders (CAL) to test-demonstrate, multiply, and disseminate seeds in the community.

- c. to encourage farmers, especially those who supply seeds in the community, to make better seeds available to other neighbor farmers.
- d. to utilize traditional seeds producers for distributing improved seeds.

The main advantage to be gained from this program will be to introduce high quality seeds into the existing seeds distribution network and consequently increase production.

#### 4.6.13 Chemical Fertilizers

Use of chemical fertilizers is low in the panchayat and confined to only certain areas (see Table 43). Twenty percent of the farmers interviewed said they have utilized small amounts of chemical fertilizers. Major constraints as expressed by the respondents are: lack of cash in hand, little credit, technical knowhow, and low availability. There is potential for combined use of chemical and organic fertilizers in the panchayat. Some emphasis needs to be placed on the efficient use of small quantities of chemical fertilizers.

#### 4.6.14 Use of Organic Manure

All the farmers in the sample use organic manure to restore soil fertility of their fields. Making proper use of organic manure will reduce the requirement of costly chemical fertilizers. Individual farmers can work on organic manure or improved composting independently and make it available for themselves without any cash outlay. To increase the total amount of manure available, they may have to work a little harder, utilizing local resources such as livestock manure, vegetation, farm and house waste, residuals, and straw from field crops. Our visual observation indicates a general tendency on the part of farmers to neglect composting. Efforts are needed to popularize improved methods of compost making. Ideally, every farmer should

x  
60

have a big compost pit to convert farm wastes to organic compost.

It is suggested that STC allocate a certain amount of budget for testing and demonstration on improved composting. Testing and demonstration involve digging a pit, filling it up, turning it and taking compost out for field application and demonstration at the village level. Since improved composting is not one of the farmers' felt needs, farmers' participation may be low in the initial stage. Women should also be involved in the process of testing and demonstration because, in general, women are responsible for compost preparation, transportation, and its field application.

#### 4.6.15 Agro-Pesticides

Use of agro-pesticides is very low in the panchayat. The most commonly used agro-pesticides are:

- a. Material for field application.
- b. Aldrin and chlorodine for soil treatment.
- c. Zinc phosphide for rodent control.
- d. BHC dust for soil treatment.
- e. Malathion and celophos for storage insect control.

No detailed information is available on the use of agro-pesticides. Farmers were found using matacial to control household insects such as cockroaches and bed bugs etc.

Testing and demonstration of the use of agro-pesticides along with training on the methods of application will convince the farmers of the advantages of their use. It is often hard to demonstrate the benefit of pesticide application, if the site is not properly selected to suit the problem. Many farmers are not confident of the performance of the agro-pesticides and their lack of knowledge is blamed on:

- a. lack of testing and demonstration in their fields.
- b. poor extension services concerning their use and value.
- c. lack of training on its use.
- d. complexity of recommendations to farmers.

#### 4.6.16 Agricultural Tools

Agricultural tools made by local blacksmiths are easy to work with, according to 99 percent of the respondents. Still, there is room for improvement. This could be achieved by training local blacksmiths. STC should probably look into the possibility of making necessary arrangements to provide training for them to improve their technical skills as well as capacity. With help they may be able to establish a workshop.

#### 4.6.17 Community Agricultural Leaders (CAL)

Community Agricultural Leaders have recently been selected from among the farmers. They are the main field staff for agricultural extension activities under the supervision of the STC Agricultural Coordinator. Each of them generally covers one major village. If the CAL selected is a progressive farmer in his village, he can effectively cover the village. The CALs should be given a training on the farmers' felt needs first. They, if trained properly, will have a good impact on the farming activities in their villages. New technological components should be introduced through them and tested in their own farms first before it is demonstrated to other farmers.

#### 4.6.18 Farm Level Grain/Seed Storage

Both the structure and environment for storage are poor. The most common storage structures are made out of locally available bamboo and straw mats - generally called, Bhakari or Gundri Ko

Kotha (see Table 44). Both of these structures are neither airtight to allow insect control by means of fumigation, nor hard enough to prevent rodent damage. These structures are kept on the top floor of the house or near the kitchen.

In general, storage development is in a primitive stage at the farm level. Because of the poor storage facilities and methods, the amount of grains lost to insects and pests is quite high. But farmers have not shown much concern for improving their storage structures; nor have they seriously calculated the amount of losses incurred during storage, even though they feel it is quite high (see Tables 45 and 46).

Most of the respondents we interviewed were male farmers who are less involved in the storage of farm produce than women. Decision on storage space, sanitation and structures are generally made by women. Any attempt to improve storage methods and facilities should mostly be directed to women farmers.

There is a need to improve storage structures. Two testings are being conducted in Gorkha district. One of them is in Deurali Panchayat itself at Hatiya managed by VORC Liaison Office of RECAST. The focus of this testing is on the storage of paddy and maize in earthen pots with different insect repellants. Another experiment is managed by the District Agricultural Development Office at Chhoprak, Gorkha. This one deals with wheat storage in different structures to determine which structure is most feasible for farmers' use. These experiments need periodic checking at regular intervals for their moisture content and viability. The results of these two experiments are not out yet. Farmers will see the advantages of some treatments over others, which will be helpful for their assessment and utilization

At the same time, metal bins for the purpose of testing and demonstration could be introduced to medium to rich farmers who

normally supply seeds to other neighbor farmers. These metal bins are subsidized (25%) by the Department of Agriculture (DOA). The Agricultural Development Bank gives a loan to cover 50 percent of the cost, which means the initial investment is only 25 percent of the total cost.

Improvement in the Bhakari storage method is also possible by adding a metal sheet underneath (at the base) and around, up to 12 inches high (as suggested by the Entomology division of DOA), if rodents are the main problem. But if insects are the only problem, one could add a plastic sheet around the Bhakari from inside to allow fumigation to control insect infection.

#### 4.6.19 Credit Facilities

Lack of cash in hand was the main constraints mentioned by the farmers for limited use of improved inputs. Among the farmers interviewed, only 33 percent had taken loans. Out of 33 percent who had taken loans only 8 percent had taken it from the Sajha or Agricultural Development Bank. Twenty-six percent had taken it from local merchants (sahuji), who charge a much higher interest rate than the institutional sources - sometimes as high as 40 percent per annum. When asked about the utilization of loans, 66 percent of the farmers who had taken loans used them for family expenses and household activities. Only 15 percent utilized the loan money for agricultural purposes and 19 percent for animal husbandry, especially goats.

#### 4.6.20 Livestock

The majority of the farmers in the panchayat own livestock. Cows, buffalos, goats, poultry, and pigs were the common animals raised by the farmers. More than 60 percent of the farmers raise cows, goats, buffalos and poultry. The average number of animal ownership per household is shown in Table 47.

Animal husbandry is a major cash income generating activity in the panchayat. Some farmers export milk and milk products, especially ghee. Among the main livestock, goats and poultry are the two important sources of cash income. There seems to be a high demand for these two livestock because of the relative locational proximity to "Manakamana" -- a famous temple -- where they are offered and slaughtered as a part of worship. This could be developed into a regular business. Improvement in goat and poultry farming is a need felt and demanded by some local farmers. Therefore, improvement activities in these areas will be readily accepted.

#### 4.7 Indirect Impacts of STC Projects

During our field survey and observation we noticed a few indirect impacts directly resulting from various services provided in the community. These impacts are quite significant and deserve a brief discussions.

##### 4.7.1 Impacts on Women's Functions

Recognition that women are the backbone of the domestic economy in many underdeveloped societies has generated a great deal of interest in women's role in development. In this section, however, our intention is not to analyze women's role in development, but to show how many of the STC projects have indirectly helped a good number of women and made them more efficient at least in terms of their time utilization.

In addition to managing a large portion of agricultural work, women have to singlehandedly perform almost all of the domestic chores: cooking, transporting water, looking after the children, gathering and carrying firewood and fodder from the jungle, washing, storage and many others. Any assistance that they can receive in any of the above areas can make their daily lives a little less difficult. Our observations indicate that many women have, in deed, acquired some indirect help from STC implemented services.

First, let us take the case of drinking water service. As succinctly pointed out by a woman, the story of which is related in Section 4.1, the provision of drinking water service in a number of communities has significantly curtailed the amount of time women had to spend on carrying water several times a day every day. Incidentally, the amount of time saved can also be translated into the amount of physical energy saved. That is, women no longer have to carry a heavy load of water for 30 - 60 minutes per trip. The time required after the provision of water service is much less - only about 10-20 minutes on the average per trip.

Second, the establishment of day care centers have also helped women considerably. These centers have saved them several hours a day and taken good care of their young children. This means mothers do not have to worry about their children, while they are engaged in other activities. These female teachers have received regular training in child care and education, areas in which they had had no previous formal training.

Thirdly, before STC's arrival, there was little attention paid to many of the female health problems partly because most women did not want to talk about their problems and partly because there was no nearby facility available. STC has appointed a female health motivator and trained sudenis to particularly deal with the female health problems. Many women in Deurali have benefitted from this service.

Fourth, women have also benefitted from the adult literacy drive, because over 60 percent of the attendants are women including young girls. This shows that women have become aware of the need for education.

Finally, the installation of a smokeless chulho, can significantly aid women's health. The women no longer have to inhale much smoke in the process of cooking which they have to do at least 2 times a day. This means they do not have to suffer as much from eye irritation and respiratory problems.

#### 4.7.2 Social Impact on the Caste System

It is a well recognized fact that the existing caste system is not only socio-politically repressive, but economically counter-productive in some ways. While we cannot claim that, after STC's arrival, the lower and professional caste groups have generally been able to gain the level of social, cultural, political and economic status occupied and enjoyed by the upper caste group, some noticeable changes have definitely occurred.

In addition to the appointment of a professional caste member to the post of the VDC's vice-chairman, a remarkable change was seen particularly in the field of day care center service. Our discussions with several villagers revealed that no objection was voiced by any upper caste villagers against the participation of professional caste children in day care centers, especially mixing of the 2 groups of children at the time of eating, which is a big caste-related taboo. We consider this to be a sign of significant relaxation (or even breakdown) of caste barriers that exist in many rural communities of Nepal.

#### 4.7.3 Reaching the Poor

The question here is: have Save the Children Projects reached the poor of Deurali. The answer is both "Yes" and "No" depending on how one views STC projects. The answer is "No", if one looks for projects with a specific target of reaching the poor. Otherwise the answer is Yes, because all of the projects implemented by STC with the participation of the villagers have been community-wide in

both nature and scale. As a result, every one, irrespective of class or caste, is allowed to fully utilize these services and benefits from them, if s/he chooses to do so. This, most definitely, includes the poor.

The STC projects have reached the poor also in a physical sense and benefitted them. That is, STC has generally brought its projects to their communities or within a walking distance. Because of this relative locational proximity, most projects are physically accessible. Were these projects not physically accessible, most of the poor would probably not have been able to afford to go far away to obtain many of these services. For example, take the case of the Clinic or the high school. How many of the poor could have really afforded to send their children to a high school in a far away place? Very few. This means their children would probably have never been able to receive a high school-level education.

One direct method that STC has employed to help the poor is to utilize their services on a wage basis whenever necessary and possible. One of the poor groups that has particularly benefitted from this practice of STC is the professional caste. Instead of going outside the community for their help, STC recruits the local skills. A further discussions of this issue is presented under a different heading in Section 4.7.4.

One objective fact about STC is that it has implemented no project that could potentially hurt the poor or augment the position of the rich, thus leading to the situation of increased socioeconomic disparity and contradiction. To illustrate let us take an irrigation project (or an agricultural credit provision project) as a case in point. Had STC implemented an irrigation project which is inherently land (or class) and material biased, the benefits would probably have accrued only to the rich. The poor, mainly those with no land, could not have used it. This would have aggravated the already existing socio-economic

x  
68

disparity between the rich and the poor and, perhaps, the locational disparity as well because such a project would probably have been implemented in a besit due to geographical considerations. By not implementing such a project which would primarily have been be utilized by a certain group, STC has managed to avoid unintentionally hurting the position of the poor, while not enhancing the position of the rich.

#### 4.7.4 Support for Local Technological Foundation and Private Entrepreneurship

One of the weakest aspects of most development projects is their dependency on external technology and technical resources. Despite the popularization and glamorization of "appropriate or intermediate technology" - however defined -- these projects are conspicuous about their lack of support for a local technological foundation and technical skills, as if small, local communities are technology-void. The fact is that, if we want to instigate or revamp the process of truly appropriate technological advancement, most suitable for the local environment and resource base, we have to provide incentives and outlets for the already existing technological foundation, refining it and building on it.

Unlike many others projects, STC has been quite particular about supporting the existing local technical skills and, in some cases, even improving it through necessary training. If STC finds whatever technical help it needs within Deurali, it recruits that help, instead of going outside the community. For example, wherever it needs carpenters and masons for construction, it recruits local people. For its water project maintenance work, it has recruited a local Kami (blacksmith) who has been given some technical training. It has recruited another local person for chulho installation work. Whenever it needs tailoring service to have day care center children's dresses made, it utilizes the service of local Damais (tailors) instead of going outside the community for such help.

This particular practice followed by STC generates employment, though temporary in many instances, for local technical skills. More importantly, it does 2 other things: 1) it provide a moral support for the local technological foundation by showing STC's confidence in it. This moral support can be an incentive factor, culminating in the improvement of the existing knowledge and 2) it also encourages local entrepreneurship to flourish, which is necessary to break local communities and existing production relations out of their precapitalist stage.

In order to enhance the household-scale entrepreneurship and technological base, STC has supported two other activities --- chakati (small mat, seat) production and envelope production. STC buys all the chakatis and envelopes produced by the local prople. STC is certainly moving in the right direction, because it is imperative to do everything possible to augment local entrepreneurship and technology for self-reliant, sustained local development.

4.8 Personnel Quality: The Question of Dedication, Conviction, and Local Adaptability

The success or failure of many projects depends on the persons(s) running the operation. Here we are not necessarily talking about human power development in terms of technical skills and managerial and administrative ability, although these qualities are important. We primarily focus on leadership developemnt with dedication, sincerity, conviction and local adaptability - personnel qualities essential for the successful implementation and continuation of projects.

It is our opinion that there is a procedural, philosophical, and, most importantly, personnel quality distinction between many other projects and Save the Children's Project in Deurali. Our observation shows that STC has carefully avoided the colony-building mentality, which would have set its personnel apart from the majority of the

village population. They live in a house that is no different in appearance or construction from the houses occupied by other villagers. Their office building is simple and no different from the panchayat building. By doing so, STC has uniquely addressed the important question of general accessibility to the Project and its personnel - the question which has commonly been overlooked by many projects. STC has kept the whole operation simple and readily adaptable to the local situation and environment. It has done an admirable job in creating an open atmosphere in which no fences of any sort - real, perceptual, or social - are raised between its staff and the general public. Everybody (every group) in the community can identify and associate with, and has easy access to, the project and its personnel.

One peculiar thing which may be unique to the CBIRD philosophy is that STC has tried to deal with the process of development also from the angle of project personnel quality which is a very important ingredient of participatory development. Save has trained its personnel - from the top all the way down to the field level - developing their leadership, based on personnel dedication, conviction, sincerity, and respect (for the local people and resources) to work for the community, with the community, and within the sociocultural norm of the community, not in isolation from it. This approach has made a full partner out of the project personnel in the process of community development, not merely external agents giving advice. And, it has certainly made it easier for the villagers - irrespective of caste or class affiliation -- to become full partners in development. One final observation, the importance of which we cannot underestimate, is the fact that the whole process of community partnership and participation in development became easier because the institutional basis for all this, as pointed out in the introductory section, already existed. Save the Children's emphasis on personnel quality has successfully rejuvenated this dormant institutional foundation of community participation and revitalized the process of participatory development.

5 STC PROJECT EXPANSION INTO TAKUKOT AND TAKU MAJH LAKURIBOT PANCHAYATS

About 1 year ago STC began the process of project expansion into other panchayats in Gorkha District. The field office was set up in Takukot Panchayat, following the baseline survey of Takukot and its adjoining panchayat - Taku Majh Lakuribot,<sup>8/</sup> almost in the same format applied in Deurali. The VDCs were formed along with ward level subcommittee - structures that do not exist in Deurali. It was decided while planning the VDCs for Takukot that such ward subcommittees would prove very helpful in implementing village projects. They are now also being added in Deurali.

There are 2 other minor differences between the VDC in Deurali and those in Takukot and Taku Majh Lakuribot. The VDCs in the new panchayats are composed of 11 members with voting powers and the Pradhan Pancha of the panchayat who is appointed as an ex-officio member with no voting power. Of the 11 regular members, 9 represent 9 wards - one for each ward - and the remaining 2 are representatives of the marginal class and women.

As in Deurali, the VDC's main function is to work with STC to identify needs, set priorities, and mobilize local resources including voluntary labor. In these tasks, the ward level subcommittees also provide the necessary help. A few months after the office was set up, the Takukot VDC, in collaboration with STC, began to formulate plans and projects. Implementation of some of these project has already been completed. A list of these projects - both completed and underway - is provided in Table A. About 4 months ago STC's Takukot office also began to implement projects in Taku Majh Lakuribot. Some of these also have already been completed and some are still under construction (see Table B).

8/ The STC office in Takukot used to cover both Panchayats until the end of March, 1984. A separate field office has now been established in Lakuribot to handle the projects in the panchayat. The SSNCC recently approved STC project commencement in Pandrung panchayat, contiguous to Takukot. A baseline survey was conducted here in February, 1984. Project activity is to begin shortly.

Because the T-L operation is in its infancy, the discussion in this chapter is not able to provide a long-term impact analysis of various projects, mainly because they have not had enough time to have produced real effects. This chapter provides merely a description of projects which have begun in the two panchayats, and a brief explanation of lessons STC has learned from their Deurali experience.

### 5.1 Priorities in Takukot and Taku Majh Lakuribot

Both Tables A and B show where the priorities of STC's Takukot-Taku Majh Lakuribot (hereafter Taku, Lakuribot or T-L) operation lie in the present context. One obvious difference between the Deurali operation and the T-L operation is that compared to the emphasis on day care centers in Deurali there are not yet any day care centers in the latter, although some are being considered. Another difference between the two operations is that from the start a greater emphasis has been important placed on the development of the agricultural sector in T-L panchayats. In T-L where one can already see the rat control project being run in all nine wards. In addition, there has also been distribution of agricultural inputs in the form of minikits and training of Community Agricultural Leaders (CALs) in these two panchayats. Four of these leaders who have already received some training were trained outside of Gorkha District (Table A).

As the Project is just underway, the provision of community health care service is limited in T-L panchayat, when compared with Deurali. Although STC has already trained Community Health Leaders (CHLs) in both panchayats and established Ward Health Committees, the health clinic service, the female health motivator program and other extensive as well as intensive health care services have yet to begin. In this respect it should, however, be noted that CHL volunteers in these areas have already successfully motivated the

villagers to construct over 200 latrines in under four months and conducted a door-to-door oral rehydration therapy demonstration campaign.

Although there is a government operated health post in Lakuribot, according to the information we received, the health officer is not always found in the clinic. STC's Taku staff told us that they would like to operate a community health program in cooperation and collaboration with the existing government health post. Since health care is such an important need as well as an integral part of integrated rural development, something must be done promptly in this regard. Since the Deurali model of health care service delivery is so successful, any STC health care operation in T-L panchayats whether run independently or in cooperation with HMG should follow the same model, especially emphasizing family planning as well as female health services. Furthermore, there should be a well-organized coordination between the curative approach and the preventive approach as is evident in Deurali.

Another project that is running with full speed in both panchayats is adult literacy. We observed that adult literacy centers are well attended by the villagers. The total attendance in T-L at the end of April was 702 students. The large majority of the attendants (students) are females (83%), many of whom are young girls above the age of 10 or 12. They all appeared diligent and enthusiastic about their education. The fact that the majority of the students are females is not difficult to explain. Most females, even today, are deprived of opportunities to receive a formal education. Since they are generally looked upon as being somebody else's family member, once they are married, their education receives little priority. STC's adult literacy drive provides an opportunity for them to be at least literate. Before the STC adult literacy program began less than 350 women in the two panchayats were literate. This year over 500 women will complete the STC-sponsored six month adult literacy course.

The other side of the coin is a low level of male attendance, compared to the number of females. The explanation for this lies in the fact that, relatively speaking, males have a greater rate of literacy. 45% in Lakuribot and 40% in Takukot, according to baseline data (July 1983). In addition, males tend to be more concerned about social activities than education even when the opportunity available. It is also possible that, since the male population generally holds a higher authoritative position both in the family and the community, the majority might even feel embarrassed to attend classes with females. STC might want to explore the possibility of offering separate yet similar classes for adult males, if it can be determined that an expressed need is there.

One recommendation concerning the adult literacy drive is that it should be expanded into a formal education program - at least up to the primary level - and it should continue to operate at night following the same time schedule that now exists. This will present the graduates of the currently running adult literacy centers with better opportunities to further their education and to strengthen their educational foundation. This recommended expansion is necessary, especially when we consider the fact that a substantial number of the attendants are young girls, possessing long-term educational potential, and they may not have any other educational outlet.

## 5.2 Potential Problems Facing the Taku-Lakuribot Operation

While some of the potential problems are geographical in nature, others may occur because of a lack of interagency coordination and the methodological contradictions in the project implementation approaches adopted by various agencies. In the following sections we intend to briefly describe these potential problems and attempt to suggest some measures which, if seriously taken by all the agencies involved, might not only keep these problems from becoming formidable, but actually coordinate various projects run by different agencies.

### 5.2.1 Geographical Constraints

Our observations indicate that there are several geographical constraints facing the T-L operation. Probably, the most important geographical constraint is the distance factor which is compounded by the topography requiring steep climbing up and down the hills. Both Takukot and Lakuribot panchayats are more isolated than Deurali. The physical distance between the STC office in Deurali and the nearest motorable road is about 2 hours in terms of walking time, and the topography is not as steep. In the case of Takukot and Lakuribot, it takes, depending on the pace and load, anywhere from 5 to 8 hours to get to the nearest roadside which is Gorkha Bazaar. This means volunteers, when they have to carry materials required for projects from Gorkha, have to spend at least 2 days, perhaps even 2½ days in the case of some women, whereas the volunteers in Deurali spend only about ½ day in similar situations.

Another geographical constraint concerns the availability of timber for certain projects. Compared to Deurali, this particular resource is quite limited. Similarly, there are not as many sources of water available in Takukot as there are in Deurali. But, from what we understand, the water availability situation in Lakuribot is much better.

These geographical constraints are going to pose some problems, but they are neither insurmountable nor uncommon in Nepal.

### 5.2.2 The Issue of Interagency Relationships and Coordination

One of the major issues that the T-L operation is facing, and soon will have to deal with, is the question of interagency relationships and coordination. At this point in time there are two agencies with which STC's field offices in Takukot and Lakuribot (and later in Pandrung which is to open shortly) will have to deal. These agencies

are: the government run health post located in Lakuribot and the Resource Conservation and Utilization Project (RCUP) which covers several panchayats in and around Takukot and Lakuribot.

The health post issue has already been raised in a previous section. STC has initiated contacts with concerned HMG offices in the hope of cooperating and coordinating its health care delivery and MCH program with the existing health post run by the government. At this point STCs initial proposals are being considered by HMG in Kathmandu. Since health care delivery in rural Nepal is such a pressing need, we strongly urge STC to give the first priority to this issue as soon as they hear from the government. The service currently provided by the existing health post in Lakuribot is inadequate for several reasons, the most important of which is the area it has to cover, which includes several panchayats. While it certainly would be best if STC successfully coordinates with the concerned government agencies to operate a well functioning health care program, as previously stated, STC has begun to initiate certain outreach and preventive aspects of its health care program already.

The real challenge that STC faces in its drive to build a foundation for local development based on community participation and local resource mobilization comes from RCUP. Compared to the STC operation in Nepal (currently limited to Gorkha District), the RCUP operation is a megaproject in terms of size, scale, dimension, and budget. This project is funded by USAID and so is STC through AID's PVO Co-Financing Grant which partially covers a portion of the program costs. Yet, RCUP is involved in several projects such as afforestation (also reforestation), livestock development, irrigation, and free distribution of agricultural inputs in the form of minikits.

The challenge STC faces from RCUP is not in the area of project conflicts or ultimate goals of their respective operations. The difference between the two projects lies in their approaches, in

the philosophical basis of their approaches, and in their modi operandi. RCUP does not appear to be designed to encourage and develop a local, institutional basis for community cooperation and voluntary involvement, the most integral part of STC's CBIRD methodology. RCUP pays its workers for all kinds of work and pays well, whereas the projects implemented by STC include voluntary participation. When and where STC pays its workers - sometimes even for voluntary work - it is minimum, just enough to cover the basic costs.

Since RCUP pays well and since wage employment opportunities are frequently available with it, the villagers tend to work for it, rather than voluntarily participate in STC projects. There was a case in point in Takuko. Just when STC was about to start a drinking water construction project in Ward 7, RCUP started a construction project to build stone walls to surround a fairly large area allocated for a forestry experiment project. Naturally, the villagers found the wage employment with RCUP much more attractive and STC had to postpone its drinking water project because of the lack of participation.

This kind of conflict or situation is bound to occur frequently, unless the two projects are coordinated in such a way that they can both take advantage of each other's relative strengths for the general betterment of the communities in which they are involved. To give an example, RCUP is well equipped with technical human power and knowledge and capital resources, whereas the fundamental strength of STC lies in its project operational methodology. They can combine their strengths and qualitatively amplify their effectiveness and efficiency in the provision of community services.

At the present stage of the evolution of T-L operation, it might be to STC's advantage to initiate contacts with concerned RCUP officials either directly or through AID, for both projects receive funding from it. The fundamental intention of such contacts is to explore the possibility of coordinating some of the specific projects planned by

x  
78

both agencies. This way both parties will be able to maximize their strengths and avoid the duplication of projects. In addition, they will not have to compete against each other which may turn out to be detrimental to the communities caught in the middle.

If some of the potential or actual problems mentioned above can be ironed out, we see a real prospect for STC's spreading operation in Takukot and Lakuribot, making significant contribution to the process of sustained participatory development in the two panchayats.

### 5.3 Lessons Learned From Deurali

Since the T-L operation is in its very early stage, it is in a solid position to learn from the experience of the Deurali experiment, building on its successes, while avoiding or modifying its shortcomings. One area to which it should definitely pay careful attention from the very beginning is maintenance so no complication or confusion, currently observed in Deurali, will arise in Takukot and Lakuribot panchayats. In talking with the STC staff it appears that some of the lessons learned in Deurali are being considered in developing the T-L program. These can be grouped into leadership and project changes.

In terms of leadership, STC has taken its experience in Deurali in order to improve the structure and training of the VDC in T-L. Whereas in Deurali the only significant leadership existed in the VDC, STC has expanded and diffused this authority through ward-level committees which in many cases take direct initiative for the implementation of projects in their area. The ward committees have proven very supportive of VDC decisions and other local activities (such as the pit latrine campaign and drinking water projects). The experience in Deurali has also improved the curriculum and training methodology in T-L. The Takukot Field Coordinator worked first as an Assistant F.C. in Deurali for two years. This experience gave him many actual case studies to use in training the new VDCs. Also the Kathmandu-based

program staff have refined the training into separate curriculum packages for the field staff to implement independently.

The process of development has also received more attention in this second phase of STC program implementation. In the earlier years, as said, there was the need for STC to complete projects to establish its credibility. Now having earned that recognition the agency has moved more deliberately in order to strengthen the community structures and decision-making skills. Community support and self-reliance are being emphasized. Local leadership is receiving better training in motivating community participation. And, where possible, STC has hired local people for such jobs as Sponsorship Assistant in T-L and members of the baseline survey team for Pandrung Panchayat, in order to keep the project as community-based as possible.

In terms of specific lessons learned from Deurali about actual project activities, we have already mentioned Day Care Centers and Health activities. Both of these are primary project areas in Deurali that are being altered for the T-L situation.

The DCCs will only proceed after community support is evident. The difficulty in Deurali in obtaining parental commitments to the DCCs has cautioned STC to wait until the parents are willing to help in the daily activities and maintenance of the Centers before beginning such a long-term, expensive activity.

The Health Sector is emphasizing preventive care much more at the outset of the T-L than was done in Deurali. Demonstration education training for the CHLs (going house to house) is being used more in T-L than it was in Deurali. This gives the CHL much more practical, first-hand experience than simply classroom training.

Similarly, an emphasis on women's health issues, like the establishment of a Female Health Volunteer network and high-priority training for sudenis and other traditional birth attendants, is being initiated much sooner in T-L, than Deurali. In Deurali STC learned that health motivation and education given to women has a much more substantial, immediate benefit for children than almost any other strategy they tried.

This interest in women's development has also evolved in T-L in the selection of female CALs (Community Agricultural Leaders). Trained women in Deurali gained self-confidence and then took on more active roles in the community activities, therefore the overall emphasis on trained women has been expanded.

For infrastructure projects, the STC learned from experience in Deurali that pipes, joints, and other material needed from Kathmandu should not be bought until the local contribution of local materials, digging, etc. was completed. This way STC does not appear to lead the community on or counter logistical problems in storing the goods while waiting for promised support from the community members.

These are some of the lessons learned by STC staff and improvements in their field strategy.

## SUMMARY AND RECOMMENDATIONS

This chapter provides a summary of the conceptual discussions and findings presented in the present report an evaluation of a rural development project which Save the Children Federation/USA (hereafter called STC) has conducted successfully using a small-scale methodological approach called CBIRD (Community Based Integrated Rural Development). Recommendations are presented in the last section of this chapter.

### Summary

The philosophical objective of the CBIRD methodology is two-fold: 1) to shift the role of local people from being dependent passive recipients to self-reliant active participants in all stages of the life cycle of a project, and 2) to create (or rejuvenate, if the foundation already exists, but is dormant) an institutional foundation to enhance community cooperation based on the principle of self-motivation and self-reliance.

The present study proceeded with the primary objective of evaluating STC's rural development project in Deurali. The specific focus was on: 1) whether STC had been able to revitalize a community based institutional framework, which already existed in Nepal, for local development, and 2) service-specific performance and impact of the Project.

For the purpose of evaluation a development institution-building approach was adopted for 2 primary reasons. First, the CBIRD methodology itself places emphasis on the creation of a community based institutional infrastructure as well as the socioeconomic infrastructure. Second, the institutional perspective looks at the community-wide impact and sustained viability of a development project rather than its costs and benefits.

To conduct a thorough and systematic evaluation of the STC Project, a conceptual model of the institutional process of development was first promulgated. The content and basis of the model is discussed in Appendix A. This model views development as having two distinctive, but interrelated, dimensions - technical and social. While the technical dimension deals with technical provisions including capital and technology, the social dimension deals with people's relationships, cooperation, motivations, perceptions, assessments, responses or reactions to the project and with both direct and indirect impact on the population. Thus, development is as much a socio-institutional issue as it is a technical problem. In order for any development project to be successful in a viable manner both these issues have to be not only taken into consideration, but actually coordinated in the processes of policy formulation, implementation and maintenance.

Within this conceptual framework the processes of development has to be viewed in its totality as an integrated, ongoing system, not as fragmented entities. Once the process of development is initiated, it has to be self-sustained in a continuing, dynamic fashion which requires a community based institutional foundation.

The STC Project in Deurali was evaluated in terms of: 1) general issues focusing on the CBIRD methodology and its application, and 2) service-specific issues focusing on individual projects. The first part of the evaluation was conducted against the proposed conceptual model as described in Appendix A.

### General Findings

It was found that the Village Development Committee (VDC) and the Deurali villagers were actively involved in the process of decision-making, project formulation, and implementation. The underlying assumption here is that, if they are involved in all of these processes,

they will have made some investment at least in the form of labor donation. As a result they will view the projects as their personal and community property and will be much more concerned about their continuous success and effective functioning. They worked together with STC staff to identify community needs, set priorities, and mobilize locally available resources including voluntary labor and implement projects. They also decided where, when and at what pace to implement projects in order to maximize their community's participation.

The basic role of STC was to motivate active participation, to provide necessary capital and resources locally unavailable and to monitor projects. In addition, STC proposed some projects on a demonstration basis, when it was certain that they could improve the quality of life in the community. As an instigator, it was STC's responsibility to think along this line because villagers, in needs assessment, were generally concerned about their most immediate needs and tended to overlook latent needs.

In the process of project formulation various issues were taken into consideration. In addition to local needs and demands, the considerations included:

- a) local environmental suitability and sustainability of projects. If the projects are not suitable for the local environment or cannot be sustained within it, they will have little use.
- b) maintainability of projects. If they cannot be maintained with the locally available resources, they are bound to deteriorate and ultimately collapse.
- c) absorptive capacity of the community. If the level of the projects is much higher than the absorptive capacity of the community in which they are implemented, they will be underutilized. Consequently, part of the resources will have been wasted.

x  
4M

- d) resource availability. If the projects are much larger in terms of the requirement of resources than the available resources, they cannot be implemented.
- e) the socioeconomic impact on various population groups. If the projects are going to benefit one group at the expense of others, they will have to be reconsidered or redesigned to maximize benefits, while minimizing negative consequences.

In view of all these considerations and given the reality of the local situation in Deurali, STC has kept its projects relatively small in scale and operation. Most of its projects have been community-wide in nature rather than targeted for specific groups. Consequently, every one has been able to share the benefits resulting from these projects. This does not mean STC has not paid much attention to income-generating activities. In fact, it has done a few things in this regard as well, but more needs to be done.

One unique finding about STC's operation in Deurali is its emphasis on personnel quality, not necessarily in terms of formal education or technical skills, but in terms of dedication, sincerity, communicability, and ability to co-mingle with the local people regardless of class or caste. They have been well trained for such community service work with full dedication, devotion, and sincerity. STC has not constructed any buildings or staff quarters that would isolate them from the local community or villagers. The STC staff live like the villagers and with the villagers; they work for the community, with the community and within the community, not apart from it. This approach has made a full partner out of STC's Deurali Project personnel in the process of community development. And, it has certainly made it easier for the villagers - irrespective of class or caste affiliation - to become full partners in the development of their community.

Despite all these successes achieved by the CBIRD methodology in actively involving the whole community in the process of its development, a procedural shortcoming was observed in the area of project maintenance; a very crucial component in the long-term viability and effectiveness of any project. It is not that STC has failed to maintain the projects which have already been completed. It still must do more to involve the community in the matter of maintenance from the very beginning. There is some confusion in the community and among the VDC members, working directly with STC, and the Panchayat members as to who, or which body, is actually responsible for project maintenance. STC needs to pay increased attention to this issue before it firmly takes root and work with the community to build a community based institutional framework for project maintenance. Given their successes in all other areas of project management and implementation this is something that, given proper attention, can easily be remedied.

#### Service-Specific Findings

As already pointed out, STC has adopted an integrated approach to rural development under the rubric of CBIRD philosophy and methodology. With the help of the Village Development Committee and the villagers' active involvement, STC has implemented various projects in all nine wards of the panchayat, emphasizing drinking water improvement and rural health care (see Table 2). In the process of project formulation, local development is treated as a total system in which different services are truly interlinked and coordinated to be complementary to each other, rather than operating as separate entities.

The findings based on the formal interviews, informal discussions and actual observations show that Save the Children has been extremely successful in not only providing specific services, but actually benefitting the general public across the socioeconomic spectrum. Not-

Y  
50

withstanding a few complaints, mainly resulting from high expectations, not from actual dissatisfaction with the services or their inefficiency, the overall impact has been positive. This positive impact is clearly supported by the fact that over ninety percent of the villagers are impressed with both STC itself and the services provided by it. This summary section is selective, covering only a few service oriented projects under two headings; supportive services and innovative services.

### Supportive Services

A significant number of the services provided by STC have been of supportive nature, i.e. either supporting the existing services or remodelling and improving them. Two examples of the prominent supportive services are the drinking water project and the formal education related project.

The water project is probably STC's largest undertaking in Deurali in terms of both the number of facilities and the amount of total budget. In some cases this project has improved and remodeled the existing sources. In other cases, it has brought the water from distant sources closer, making it more accessible to the local people.

Notwithstanding some minor difficulties discussed in the main text, this service has proven to be very beneficial for the Deurali community as a whole. First, one group the increased accessibility to water has particularly helped is the female population. Since it is the women who have to tend to such daily chores as cooking, washing and carrying drinking water, they have been able to save their time as well as energy. Since the time thus saved is invariably properly utilized, women have been given the opportunity to be much more productive.

Second, the project, by constructing standpipes, has greatly improved the quality of drinking water, one of the primary sources of

many gastro enteritis related and viral diseases. The informal discussion with the staff nurse and the female health volunteer appointed by STC indicates that the incidences of these diseases have been decreasing. They attribute this to the improved quality of drinking water.

In the case of formal education, STC has provided teaching aid materials and furniture to some schools. Where the villagers have identified needs and mobilized available resources including labor, it has also provided necessary capital and certain materials for school building construction. The most significant undertaking in this area is the construction of a 3-room annex to the existing high school building in Ward 8, allowing an expansion in the number of classes attending the school.

#### Innovative Services

There are several projects, providing services of innovative nature which means these services were not either previously available or the approach to the provision of these services is uniquely different. The health care and day care center projects can be cited as two principal examples of innovative services.

The provision of day care centers in Deurali is quite unique because such a concept probably never existed in the minds of the local villagers. Although the villagers were initially ambivalent about this service, it appears to have become quite popular among them, especially the mothers who have become the second group of direct beneficiaries of this project; the first being the children themselves. The day care centers have provided three or four hours of unencumbered time for the mothers during which time they can be more productive or simply do something else.

As far as the day care center students are concerned, the service has been meaningful. It has not only given a well-rounded preschool training to them; it has changed their attitude toward education, forming the habit of going to school. According to one record, almost all of last year's day care center graduates are attending primary schools this year. These students generally seem to be more active. Although the rate of day care center attendance is directly related to the long-term availability (or for that matter unavailability) of milk powder provided by the central office of Nepal Bal Sangathan through STC, the provision of milk as snack has apparently improved the health of the children.

Another innovative service is health care delivery. Save the Children has approached the health care problem in Deurali from both the curative and preventive angles. On the curative side, it has established a health clinic equipped with a health officer, a staff nurse, and a self-supporting cooperative type of drug store. The Clinic is adequate to serve the local population with regard to most commonly observed diseases.

The preventive approach adopted by STC is quite unique in that it is very extensive as well as intensive. It is extensive because it covers the whole panchayat and intensive because the message is transmitted through direct personal contacts and this process is repeated on a regular and rotational basis across the panchayat. The health care program has recruited health volunteers directly from local villages to serve their respective villagers as Community Health Leaders and Female Health Volunteers, who are given a simple training about basic health care and preventive measures. Their main function is to let the villagers know about the importance of preventive health care measures. Volunteer "Sudenis" (midwives) are also recruited and given basic training to assist mothers during child-delivery. In addition, STC has appointed a female health motivator who visits every

village in the panchayat on a rotational basis for five days a week, making careful observations of various sanitary conditions and conferring with the family members of the houses where she notices sanitary problems.

This particular approach, pursued by the female health motivator, is probably the most intensive and effective of all in the area of the preventive health care service provided by STC. The initial participant observation suggests that the extensive as well as intensive approach has produced substantial results. The villagers' outlook on health care and various preventive measures seems to have notably changed.

#### Family Planning Service

The family planning service provided by Save the Children can be considered both supportive and innovative; supportive because it supports the mobile family planning team of FP/MCH and innovative because its approach is unique and effective. The success rate of this service is more than gratifying and the approach should be explored as a potential model for other family planning operations within and outside Nepal.

In the last two years STC's health team including the female health motivator has been able to convince 160 persons (69 females and 91 males) to have vasectomy or laparoscopy operations. Assuming that these 160 people come from 160 different households, the success rate represents 21 percent of the total households in the panchayat.

Such a phenomenal success rate is simply a function of the intensity of personal approach. First of all, the health team maintains an up-to-date record of all couples eligible for family planning in the panchayat. Once the team is notified of the scheduled visit by the mobile family planning clinic of FP/MCH to Deurali, the team mobilizes all of its personnel, frequently visiting all eligible couples and motivating them to adopt permanent family planning. These activities

are further intensified as soon as the mobile clinic arrives in Deurali. Now the team visits every eligible couple, applying persuasion to come for family planning. If the male (husband) comes, the operation is performed right in Deurali. If the female (wife) comes, she is taken to Gorkha Bazaar for laparoscopy. STC provides a free roundtrip transportation for the female adopters. Following the operation, the health team pays frequent visits to female adopters to make sure no complications have set in. It also looks after the health of these family planning adopting couples' children.

### Recommendations

Since the ongoing STC process of integrated rural development has been participatory, involving the community in planning as well as implementation, it would be somewhat imposing and self-defeating for the present research team to make specific project recommendations. Instead, it is felt that it would be more appropriate for the community and villagers themselves to generally determine what should and could be done in the coming months or years. Keeping in view the active participatory roles played by the villagers, the list of recommendations is kept deliberately short, focusing on only those issues that are pertinent and should be considered in order to sustain and move forward with the process of development.

Four issues are identified:

- a. Maintenance.
- b. Income generating activities and private entrepreneurship.
- c. Adult literacy.
- d. Agricultural Development.

### Maintenance

As pointed out in the main text, maintenance is a very crucial component in the process of development. While Save the Children has begun this process on certain projects, it needs to do more. Specifically,

1. It should increase the involvement of the villagers in infrastructural project maintenance work, along with other projects.
2. It should continue its work with the villagers in laying the institutional foundation for maintenance based on the STC principles of community cooperation and organization.

### Income Generating Activities and Private Entrepreneurship

In the Deurali context, Save the Children has already done an admirable job in making various community-wide basic services (e.g. drinking water, health care, education, etc.) available with the active help of the community. The current evaluation research team feels the time has arrived for STC to pay increasing attention to income generating activities and to encourage private entrepreneurship. As discussed in the main text, STC has already initiated some income generating activities in Deurali, but more are needed. Specifically, STC needs to encourage private entrepreneurship. The success of private entrepreneurship will depend on a number of factors. Two of the most important factors are the availability and access to the necessary raw materials and the market potential. These factors should be taken into consideration by Save the Children and the villagers, taking part in the income generation projects. When appropriate and necessary outside assistance should be consulted to identify which projects are feasible in terms of costs and benefits.

### Adult Literacy

As mentioned in the main text, the adult literacy classes have been quite popular and has had substantial village participation, especially from the women and young girls.

With respect to adult literacy, some specific recommendations are:

1. An expanded curriculum be introduced to be used after a basic level of literacy is attained.
2. The curriculum should be functional, focusing on issues which could improve the standard of living and productivity.

3. The functional character of the curriculum should be related to those issues for which the women and young girls are responsible. Examples include: farming - related issues, health sanitation, child care, etc.

### Agriculture

Given the fact that in Deurali, there is an accessible market for surplus production, as far as Kathmandu and Pokhara thanks to the Kathmandu - Pokhara - Gorkha highway networks, we recommend some agricultural development measures which STC can, on a testing and demonstration basis, initiate in Deurali. Since contextual discussions concerning these measures are already provided in the agricultural section of the main text, we only provide the actual measures in this section.

- a. One of the standard methods of increasing agricultural (land) productivity and production is through the practice of multi-croppings. Emphasis must be placed on the possibility of growing three crops per year in Khet land. The three-crop rotation possibilities are:

1. Maize - Rice - Wheat
2. Rice - Rice - Wheat
3. Rice - Winter Vegetables - Spring Vegetables

In the case of rice CH45 might be the most suitable improved variety for an early crop of rice, whereas for maize the improved variety "Arun", should be introduced to replace the local variety, "Sathia." As far as wheat is concerned, an improved variety called RR21 is already popular in the panchayat and we recommend its continuation with better quality of its seeds.

- b. Maize, millet, mustard, upland rice and blackgrams are some of the most commonly grown crops in the Pakho land. Among the improved varieties of maize, Rampur composite, Hetauda composite and Khumal Yellow have already been introduced in the panchayat and found to yield more. Steps should be taken to make high quality seeds of these varieties more easily available in the local communities. Training should be provided in the area of better and safer storage of maize grains and seeds.
- c. Among the cash crops blackgram, locally known as "mash", is very popular and the variety available in Deurali is good. However steps should be taken to sustain its varietal purity and quality.

Vegetables are also grown in the panchayat and winter vegetables are more popular than spring or summer vegetables. Because of Deurali's accessibility to important market centers, especially Pokhara where the supply of vegetables is generally lower than their demand, various kinds of vegetables can be grown as cash crops during various seasons. They are highly profitable cash crops. Possibilities should be explored to harness this potential and to transform Deurali into a source of fresh vegetables. Production of tuber crops, potatoes and colocasia (Taro) should be also developed.

- d. The majority of the farmers in Deurali use local varieties of seeds obtained through the traditional farmer-to-farmer seeds exchange system. Since this is a fairly popular channel of the distribution of seeds, possibilities should be explored to tap this channel for the timely distribution of high quality and improved varieties of seeds to the local farmers and for the introduction of new varieties which at first may have to be done on a demonstration basis. This channel may also be utilized for such introductory demonstration activities.

- e. Since it is the women who are largely involved in seeds production, handling and storage, emphasis should be placed on their practical training at the local level so they do not have to leave their villages for such training.
- f. Since organic manure is the main source of fertilizers in Deurali, intensive efforts should be geared toward introducing better methods of composting which is essential to increase the amount of fertilizers available. This may have to be done on a testing demonstration basis - a procedure similar to the introduction of smokeless chulhos. Women farmers should also be involved in the process of testing and demonstration.
- g. STC should probably look into the possibility of making necessary arrangements to provide training for the local blacksmiths to improve their technical skills as well as production capacities. STC may even have to help them establish a workshop. In addition to providing improved agricultural implements for the local communities, this program has the potential to serve three different purposes which are:
  - 1. To support and improve the local technological foundation,
  - 2. To encourage private entrepreneurship which may, one day, evolve into a cottage industry enterprise, supplying agricultural implements to surrounding panchayats and beyond, and
  - 3. To directly reach the poor because the blacksmiths in the Nepalese context are at the bottom of both the caste and class hierarchies.
- h. Grains and seeds storage facilities at the farm level were found to be in a rudimentary stage. These facilities need to be greatly

improved to reduce the loss of stored grains and to maintain the quality of seeds. One method to improve such facilities is to introduce metal bins. STC should look into the possibility of introducing such bins to the farmers first on a selective testing and demonstration basis.

- i. One of the main problems in rural economies is the lack of cash in hand and credit at reasonable interest rates. While we are not sure about STC playing the role of a creditor, it may want to explore various credit avenues, for example, production loans in the forms of assets and implements or to establish entrepreneurial facilities such as a workshop for the local blacksmiths.
- j. STC should help farmers improve the quality of their livestock by introducing new breeds. Emphasis should also be placed on developing goat and poultry farming into commercial farming, because the demand for them in and around the panchayat is quite high. In addition, STC may have to make necessary arrangements to make veterinary services available to the local community.

## APPENDIX A.

A Conceptual Model of the Development Process

Every development project has two dimensions: technical and social. While the technical dimension deals with technical provisions including capital and technology, the social dimension deals with people's perception, assessment, and response or reaction to the project and with the impact on the population. Thus, development is as much a socio-institutional issue as it is a technical problem.

The process of development has to be viewed in its totality as an integrated, ongoing system. Once the process of development is initiated, it has to be self-sustained in a continuing fashion which requires a community-based institutional foundation. Within this conceptual framework we have developed an institutional model which views development as a total, integrated system, not as fragmented entities. When we evaluate a development project against this model, we shall gain a clearer understanding of the degree of effectiveness and effective functioning of the project over a long period of time. Our model is presented in Figure 1.

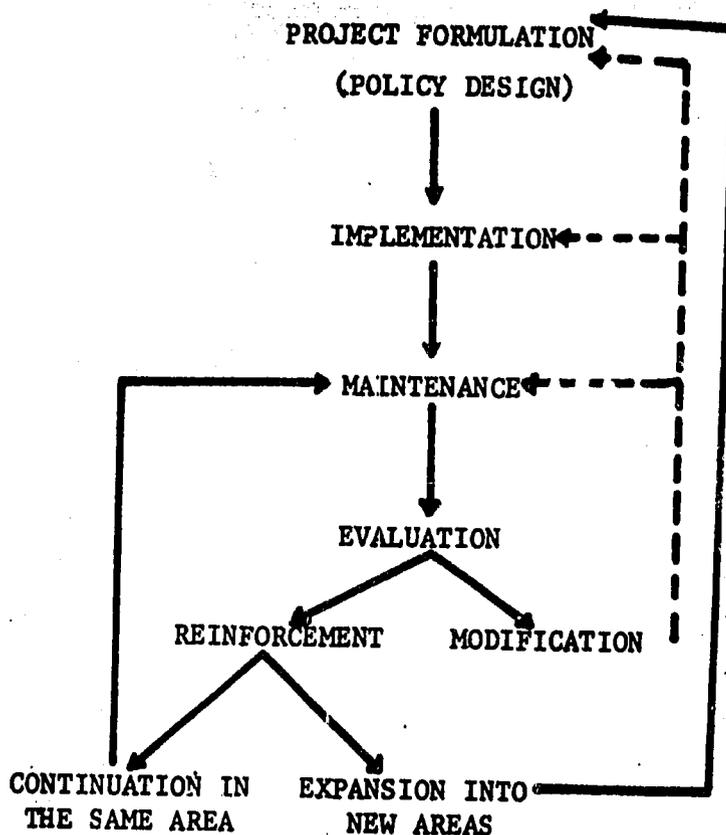
Project Formulation

The model shows that the life cycle of a development project begins with its formulation, finally reaching the stage of either continuation in the same area (if it is of a limited nature) or expansion into new areas if resources are available.

Project formulation has to be based on various considerations: local needs and demand, environmental suitability and sustainability, maintainability, absorptive capacity, resource availability, socio-economic impact on various population groups, and many others.

Figure 1

## A CONCEPTUAL MODEL OF THE INSTITUTIONAL PROCESS OF DEVELOPMENT



Leads to another stage of the project's life cycle. If the project evaluation finds that the project is operating effectively, the obvious step is to reinforce the project and continue it or begin the process of expansion into new areas, if the necessary resources are available.

If the evaluation finds drawbacks, the project will have to be modified. The process of modification will depend on the nature of drawbacks -- whether they are technical, policy related, implementation related, or maintenance related. For example, if they are related to project formulation (policy), the process of modification will have to begin at the project formulation stage.

### Project Implementation

Once the project is formulated, it has to be implemented if it is to have any value. Implementation is a function of the organized mobilization or availability of necessary inputs, i.e. land, labor, capital, and technology in standard economic terms. Resource mobilization for community level projects can be organized from outside - by the government or other external agencies - or from within - by the local community itself. We emphasize the institutional cooperative, and self-reliant role of the latter for the simple reason that: once the community is motivated to become an active participant in a project, it will view it as its personal project. Since the people in the community have made some personal investment, at least in the form of their labor donation, they will be much more concerned about its success and effective functioning.

### Project Maintenance

The next stage is maintenance - a very crucial stage in the project's life cycle and continual functioning. It is crucial because, if the project is not properly maintained, it becomes incapable of functioning effectively and productively.

Maintenance is a real issue; it has become a national problem in most underdeveloped countries. One after another projects have failed mainly because they are either not maintained or are too large to be maintained. Consequently, many grandiose projects have become obsolete with their life cycle prematurely cut short.

### Project Evaluation and Reinforcement/Modification

Next the project has to be evaluated to determine its effectiveness as well as shortcomings. Based on the findings one can determine whether

X  
100

the project has to be reinforced (if effective and productive) or necessary modification and improvements have to be made to redress shortcomings. In addition, the decision can be made regarding the continuation (or termination in few cases) and expansion of the project.

#### Project Continuation and Expansion

Continuation will take the project's life cycle back to the (periodic) maintenance stage and then to (periodic) evaluation and reinforcement or modification, depending on the situational changes. Expansion into new areas will take it all the way back to the initial phase, i.e. formulation. While the same basic design and principles will be used to formulate projects in new areas, certain locational variations will have to be taken into consideration. This will not only complete one generation of the project's life cycle, but also take it to the next generation and the process will continue.

It is within this conceptual framework that the STC Project in Deurali is being evaluated. The specific focus is one whether Save the Children has followed this model, what Save the Children has done to build a community-based institution to carry on the Project after its departure, and how the Project has affected people's lives.

Is Small Beautiful?<sup>2/</sup>

The question to be tentatively explored in this section is: are there possible spread effects of Save the Children's approach to other integrated rural development (IRD) programs? Given all that has been spelled out in the main text as well as the summary section, the evaluation research team feels that rural development policy makers and planners may be able to learn some procedural lessons from Save the Children's approach to integrated rural development.

In exploring what these lessons might be, the research team makes no mistake about their understanding of the fact that there is no universal model of rural development that can be applied across the board. It is fully realized that a model is only a paradigmatic framework. Its successful application (or duplication in the real world) depends as much on its environmental suitability, institutional functionability and sociohistorical accountability as it does on the personal devotion of its implementors, which may arise either from their personal dedication/conviction and/or sociopolitical compulsion.

Based on the general understanding of various IRD projects underway in Nepal, a brief comparative discourse can be generated. First of all, it has to be kept in mind that no model is good or bad; but every model may have room for improvement. The basic difference between Save the Children's approach (or CBIRD methodology) and many other IRD projects lies not in their goals and objectives, but in the procedures and scales of their operation.

---

2/

This phrase is a derivative of E.F. Schumaker's famous book, "SMALL IS BEAUTIFUL."

Compared to many other projects which cover a large number of panchayats or even a whole zone, Save the Children's operation is very small in terms of both the operational budget and the area of spatial coverage. Thus, as far as the procedural matters are concerned the STC approach is very intensive. Additionally, the project implementation approach is truly integrative because its panchayat level field office directly coordinates all different projects rather than implementing them through different line agencies, functioning almost as independent entities.

Two of the most distinguishing characteristics of the STC approach are its emphasis on 1) personnel quality, especially in terms of leadership based on personal dedication and motivation, and 2) building an institutional foundation based on the principles of community cooperation and self-motivation. The process of local development is truly participatory actively involving the local people in assessing needs, planning and implementation. Most importantly, the people themselves decide when, where, and at what pace to implement projects.

There is no doubt some may question the wisdom of the operational framework of this approach in which the pace of development is slow. Certainly, at this pace it may take decades to spread the process and effects of development over the whole country, when the political reality requires that development be achieved at an exponential rate. Yet, the present research team feels that this apparent contradiction between the urgency of rapid development and the concentrated pace of STC's approach can be short-circuited if some of STC's strengths are creatively extended to other larger IRD programs.

Of course, when extending some of its components to other IRD programs, the approach may have to be modified to accommodate local variations including environmental conditions and the sociohistorical

context. Specifically, there are two areas where the extension of the Save the Children approach to other IRD programs might be possible:

1. The policy-makers and planners of other large scale IRD programs might, with an open mind, want to look into the operational feasibility of breaking down their programs into several field units<sup>3/</sup> within an area rather than into line agencies in charge of specific sectors operating almost independently. The assumed advantage of project implementation through field units as opposed to line agencies is that the process of development is not only maximally decentralized, it actually becomes truly participatory with increased local inputs in all phases of a project, with increased local resource mobilization and with increased coordination among various sectors or services. In exploring this possibility, of course, one has to figure out if there are any additional costs involved in the procedural transformation and how much, if there are, because no one can afford to overlook the importance of resource limitation. However, it is likely that breaking a large-scale project into smaller field units with a decentralized administration may be less costly over the long-term than a more centralized project.
2. Large scale IRD programs might also want to explore the need for recruiting field staff directly from among the local population who have cultural and social obligations to their community. There is no doubt they have to be given basic as well as extensive technical training, preferably in the field on a periodic basis, with a significant effort also made in the area of leadership

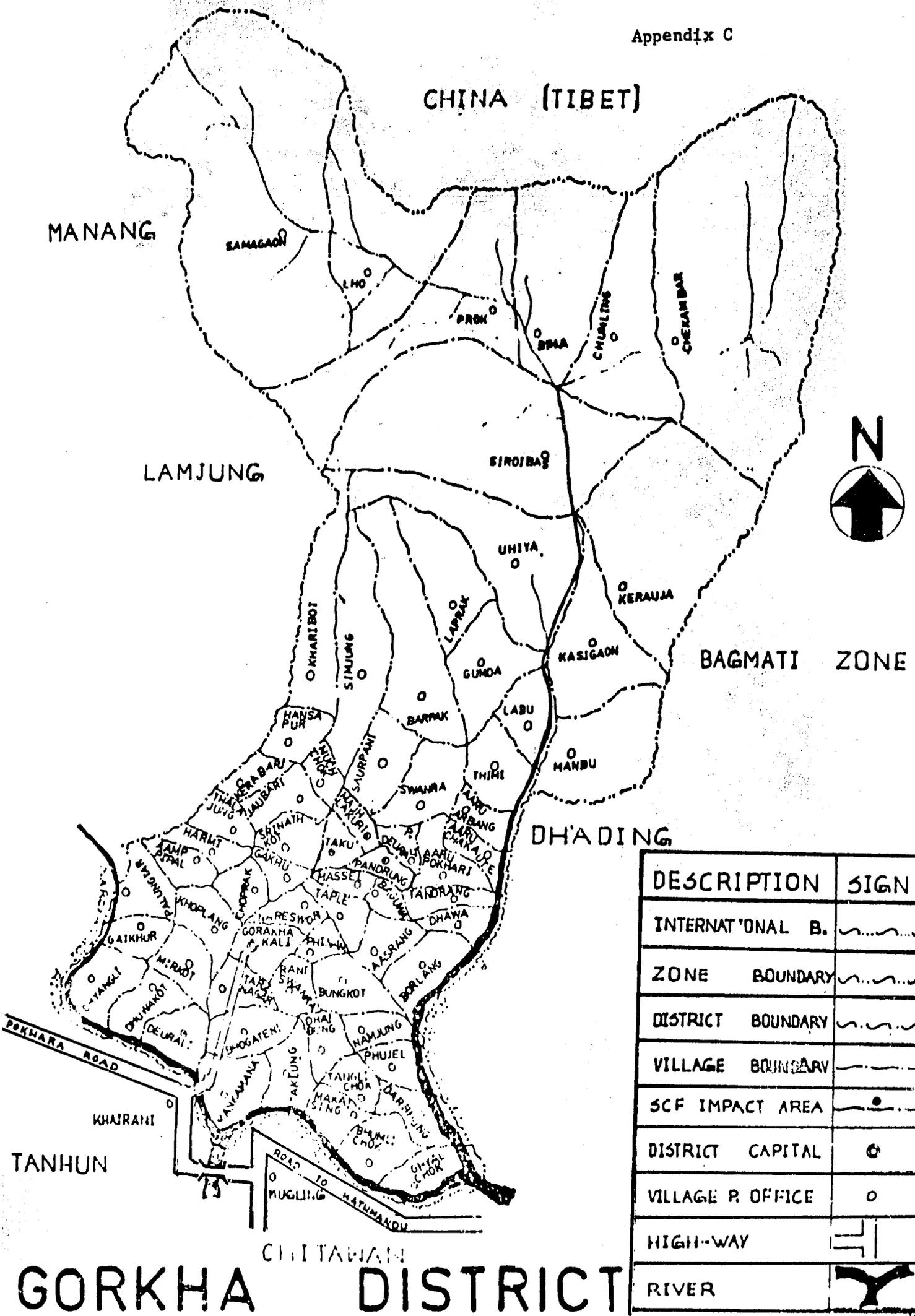
---

How large an area each field unit should cover will have to be assessed in accordance with the spatial configuration and the demographic density of the area where the rural development activities are to be implemented.

Each field unit will have a staff headed by a field coordinator whose main function is to work closely with villagers in identifying needs and mobilizing resources and to coordinate various programs systematically and effectively.

development. The long-term benefit to the local community will be expanded by improving the leadership skills and human resources of the community members themselves.

There are many other aspects of the Save the Children approach that may be explored, given a project's scope for modification to improve its general effectiveness. It is needless to say that exploration of above possibilities or procedural transformations is, however, not recommended for the programs that are already operating effectively. Whether programs have room for improvement or whether they are effective is something which specific policy-makers, planners, and evaluators will have to decide.



DESCRIPTION	SIGN
INTERNAT'IONAL B.	.....
ZONE BOUNDARY	.....
DISTRICT BOUNDARY	.....
VILLAGE BOUNDARY	.....
SCF IMPACT AREA	.....
DISTRICT CAPITAL	○
VILLAGE P. OFFICE	○
HIGH-WAY	⊥
RIVER	Y

# MAP OF DEURALI VILLAGE PANCHAYAT

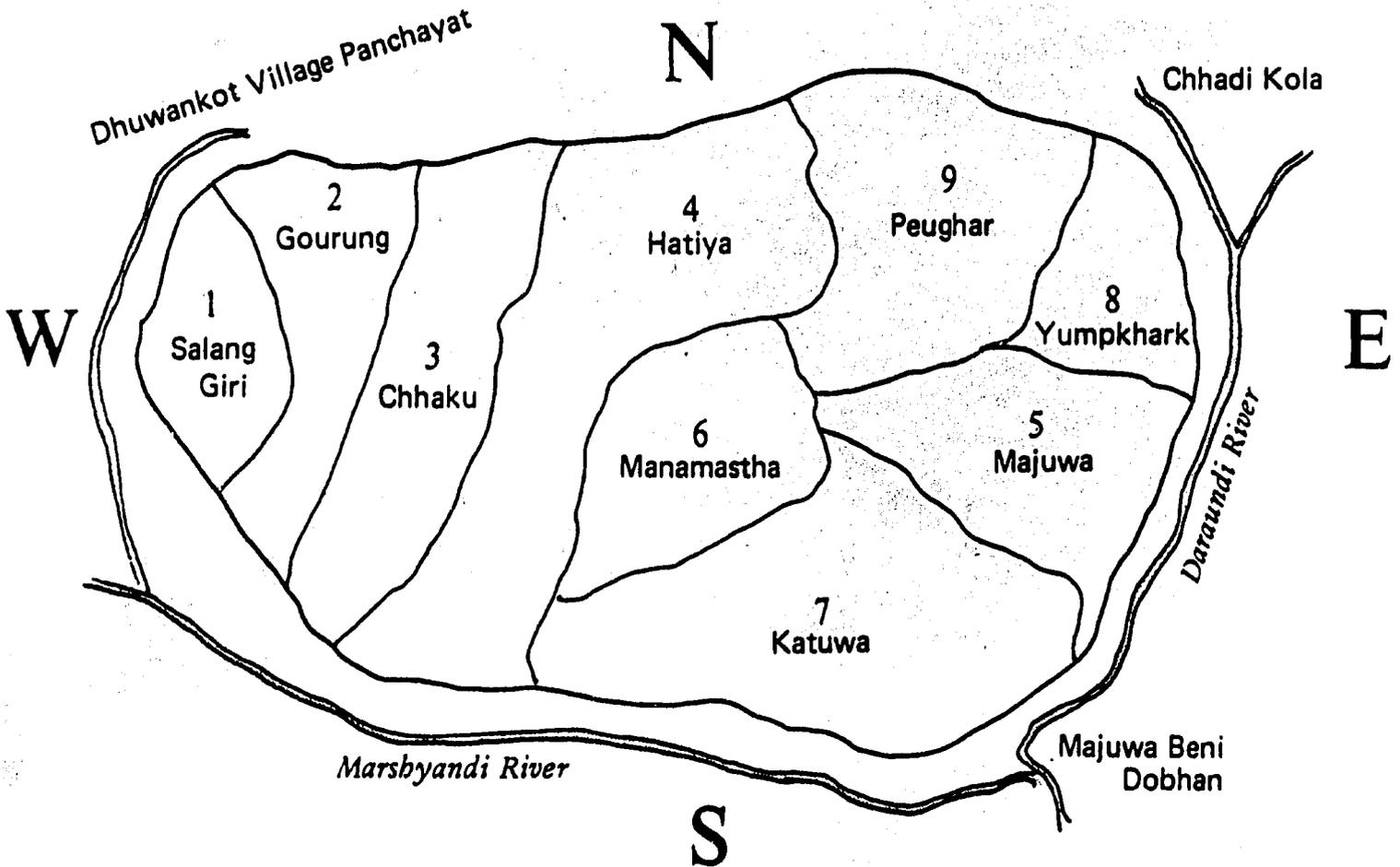


Table 1

Population Distribution in Deurali Panchayat by Community Health Leader (CHL) Area, Age, and Sex, 1984

CHL Area/Age	0-1	2-5	6-10	11-15	16-20	21-45	46 & Over	Total	Male	Female
1.	7	35	42	37	30	84	59	294	136	158
2.	5	16	30	32	22	57	44	206	107	99
3.	6	38	44	32	25	89	45	279	131	148
4.	6	13	23	24	22	46	25	159	81	78
5.	6	68	66	64	67	172	93	536	263	273
6.	24	85	85	70	63	180	95	602	310	292
7.	9	43	60	51	24	124	61	372	185	187
8.	9	78	103	89	65	202	98	644	328	316
9.	14	50	59	68	42	151	71	455	228	227
10.	5	22	24	22	19	64	32	188	92	96
11.	3	12	21	20	14	41	22	133	63	70
12.	7	14	13	21	10	37	15	117	57	60
13.	7	33	22	23	15	64	35	199	99	101
<b>Total</b>	<b>108</b>	<b>507</b>	<b>592</b>	<b>553</b>	<b>418</b>	<b>1311</b>	<b>695</b>	<b>4184</b>	<b>2079</b>	<b>2105</b>

Source: Save the Children Office in Deurali, 1984.

198  
x

Table 2

Spatial Distribution of STC Projects by Ward

Ward/Project	Drinking Water	Day Care Center	School/Ed. Materials Building	Main Health Clinic	Community Health Leader (Male/Female)	Adult Literacy Center	MCH Mini Clinic	Community Agricultural Leader	Small Cottage Industry	Agricultural Inputs Shop	Total	Percentage
1.	-	1	1	-	1	-	-	1	-	-	4	6
2.	-	-	-	-	1	-	-	1	1	-	3	4
3.	-	-	1	-	2	1	-	2	-	-	6	8
4.	7	2 <sup>1/</sup>	-	1	2	-	1	2	-	1	16	23
5.	7	1	1	-	2	2	1	1	1	-	16	23
6. <sup>2/</sup>	-	-	-	-	-	-	-	-	-	-	-	0
7.	3	1	-	-	1	-	-	1	-	-	6	8
8.	10	-	1 (High School)	-	1	-	-	1	-	-	13	18
9.	3	1	-	-	1	1	-	1	-	-	7	10
<b>Total</b>	<b>30</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>11</b>	<b>4</b>	<b>2</b>	<b>10</b>	<b>2</b>	<b>1</b>	<b>71</b>	<b>100</b>
<b>(Percentage)</b>	<b>(42)</b>	<b>(8)</b>	<b>(6)</b>	<b>(1)</b>	<b>(16)</b>	<b>(6)</b>	<b>(3)</b>	<b>(14)</b>	<b>(3)</b>	<b>(1)</b>	<b>(100)</b>	

Source: Save the Children Office in Deurali, 1984.

1/ One of these 2 day care centers covers both Ward No. 4 and Ward No. 6.

2/ Ward No. 6 is adjacent to Ward No. 4 and utilizes quite a few of the services located in Ward No. 4.

129

Table 3

Villagers' Ability to Successfully Continue Projects after STC's  
Departure

Ability	Absolute Number	Percentage
Yes	44	56
No	25	32
Don't Know	9	12
Total	78	100

If yes, which projects ?	Number
Drinking Water	21
School	19
Health Clinic	11
Day Care Center	8
Others	6

If no, why ?	Number
Financial Difficulty	21
Lack of Cooperation Among Villagers	10
Lack of Technicians	2

Source: Field Survey, 1984.

Table 4.

Villagers' Ability to Successfully Continue Projects after STC's Departure  
(by Landholding Class and Caste)

Landholding Class	Yes	(%)	No	(%)	Don't Know	(%)
0 - 4	7	(37)	9	(47)	3	(16)
4 - 10	11	(52)	8	(38)	2	(10)
10 - Over	26	(68)	8	(21)	4	(11)
Total	44	(56)	25	(32)	9	(12)

Caste

Brahmin/Chhetri	19	(61)	9	(29)	3	(10)
Magar	7	(44)	4	(25)	5	(31)
Professional Caste	6	(46)	6	(46)	1	(8)
Darai	8	(80)	2	(20)	-	-
Newar	4	(50)	4	(50)	-	-
Total	44	(56)	25	(32)	9	(12)

Source: Field Survey, 1984.

**Table 5**

**Socio-Demographic Characteristics of the Sample Population by Landholding Class**

Landholding Class (in Ropanis)	Sample Size	Average Family Size	Population	Male	Female	<u>Educational Qualifications</u>				
						Illiterate	Literate but No Formal Education	1-5 Class	6-10 Class	SLC and over
0 - 4	19 (24%)	4.8	92	49	43	55 (60%)	12 (13%)	20 (22%)	5 (5%)	-
4 - 10	21 (27%)	6.8	142	72	70	80 (56%)	18 (13%)	39 (27%)	5 (4%)	-
10 - Over	38 (49%)	6.7	254	147	107	138 (54%)	25 (10%)	59 (23%)	24 (9%)	8 (3%)
<b>Total</b>	<b>78</b>	<b>6.3</b>	<b>488</b>	<b>268</b>	<b>220</b>	<b>273</b>	<b>55</b>	<b>118</b>	<b>34</b>	<b>8</b>
<b>(Percentage)</b>	<b>(100)</b>		<b>(100)</b>	<b>(55)</b>	<b>(45)</b>	<b>(56)</b>	<b>(11)</b>	<b>(24)</b>	<b>(7)</b>	<b>(2)</b>

Source: Field Survey, 1984.

113

Table 6

Socio-Demographic Characteristics of the Sample Population by Caste

Caste	Sample Size	Average Family Size	Population			Educational Qualifications				
			Male	Female	Illiterate	Literate but No Education	1-5 Class	6-10 Class	SLC and Over	
Brahmin/Chhetri <sup>1/</sup>	31	5.9	184	104	80	97 (52%)	20 (11%)	44 (24%)	18 (10%)	5 (3%)
Magar	16	6.0	96	51	45	54 (56%)	18 (19%)	18 (19%)	6 (6%)	-
Professional Caste <sup>2/</sup>	13	6.5	84	51	33	52 (62%)	9 (11%)	18 (21%)	5 (6%)	-
Darai	10	6.6	66	35	31	42 (64%)	2 (5%)	19 (29%)	1 (1%)	1 (1%)
Newar	8	7.3	58	27	31	28 (48%)	5 (9%)	19 (33%)	4 (7%)	2 (3%)
Total	78	6.3	488	268	220	273	55	118	34	8
(Percentage)	(100)		(100)	(55)	(45)	(56)	(11)	(24)	(7)	(2)

Source: Field Survey, 1984.

<sup>1/</sup> Brahmins and Chhetris are grouped together because of many similarities in their life style and relative socio-economic positions.

<sup>2/</sup> Professional caste includes Kami (blacksmiths), Sunar (goldsmiths), Damai (tailors), and Sarki (leather workers). These people also tend to commonly call themselves Bishwakarma after the greatest craftsman - B'ishwakarma - in the Hindu literature.

Table 7

Landholdings of the Sample Population by Caste.

Caste/Landholdings (in Ropani)	0-4	4-10	10-15	15-20	20 & Over	Total	Percentage
Brahmin/Chhetri	7	7	5	4	8	31	40
Magar	1	7	3	2	3	16	20
Professional Caste	6	3	4	-	-	13	17
Darai	3	2	-	3	2	10	13
Newar	2	2	1	1	2	8	10
<b>Total</b>	<b>19</b>	<b>21</b>	<b>13</b>	<b>10</b>	<b>15</b>	<b>78</b>	<b>100</b>
<b>(Percentage)</b>	<b>(24)</b>	<b>(27)</b>	<b>(17)</b>	<b>(13)</b>	<b>(19)</b>	<b>(100)</b>	

Source: Field Survey, 1984.

511 X

Table 8

**Villagers' Participation in the Process of Decision-Making Concerning STC Projects**

<b>Decision-Making</b>	<b>Absolute Number</b>	<b>Percentage</b>
Projects Decided by Villagers	47	60
Decided by Others	31	40
<b>Total</b>	<b>78</b>	<b>100</b>

<b>Project Decision-Makers</b>	<b>Number</b>
Pradhan Panch & Panchayat Members	18
VDC & STC Staff	9
Don't Know	4
<b>Total</b>	<b>31</b>

Source: Field Survey, 1984.

**Table 9**

**Villagers' Participation in the Process of Decision-Making Concerning STC Projects (by Landholding Class and Caste)**

Landholding Class	Decided by Villagers (%)	Decided by Others <u>1/</u> (%)	Don't Know (%)
0 - 4	12 (63)	6 (32)	1 (5)
4 - 10	12 (57)	8 (38)	1 (5)
10 - Over	21 (55)	15 (40)	2 (5)
<b>Total</b>	<b>45 (58)</b>	<b>29 (37)</b>	<b>4 (5)</b>

**Caste**

Brahmin/Chhetri	10 (32)	18 (58)	3 (10)
Magar	11 (69)	4 (25)	1 (6)
Professional Caste	9 (69)	4 (31)	-
Darai	10 (100)	-	-
Newar	5 (63)	3 (37)	-
<b>Total</b>	<b>45 (58)</b>	<b>29 (37)</b>	<b>4 (5)</b>

Source: Field Survey, 1984.

1/ Others include Panchayat members, VDC members and STC staff.

Table 10

Participants in Discussion Concerning STC Projects

Participants	Absolute Number	Percentage
Village Panchayat Members and STC	26	33
VDC and STC	24	30
Villagers	13	17
STC Staff	6	8
Village Panchayat Members	6	8
Don't Know	3	4
Total	78	100

Source: Field Survey, 1984.

Table 11

Villagers' Participation in STC Projects

Participation	Absolute Number	Percentage
Yes (Labor Donation)	50	64
No Participation	28	36
Total	78	100

Source: Field Survey, 1984.

Table 12

Villagers' Participation in STC Projects (by Landholding Class and Caste)

Landholding Class	Participation (Labor Donation)	(%)	No Participation	(%)
0 - 4	10	(53)	9	(47)
4 - 10	18	(86)	3	(14)
10 - Over	22	(58)	16	(42)
Total	50	(64)	28	(36)

Caste

Brahmin/Chhetri	24	(77)	7	(23)
Magar	8	(50)	8	(50)
Professional Caste	8	(62)	5	(38)
Darai	5	(50)	5	(50)
Newar	5	(63)	3	(37)
Total	50	(64)	28	(36)

Source: Field Survey, 1984.

Table 13

**Implementation of Projects Demanded by Villagers**

<b>Implementation</b>	<b>Absolute Number</b>	<b>Percentage</b>
Yes	43	55
No	35	45
<b>Total</b>	<b>78</b>	<b>100</b>

<b>If yes, which ones</b>	<b>Number</b>
School	29
Drinking Water	26
Day Care Center	17
Health Clinic	11

<b>If No, which ones</b>	<b>Number</b>
Drinking Water	20
Irrigation	13
School	10
Day Care Center	5
Agriculture	3
Road Maintenance	3
Others	6

Source: Field Survey, 1984.

Table 14

Implementation of Projects Demanded by Villagers (by Landholding Class and Caste)

Landholding Class	Implemented	(%)	Not Implemented	(%)
0 - 4	12	(63)	7	(37)
4 - 10	10	(48)	11	(52)
10 - Over	20	(53)	18	(47)
<b>Total</b>	<b>42</b>	<b>(54)</b>	<b>36</b>	<b>(46)</b>

Caste

Brahmin/Chhetri	12	(39)	19	(61)
Magar	9	(56)	7	(44)
Professional Caste	8	(62)	5	(38)
Darai	7	(70)	3	(30)
Newar	6	(75)	2	(25)
<b>Total</b>	<b>42</b>	<b>(54)</b>	<b>36</b>	<b>(46)</b>

Source: Field Survey, 1984.

Table 15

Villagers' Desire/Attempt to Implement New Projects Through STC

Attempts	Absolute Number	Percentage
Yes	35	45
No	43	55
Total	78	100

Projects	Number
Drinking Water	14
Irrigation	12
Day Care Center	6
Improved Livestock	5
School	4
Road Maintenance	4
Others	10

Source: Field Survey, 1984.

Table 16

Villagers' Desire/Attempt to Implement New Projects through STC (by Landholding Class and Caste)

Landholding Class	Attempt	(%)	No Attempt	(%)
0 - 4	8	(42)	11	(58)
4 - 10	9	(43)	12	(57)
10 - Over	18	(47)	20	(53)
Total	35	(45)	43	(55)

Caste

Brahmin/Chhetri	18	(58)	13	(42)
Magar	7	(44)	9	(56)
Professional Caste	3	(23)	10	(77)
Darai	3	(30)	7	(70)
Newar	4	(50)	4	(50)
Total	35	(45)	43	(55)

Source: Field Survey, 1984.

Table 17

Any Need to Improve STC Projects ?

Improvement	Absolute Number	Percentage
Yes	45	58
No	24	31
Don't Know	9	11
Total	78	100

Improvement of	Number
Drinking Water Facility	11
Free Medicine/Treatment	5
School	5
Maintenance	9
Others	10

Source: Field Survey, 1984.

Table 19

Failure of STC Projects

Failure	Absolute Number	Percentage
No	64	82
Don't Know	10	13
Yes (water project due to irregular water supply)	4	5
Total	78	100

Source: Field Survey, 1984.

Table 18

Any Need to Improve STC Projects (by Landholding Class and Caste) ?

Landholding Class	Yes	(%)	No	(%)	Don't Know	(%)
0 - 4	12	(63)	5	(26)	2	(11)
4 - 10	14	(67)	5	(24)	2	(9)
10 - Over	19	(50)	14	(37)	5	(13)
<b>Total</b>	<b>45</b>	<b>(58)</b>	<b>24</b>	<b>(31)</b>	<b>9</b>	<b>(11)</b>

Caste

Brahmin/Chhetri	18	(58)	10	(32)	3	(10)
Magar	8	(50)	5	(31)	3	(19)
Professional Caste	6	(46)	5	(38)	2	(16)
Darai	6	(60)	3	(30)	1	(10)
Newar	7	(88)	1	(12)	-	-
<b>Total</b>	<b>45</b>	<b>(58)</b>	<b>24</b>	<b>(31)</b>	<b>9</b>	<b>(11)</b>

Source: Field Survey, 1984.

Table 20

Commercial Progress after STC's Arrival

Commercial Progress	Absolute Number	Percentage
None	59	76
Yes	18	23
Don't Know	1	1
Total	78	100

Progress	Number
Increased Sales of Household Products	11
Tea Shops	7

Source: 'Field Survey, 1984.

Table 21

**Personal Benefits from STC Projects**

<b>Benefits</b>	<b>Absolute Number</b>	<b>Percentage</b>
Yes	64	82
No	14	18
<b>Total</b>	<b>78</b>	<b>100</b>

<b>Benefits</b>	<b>Number</b>
Medical Treatment/Medicine	32
Drinking Water	27
Day Care Center	23
School	21
Employment	6
Training	3

Source: Field Survey, 1984.

**Table 22**

**Personal Benefits from STC Projects (by Landholding Class and Caste)**

Landholding Class	Benefits	(%)	No Benefits	(%)	Total
0 - 4	18	(96)	1	(4)	19
4 - 10	18	(86)	3	(14)	21
10 - Over	28	(74)	10	(26)	38
<b>Total</b>	<b>64</b>	<b>(82)</b>	<b>14</b>	<b>(18)</b>	<b>78</b>

**Caste**

Brahmin/Chhetri	27	(87)	4	(13)	31
Magar	11	(69)	5	(31)	16
Professional Caste	11	(85)	2	(15)	13
Darai	9	(90)	1	(10)	10
Newar	6	(75)	2	(25)	8
<b>Total</b>	<b>64</b>	<b>(82)</b>	<b>14</b>	<b>(18)</b>	<b>78</b>

Source: Field Survey, 1984.

Table 23

Community Benefits from STC Projects

Benefits	Absolute Number	Percentage
Yes	76	97
No	2	3
Total	78	100

Benefits	Number
Medical Treatment/Medicine	44
School	43
Day Care Center	41
Drinking Water	38
Employment	8
Training	5
Others	5

Source: Field Survey, 1984.

Table 24

Villagers' Impression of STC Projects

Impression	Absolute Number	Percentage
Good	67	86
Indifferent	11	14
Total	78	100

Source: Field Survey, 1984.

Table 25

Villagers' Impression of STC Itself

Impression	Absolute Number	Percentage
Very Good	7	9
Good	70	90
Don't Know	1	1
Total	78	100

Source: Field Survey, 1984.

Table 26

Sources of Drinking Water

Sources	Number	Percentage
River (Stream)	19	24
Well (Spring)	15	19
Built Tap	44	57
Total	78	100

Improvement in Drinking Water Facility after STC's Arrival

Improvement	Number	Percentage
Better	32	41
About the Same	46	59
Total	78	100

Source: Field Survey, 1984.

Table 27

**Clinic Visits by Villagers, 1983**

<b>Months</b>	<b>Number of Visits</b>
January	156
February	242
March	374
April	460
May	646
June	600
July	296
August	248
September	356
October	264
November	258
December	203
<b>Total</b>	<b>4,103</b>

Monthly Average = 342

Source: Save the Children Office in Deurali, 1984.

X  
133

Table 28

Health Problems in the Family

Anybody with Health Problem	Number	Percentage
Yes	39	50
No	39	50
Total	78	100

Sources of Medical Treatment

Source	Number	Percentage
Health Clinic	28	72
Local Medicine	7	18
Shaman	4	10
Total	39	100

Source: Field Survey, 1984.

Table 30

Degree of Malnutrition Based on Arm Tape Measurement, 1983

Malnutrition (1-5 Years of Age)	Number	Percentage
Severe Malnutrition	35	10
Mild Malnutrition	141	39
Normal	181	51
Total	357	100

Source: Save the Children Office in Deurali, 1984.

Table 31

Food Supplement for Breast-fed Babies

Supplement	Number	Percentage
Yes	53	68
No	25	32
Total	78	100

Supplementary Food and Babies' Age

Age in months	Number	Percentage
3 - 6 months	18	34
Over 6 months	35	66
Total	53	100

Source: Field Survey, 1984.

Table 29

Reported Incidences of Diseases, 1983

Disease	Number of Cases	Percentage
Gastro Enteritis (Diarrhea & Dysentery)	389	32
Upper and Lower Respiratory Tracts Infections (Asthma)	270	22
Skin Diseases	157	13
Ear, Nose and Throat Problems	113	9
Prenatal Cases	44	4
Emergency Cases	35	3
Infectious Diseases	16	1
Gonorrhoea Cases	14	1
Accidental Injuries	14	1
Urinary Tract Infections	13	1
Other Diseases	156	13
Total	1,221	100

Source: Save the Children Office in Deurali, 1984.

Table 32

Immunization of Children

Immunization	Number	Percentage
Yes	67	86
No	11	14
Total	78	100

Sources of Immunization

Source	Number	Percentage
Health Clinic (EPI)	31	46
Visiting Medical Team (EPI)	36	54
Total	67	100

Source: Field Survey, 1984.

**Table 33**

**Regular Medical Check-up of Pregnant Woman**

Check-up	Number	Percentage
Yes	40	51
No	38	49
<b>Total</b>	<b>78</b>	<b>100</b>

**Better Food Provision for Pregnant Woman**

Provision	Number	Percentage
Yes	66	85
No	12	15
<b>Total</b>	<b>78</b>	<b>100</b>

Source: Field Survey, 1984.

Table 34

Use of Smokeless Chulho (Oven)

Chulho	Number	Percentage
Old Style	71	91
Smokeless	7	9
Total	78	100

Reasons for Not Using Smokeless Chulho

Reasons	Number	Percentage
Kachi Ghar (House with thatch roof) so fear of fire	44	62
Lack of heat generation in the winter season	7	10
Not available	2	3
Don't Know	6	8
Others	12	17
Total	71	100

Source: Field Survey, 1984.

Table 35

Use of Latrines

Latrines	Number	Percentage
Built in the backyard	32	41
Open Space (jungle, stream banks, etc.)	46	59
Total	78	100

Source: Field Survey, 1984.

Table 36

Adoption of Permanent Birth Control in Deurali Panchayat, 1982 and 1983

Sex	<u>1982 (2039)</u>		<u>1983 (2040)</u>	
	Number of Families	Percentage	Number of Families	Percentage
Male	62	56	29	58
Female	48	44	21	42
Total	110	100	50	100

Source: Save the Children Office in Deurali, 1984.

**Table 37**

**Adoption of Permanent Birth Control (Vasectomy and Laparoscopy) in Deurali Panchayat, 1982-83**

Female Age Group	Number of Adopters ( % )	Number of Sons				Number of Daughters			
		1	2	3	4+	1	2	3	4+
20 - 25	13 ( 19%)	3	5	5	-	3	4	1	-
26 - 30	25 ( 36%)	3	12	5	5	12	6	2	1
31 - 35	22 ( 32%)	3	9	3	6	2	11	5	2
36 - Over	9 ( 13%)	1	3	1	2	2	3	2	-
<b>Total</b>	<b>69 (100%)</b>	<b>10 (14%)</b>	<b>29 (42%)</b>	<b>14 (20%)</b>	<b>13 (19%)</b>	<b>19 (28%)</b>	<b>24 (35%)</b>	<b>10 (14%)</b>	<b>3 ( 4%)</b>
<b>Male</b>									
Male Age Group									
20 - 25	4 ( 4%)	-	3	1	-	3	-	-	-
26 - 30	20 ( 22%)	7	9	2	2	10	4	4	1
31 - 40	42 ( 47%)	11	19	9	1	12	15	6	3
41 - 50	20 ( 22%)	5	6	5	3	5	6	3	3
51 - Over	5 ( 5%)	2	-	1	2	4	-	-	1
<b>Total</b>	<b>91 (100%)</b>	<b>25 (27%)</b>	<b>37 (41%)</b>	<b>18 (20%)</b>	<b>8 ( 9%)</b>	<b>34 (37%)</b>	<b>25 (27%)</b>	<b>13 (14%)</b>	<b>8 ( 9%)</b>

Source: Save the Children Office in Deurali, 1984.

141

Table 38

Adoption of Family Planning Devices in Deurali Panchayat

Family Planning Devices	Number of Households	Percentage
Families who have adopted permanent birth control (1982-83)	160	21
Females regularly using pills (1983-84)	9	3
Males regularly using condoms (1983-84)	11	
Families eligible for permanent birth control (for 1984 mobile family clinic operation)	126	17
Families not using any devices, not needing family planning, and ineligible for permanent birth control	439	59
Total number of Households	745	100

Source: Save the Children Office in Deurali, 1984.

Table 39

Day Care Center Population and Attendance, 1984

Day Care Centers (Ward & Village)	No. of Registered Children	Average Monthly Attendance (Jan-Feb. 1984)	Percentage (Attendance)
Ward 1 (Salyangiri)	31	13	42
Ward 4 (Yangkot)	47	17	36
Wards 4 & 6 (Hatiya)	51	24	47
Ward 5 (Majuwa)	32	11	34
Ward 7 (Ansikot)	42	20	48
Ward 9 (Piughar)	23	11	48
Total	226	96	42 //

Source: Save the Children Office in Deurali, 1984.

Table 40

Crops Grown in Deurali

Crops	In Khet (Low) Land ( % )	In Pakho (High) Land ( % )
Rice	78 (100)	67 (86)
Maize	12 (15)	74 (95)
Wheat	13 (17)	2 (2)
Millet	-	55 (70)
Mustard	-	37 (47)
Blackgram	-	42 (54)
Soyabean	-	22 (28)
Potato	7 (9)	-
Teel	-	8 (10)
Garlic	4 (5)	2 (2)
Onion	3 (4)	1 (1)
Banana	-	1 (1)
Orange	-	1 (1)
Total Sample Households	78	78

Source: Field Survey, 1984.

Table 41

Vegetable Crops Grown in Deurali

Vegetable Crops	No. of Farmers	Percentage
Mustard	65	83
Radish	56	72
Chilli	18	23
Garlic	13	17
Onion	11	14
Ginger	11	14
Potato	10	13
Tomato	10	13
Cauliflower	7	9
Coloeasia	6	8
Turmeric	5	6
Peas	3	4
Spinach	2	3
Beans	2	3

Source: Field Survey, 1984.

Table 42

Use of Improved Seeds in Deurali

Improved Seeds	Number	Percentage
New Rice	4	5
New Maize	5	6
New Wheat	2	3
Local Seeds	67	86
Total	78	100

Source: Field Survey, 1984.

Table 43

Use of Fertilizers in Deurali

Fertilizer	Percentage of Farmers Using it
Organic Manure	100
Chemical Fertilizers	20

Source: Field Survey, 1984.

Table 44

Seeds/Grains Storage Structures in Deurali

Structure	Number	Percentage
Gundri ko Kotha (made out of straw mats)	25	33
Bhakari (made out of bamboo mats)	46	61
Clay Pots	4	6
Total	75	100

Source: Field Survey, 1984

Table 45

Stored Grain Loss in Deurali

Percent of Stored Grain Loss	No. of Farmers	Percentage
Less than 25%	49	63
25 - 50%	24	31
Over 50%	2	2
Don't Know	3	4
Total	78	100

Source: Field Survey, 1984.

Table 46

Preventive Measures Taken by the Farmers to Reduce Losses

Preventive Measures	Number	Percentage
Cat	32	41
Insecticides/Pesticides	25	32
Nothing	20	26
Better Container	1	1
Total	78	100

Source: Field Survey, 1984.

Table 47

Livestock Ownership in Deurali

Livestock	Number of Households	Percentage	Number of Animals	Average Ownership per family
Cows	67	86	265	4
Buffaloes	46	59	94	2
Goats	47	60	188	4
Poultry	51	65	354	7
Pigs	16	20	34	2

Source: Field Survey, 1984.

Table A

Politico-Spatial Distribution of STC Projects in Takukot Panchayat, 1984

Ward/Projects	Drinking Water <u>1/</u>	Health Leader	Community Agri. Inputs Distribution	Agri. Training	Rat Control	Community Agri. Leader	Adult Education	Education (Materials)	Teacher Training	Total
1.	1	1	1	1	1	1	2	1P	2	11
2.	-	1	1	1	1	1	1	-	-	6
3.	-	1	1	1	1	1	2	-	-	7
4.	-	1	1	1	1	1	1	1H	1	8
5.	2	2	1	2	1	1	2	-	-	11
6.	2	1	1	1	1	1	-	-	-	7
7.	4	1	1	1	1	1	1	-	-	10
8.	-	2	1	1	1	1	2	1P	-	9
9.	-	2	1	1	1	1	1	-	-	7
Total	9	12	9	10	9	9	12	3	3	76

Source: Save the Children Office in Takukot, 1984.

P = Primary School, M = Middle School, H = High School.

1/ Most drinking water projects are under construction.

Table B

Politico-Spatial Distribution of STC Projects in Lakuribot Panchayat, 1984

Ward/Projects	Drinking Water <u>1/</u>	Community Health Leader	Agri. Inputs Distribution	Agri. Training	Community Agri. Leader	Adult Education	Education (Materials)	Teacher Training	Bridge Repair	Total
1.	4	1	1	1	1	1	-	-	-	9
2.	3	1	-	1	1	1	-	-	-	7
3.	3	1	-	1	1	1	-	-	-	7
4.	-	1	-	1	1	1	IM	1	-	6
5.	-	2	-	1	1	1	-	-	1	6
6.	2	1	-	1	1	1	-	-	-	6
7.	1	2	-	1	1	1	-	-	-	6
8.	-	1	-	1	1	2	-	-	-	5
9.	-	2	-	1	1	1	1	-	-	6
<b>Total</b>	<b>13</b>	<b>12</b>	<b>1</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>58</b>

Source: Save the Children Office in Takukot, 1984.

P = Primary School, M = Middle School, H = High School.

1/ Most water projects are under construction.

150