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agricultural development

Role of NGOs in Irrigation Development and Management in Nepal

नेपालको सिंचाई विकास तथा व्यवस्थापनमा
गैर सरकारी संस्थाहरू (NGOs) को भूमिका

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Ujjwal Pradhan, Alfredo Valera and Sujata Rana, editors

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Please direct inquiries and comments to:

**International Irrigation Management Institute
Nepal Field Operations Office**

IIMI-Nepal
P.O. Box 3975
Kathmandu, Nepal

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Foreword

In recent years in Nepal, the role of non-government organizations (NGOs) in various development efforts is gaining credibility and recognition. This recognition of the positive role of NGOs in what previously used to be under the purview of government agencies is a welcome trend. Given the supportive environment for the growth of NGOs and the constraints that bureaucracies face, decentralization and promotion of private sector involvement is being fostered in many arenas of natural resource management and income generation.

In the context of irrigation management, the government through its new irrigation policy has recognized the role of NGOs as partners of irrigation development. The farmer groups, in fact, as non-government entities have been constructing and managing irrigation systems and these constitute the majority of irrigated agricultural land in Nepal. The new irrigation policy paves the way for government staff and the farmer groups to actively participate in agency systems initially in joint management arrangements and finally full management turnover.

This national workshop on the role of NGOs in irrigation management and development is a timely publication to illustrate the efforts being undertaken by several NGOs in irrigation development, perception of irrigation bureaucracies towards the involvement of NGOs in irrigation, and the capability within farmer based non-government entities that have been managing irrigation for centuries. This publication also exemplifies the partnership between government agencies and farmers regarding alternative development procedures for irrigation management. Representatives of farmer groups from well managed irrigation systems wrote workshop papers, presented and discussed them in a national workshop, attended by the government, donors, policy makers, researchers, local NGOs, and other agencies.

This proceedings will be useful not only for irrigation professionals but also for other development oriented professionals who consider farmer-based groups and local NGOs as partners in development. This proceedings should only be a start in the identification of a positive role of NGOs and readers and participants should carry on the task of actualizing this potential. I am happy to note that during this workshop an ad hoc committee was formed with representations from the government, private, and farmer sectors with the objective of forming an NGO network to i) organize rural NGOs, ii) train rural NGOs, iii) match rural NGOs' capability with agency and project consultant's needs, and iv) train national NGOs in irrigation management. With the help of NGOs in securing or providing access to natural resources for the underprivileged, they would have indeed started a movement in a positive direction incorporating local knowledge and expertise.

Binayak Bhadra
Member
National Planning Commission, Nepal

November 11, 1992

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The contributors of papers and participants represented various fields and institutions. Especially, the contributions of the farmer functionaries of well-managed irrigation systems of Chherlung and Argali in Palpa, Chattis Mauja of Rupendehi, and Pithuwa of Chitwan by way of paper presentation and discussions was one of the more rewarding highlights of the workshop. We are grateful to all who kindly accepted the role of moderators, discussion leaders, and rapporteurs.

Ujjwal Pradhan, Social Scientist, IIMI-Nepal Field Operations

Alfredo Valera, Head, IIMI-Nepal Field Operations, and

Sujata Rana, Secretary, Udaya-Himalaya Network

Role of NGOs for the Socio-Economic Development and Poverty Alleviation in Nepal

S. Lakhey¹

Introduction

Nepal is a landlocked hilly country scarcely populated from the mountainous region of the Himalaya to the Gangatic plain adjoining the Indian border to the south. People are used living in isolation within the framework of their family or their ethnic groups. Their economy is self-supporting agro-based with limited demands. With the rapid growth of population, the traditional ethnic frame-work is breaking up, bringing changes in the composition of ethnic groups. This is further accelerated by the search for prospective agricultural land required to support the increasing population. This has meant some distortion in the composition of ethnic settlements. The social system is further distorted by migration of people in search of employment opportunities within the country, but outside their local environment.

With the increasing population in the country, the social system has gradually become ineffective, and is replaced with government institutions that work as a media for receiving development aid but they fail to "trickle down" development benefits to the grass roots level for whom the assistance was targeted. In the process of disseminating development aid to the downtrodden, the government involvement increased with time but no substantive results were noted. Many sociologists and development planners claimed that the ineffectiveness of development assistance was due to the inefficiency of the Government institutions, lack of adequate logistic support, corrupt practices, lack of enthusiasm among government workers, and overall inadequate infrastructural development in the country. Consequently, the government is searching for of suitable alternatives, preferably emerging from among beneficiaries or local elites and thereby minimizing the government involvement.

Present Status of NGOs

With the re-establishment of democracy and a democratic government in the country, there is an increasing tendency to decentralize the development activities more and more to the grass roots level. The village and district development committees were revitalized and entrusted with major development responsibilities. The government institutional supports, however, were limited due to the scarcity of resources and fluctuation of manpower requirements depending upon the nature and volume of work. Moreover, the Government institutions were failing to adapt into a new taskforce having completed the a assigned task. Consequently, they are a liability to the organization. The government can neither remove them nor use their services in other development activities. They remain static

1 National Staff Consultation Participatory Management cum Training Coordinator, ILO/Nepal.

and unproductive. The government needed flexible, self-supporting institutions preferably at the grass roots level that could bridge the gap between the government's development work and the people.

The concept of NGOs as a viable alternative to fill the development vacuum in the country is now recognized by the government .

The Social Service National Co-ordination Council (SSNCC) has divided NGOs activities into six categories, encompassing health services, social and village development, child welfare, women's development etc. And later two additional activities, such as environmental protection, and AIDS and drug abuse control were introduced. According to the SSNCC's publication of 12 February 1992, there exists 545 NGOs in the country of which 18 are national, 8 are regional and 518 are at local level.

Further details on NGOs are as follows:

Type of activities	KTM valley	Outside KTM	Total
1. Health services	30	15	5
2. Social and village dev.	97	69	166
3. Child welfare	11	2	13
4. Women's development	18	16	34
5. Youth activities	74	121	195
6. Environment	10	3	13
7. Blind and disabled	11	1	12
8. AIDS and drug abuse	6	x	6
9. Moral development	33	27	60
Total	290	254	554

The SSNCC further reveals that there are 16 International NGOs operating in the country having their activities in remote areas of the country. Besides, this there are other INGOs operating in the country without having formal agreements either with SSNCC or the Government.

The INGOs are financed by their respective government or sponsoring agencies. The other NGOs' sources of finance consist of 8.3% local resources, 88% foreign aid, and 3.7% government finance. Responsibility and liabilities of these organizations and their staff are to the extent of work assigned. Their responsibilities are limited, like that of the government officials. Therefore, in the changed political context, NGOs are viewed as private organizations which support development activities at the grass roots level.

Justification of Private NGOs

Employment Generation

Of all the development activities in the country, both in the public and private sectors, the one achievement that stands out is education. It has reached far and wide in the country. Meanwhile, the country is facing an unemployment problem among the educated populace. Education is a continuous process and with the increase of educated persons more and more new jobs have to be created. Presently, the government sector is taken as a perennial source of employment and every new addition to the employment force relies heavily on the government's employment openings.

Employment opportunities in the private sector are also being created, particularly in industries, commercial organizations, tourism, hotels etc. but all activities are confined mostly to the urban areas. No employment generation activities have so far been created at the district and village levels nor are envisaged in the immediate future in the private sector. It is also hard for villagers imagine any employment avenue beyond their traditional modes of livelihood, such as agriculture, dairy, horticulture.

In villages and districts, educational institutions are the most important sources for educated employment. Almost all these educational institutions have local teachers and staff. In the sixties, when education was becoming popular in villages, even the school graduates had opportunities to hold key posts, like headmasters and assistant headmasters of local schools. The government had a very difficult time to persuade school teachers from urban areas to go to village schools even with an additional salary incentive. Now most of these village schools have college/university graduates as teachers from their respective villages and/or districts. Most of these schools have reached a point of saturation and there is no more scope for additional university graduate teachers. The educated unemployment problems have also reached the villages and districts. There is unrest and dissatisfaction among educated people.

The concept is that NGOs can create a chain of employment opportunities at the grass roots level without any financial support from the government. The school/college/university graduates who are in search of employment in the local areas would have opportunities.

This would help to fulfill their inspirations as well villagers' need and the government's objectives of decentralization and getting work done by the people themselves.

Discourage Educated Migration from Rural to Urban Areas

Until the mid-sixties, migration of people from place to place in search of prospective agricultural land was usual as the hills were getting over populated and marginal lands were being used for agriculture. The trend of migration was from the hills to the inner Terai along the forest belt. Another form of migration was seasonal in search of temporary employment to supplement the farmers agricultural production for their livelihood. As soon as the employment opportunities for the educated reached a saturation point in rural educational institutions, unemployed educated people migrated to urban areas in search of employment. Along with them came their families, later followed by the extended families, and other dependents. This is continuously on the increase.

Agriculture and agriculture related economic development activities alone were not enough to check the rural influx to urban areas because these activities were not immediately effective in bringing about substantive changes in the rural economy. Farmers were not with a contented small degree of improvement in agricultural production. Moreover, other consumer good prices were rising faster than agricultural products. Farmers were measuring their economy in terms of cash income rather than the quantity of agricultural products. Besides this, farmers were relying on the services of their children on whose education they spent their fortune.

As in rural areas there are no immediate employment opportunities in urban areas other than local educational institutions establishment of a chain of NGOs. These NGOs are to accelerate rural economic development by providing improved plans, programs and techniques to the village development committees and then to farmers. This would be very appropriate in the context of decentralization policy of the Government. In the central and regional headquarters of the government there is enough qualified technical manpower, advisers and consultants available. Their primary task is to advise the development planners. Development activities are designed for the grass roots people living in rural areas, but these beneficiaries been neglected and deprived of development benefits due to lack of appropriate linkages.

Establishment of NGOs from within the rural educated people, after receiving necessary training from the agency concerned, would be the most appropriate non government agency to assist the village development committees, subprojects at the grass roots level, and farmers at large. This system will absorb a large number of educated unemployed people in their own villages and discourage them migrating to urban areas. This is not only a question of stopping singular migration but also the chain of families and their dependents.

Social Interaction and Follow-up

The planners and administrators claimed that once a plan was formulated and executive procedures developed, the benefits of the plan automatically trickled down to the grass roots level for whom the plan was designed. The administrators claimed that this process was effected. However, a sociologist held a different view and raised the question of "how could the beneficiaries know that the plan was designed for them ?" They were never briefed nor consulted. Consequently, the plan was drawn up on a piece of procedures worked out and also shown as completed on paper. Benefits were shared by the policy workers, administrators and middle men. Administrators responsible for the execution of a development plan never bothered to assess the requirements or the aptitude of people for whom the plan was designed. Moreover, they had no time, patience, desire, or training to interact with the grass roots level people. All these shortcomings can be overcome with the establishment of NGOs at the grass roots level with modest training and refresher courses as and when required. The NGO workers, being a part of the village society can comfortably interact with the vision and knowledge of their fellow-villagers due respect giving them. This is based on the principal of reciprocal benefits.

Follow-up Action

Modern management science does not confine itself to the procedural development, defining function responsibilities and manpower requirements. Considered equally important is a follow-up action to a given task and the evaluation of end results, both intended and unintended.

This is greatly lacking in government executed projects. These are primarily concerned with the utilization of the budget and statistical reports confirming that the objective set out was achieved. In the context of a developing country, like Nepal where people are thinly scattered over the vast hill terrains with great difficulties of communication, development spin-offs to them can be reached only through constant follow-up action. This was greatly lacking in the government system. This follow-up action can be achieved through NGO workers because they are available for discussion.

Establishment of Social Institutions at the Grass Roots Level

There are two different controversial reports about the intensity of development oriented institutions in the country. The Government claims too many institutions in the name of development that these are getting beyond the government financial capacity. Recently, the government development institutions were extended upto the district level. Since most of the districts headquarters still lack a road link, the development benefits of such institutions can hardly be expected to reach the people.

As the government machinery is not sufficiently effective, each development task demands a separate set of manpower that keeps increasing the Government's financial liability. This cumbersome and clumsy administrative practices can be overcome and the cost minimized. Development activities could be better activated by establishing local based NGOs at the district and grass roots levels. Depending on the magnitude of development activities in a given district, the number of NGOs set up can be, either by the nature of work specialization or by geographical distribution.

Cost Effectiveness of NGOs

From the First Plan Starting in 1956 to the end of the Second Plan in 1965, the entire development aid was in the form of grants ranging from 78-100%. From the Third Plan starting in 1965 the foreign loan constituted between 15%-70% of the total development expenditures until 1991/92. In view of the limited gross domestic savings against the gross domestic investment and the growing foreign loans, the country has to develop cost effective devices to trickle development benefits down to the grass roots level. Over the past few decades, the Government endeavored to commensurate field administration to the degree of development activities so that motivation of the implementers would be high. Although the administrative costs increased, the development impact to the people was negligible. On 7 June 1992 Prime Minister Girija Prasad Koirala at the convention of NGOs in Kathmandu assured "free work atmosphere" to NGOs and further said "a need for expanding their activities through out the country to reach services to the people".

As the objective of this paper is to organize a wide range of NGOs at the grass roots level in the country, we shall take into account the best prevailing remuneration available to educated employed people at the village and district levels. The most ideal, respected and effective profession at the grass roots level widely accepted is educational profession ranging from middle school to college absorbing a large part of educated population. They are accepted by society and their remuneration is commensurable with the living standard of an educated society. These teachers enjoy the standard salary and other facilities set by the Government for the educational institutes and, moreover, they share the privileges of living at home and assisting the family in the traditional livelihood of agriculture. This is the best ideal situation for NGO workers. Their salary and other facilities will commensurate with their level of education, experience and commitment to the work.

This is an ideal situation. A trained school graduate will receive remuneration equivalent to a primary school teacher. Comparing the government officials who were forcefully assigned to work, NGOs will be cost effective and have a pragmatic approach to the donors, and beneficiaries.

Creation of Local Development Oriented Leaders

A review of the country's development history revealed that the Government never genuinely offered opportunities to local people to create their own development leaders. The Government had no confidence in the capability and efficiency of the people. They always believed in guided development programs, imposing development work from the top to the people. Consequently, over the last 40 years the country has not managed to develop good development oriented leaders. Introduction of NGOs at the grass roots levels will give birth to development oriented local leaders whose services can be obtained for the development of villages and districts. They would have pragmatic approaches to the aspiration of the people, their needs, their resources and manpower. This is a must to bring about economic development emerging from villages and the people themselves.

Other Benefits of Promoting NGOs at the Grass Roots Level

The forward and backward planning actions of NGOs would lead to more accurate and representative information about the needs, priorities and capability of local people. In other words more reliable feedback on the impact of government initiatives, plans and programs and their effectiveness. Developing programs to meet local conditions so that the government and public scarce resources are used efficiently must be a priority.

With the participation of local people through local NGOs better access to target groups and there by project cost can substantially be minimized. At the same time, maximum use of local technology resources and adaption of new technologies as well, maker projects more sustainable.

The Government's most desired wish projects being sustainable can be ensured to a great extent through wide ranging NGOs participation and constant observation.

Scope of NGOs

Broadly speaking, there are three forms of development practices in the country. The Government sector is the prime one with defined development objectives to provide socio-economic benefits to the people. It is entirely governed by the rules and regulation of the Government. The magnitude of work is also governed by the prevailing political system. The rules and regulations are very rigid and the whole system bureaucratic.

Another type form of development institution are the government guided institutes, popularly known as corporations. These institutions were established with government support with some administrative flexibility as they are governed by a Board of Directors under the Development Act, 2013. Besides, there are some organizations established under a separate Charter but entirely financed by the Government. These institutions are also classified as NGOs. In practice, they are under the Government's control and do not enjoy any working autonomy.

The third category of development institution is in the private sector established by an individual, a group of individuals under the law of the country. The manufacturing industries are registered with the Department of Industries under the Industrial Act, the commercial and trading activities are governed by the Commercial Act, hotel and tourism related activities are registered with the Department of Tourism. In addition, there are some social organizations which are registered with the CDO's office under the Association Registration Act 2034. Literally all these institutions can be classified as non-government organizations with defined objectives.

For the purpose of our study, a NGO is a body or an organization formed under the prevailing act of the country to provide expertise and/or equipment services, technical know-how, skilled, semi-skilled manpower, and carry out specific tasks against an agreed remuneration, and thereby strengthen its organization for better services and self-sustainability.

There is vast scope for NGOs, since most of the Government development organizations are either centrally or regionally based with a limited framework at the district level. There is a tremendous scope for such organizations to extend their services to the people in different development activities either under the Government agencies service contracts or in agreement with the village/district development committees. They can cover a wide range of activities, such as construction supervision work, work contracts, development of farmers institutions, farmers participation and resource mobilization, training and supervision on operation and maintenance of irrigation system, water management, agricultural extension services, pilot agriculture development etc in the irrigation sector. Similarly, there are many other agencies like agriculture, forest, environmental protection, roads, suspension bridges, health, education etc. that can also utilize their services.

Obstacles in Getting NGOs Established

The practice of establishing NGOs cannot occur in a vacuum. As their success depends on factors, which can support and strengthen the concept, it would be useful to review the factors that can affect NGOs negatively. The obstacles are broadly classified under the following headings.

Political Obstacles

The political environment or system that can discourage formation of a NGO at the grass roots level. In such situations the prevailing political ideology does not encourage openness or and is dominated by central government directives. In the later part of the Panchayat System all NGOs were controlled by the SSNCC which had no flexibility.

Similarly, tension can arise between the state policy and development projects governed by the District Development Committee responsible for overseeing NGOs. Nevertheless, political parties conflict at the village and district levels and this can also hinder effective development work at the grass roots level. Moreover, the existing legal system within a country can seriously frustrate efforts to promote NGOs.

- advance from the party upon the agreement of work award/contract.

NGOs Development Work Plan

The work plan will consist various activities, namely:

- training for NGOs by the agencies concerned in their respective fields;
- identification of NGOs field of activities work; and
- development of plans for NGOs.

Training for NGO staff will be the responsibility of the government or related agencies before they are allowed to carry out work agreed upon between parties. Cost of training should be borne by the agency.

There will be two ways to of select of development activities to be carried out by NGOs. One approach will comprise of activities recommended by NGOs suitable for immediate development at the village levels. The other approach will consist of activities that the developing agencies award contract to the NGOs for a specific task. The field of activities can vary from social orientation to technological development.

Plan development will consist of a organization of NGOs at the field level, training to their staff for each specific job, award of contracts and monitoring of work.

NGOs as Facilitating Agents in Community Works under a Genuine Participatory Approach

C. Baker¹

The governments of many developing countries have set themselves over-optimistic targets as regards the provision and maintenance of basic infrastructure and services for their people. This has led them (and the donor community and aid agencies) to involve beneficiary communities in the identification and implementation of programs and projects and in the subsequent management, operation and maintenance of the assets created. The introduction of community participation has certainly improved the chances of sustainability but my feeling is that many of the resulting joint ventures are rather unsatisfactory compromises between the very different interest of the parties involved:

- the politicians, whose main interests are in getting into power and then staying in power;
- the technical ministries/departments of central/local government, which have limited resources but are reluctant to relinquish any of their responsibilities;
- the donors and aid agencies, which want to see the best use made of their limited resources but dictate the nature and source of the aid they will provide; and, last of all,
- the people themselves, who usually know what they want but whose views are often ignored or over-ridden,

Not exactly a recipe for worldwide replication!

I should like to propose an alternative approach in which governments make a realistic reassessment of their roles in the provision and maintenance of basic infrastructure such that they adopt a more promotional, supportive and regulatory role as regards basic infrastructure which they are unable to provide but which communities, given adequate technical and financial assistance, may be able to provide for themselves as community works.

Community works are undertaken by groups of people with common interests in acquiring certain physical assets or services, usually with technical and financial assistance from facilitating agencies. The assets created should become the property of the groups of beneficiaries or communities involved who should be fully responsible for managing, maintaining and, where appropriate, operating them.

In other words, communities should be put into the driving seat, encouraged to identify their needs and priorities, and then be helped to acquire the assets they want. As a corollary, governments and aid agencies should adopt a more passive but responsive role and be prepared to work at the communities' pace. They must think in terms of their participation in communities' projects rather

1 ILO Senior Adviser for Institutional Development, Special Public Works Program, Nepal.

than the other way around. They should start to treat communities as clients and, in effect, help them to "buy" the assets they want, albeit at a subsidized price. Genuine community ownership should offer a far better chance of sustainability than community management.

From the supporting agencies point of view, the key issues are how much subsidy and what priority should communities projects receive. The answers will, of course, depend on:

- the resources available;
- the objectives and policies of the governments and donors;
- the socio-economic benefits of the projects;
- the communities' understanding of and commitment to their responsibilities as owners of the assets they want.

From the communities' point of view, the key issues are likely to be:

- what assets do we need most;
- how can we afford the initial cost; and
- will we be able to manage the assets once we have them.

This brings us to the question of how to support community works. In my view, this support should incorporate the use of NGOs as facilitating agencies for the following activities:-

- a) The establishment of community development funds which can accept money from government, donors, NGOs, etc and also from beneficiaries, and which has clear rules and procedures for the management and disbursement of the funds received.
- b) Implementation by local resource-based methods (i.e. making maximum use of locally available materials, labor, skills and institutions).
- c) Adequate technical assistance from facilitating agencies throughout the project cycle, including:
 - providing case officers to act as intermediaries between the fund and the communities;
 - helping with the formation and registration of associations of beneficiaries (where necessary);
 - helping with the acquisition of credit (preferably through commercial banks);
 - preparing alternative schemes and helping communities to choose between them;
 - helping communities to ensure that costs and benefits are fairly shared;
 - procuring materials, tools etc and organizing and supervising implementation, and training communities in management, operation and maintenance of the assets created (refer to Annex 1 for an example of topics for trainings).
- d) The implementation of all projects to be costed in full (including labour and locally available materials) and the communities' contributions to be specified as percentages of the total costs. I personally prefer a credit-supported cash contribution and paid labour (with the benefi-

ciaries having priority for jobs) because this removes the possibility of the poor and vulnerable being required to provide voluntary labor and it allows the work force to exceed the number of able-bodied beneficiaries.

- e) Equitable distributions of costs and benefits within communities, so that the poorest and most vulnerable members do actually benefit from the projects (e.g. by earning more than they have to contribute).
- f) Limiting the involvement of central and local government to that which is absolutely necessary, i.e.:
 - statutory clearances (e.g. granting water rights);
 - technical and standardization clearances (e.g. hand pump specifications and standard designs); and
 - compatibility with local development plans (where they exist).

There should be no need for proposals and requests to be submitted through local development committees. Any group of people should be at liberty to submit a proposal to the managers of the development fund and then obtain the necessary government clearances with the help of a facilitating agency, e.g. a local community-based NGO.

These ideas concerning the provision and maintenance of community-level infrastructure, are based largely on my experience in Africa and Asia. They are certainly not appropriate everywhere. What do you think might work in Nepal?

Annex 1

Proposed Topics for NGO Training on Second Hill Irrigation Project Schemes

1. **Formation and Management of Farmers' Irrigation Associations, viz:**
 - Constitution,
 - By-laws,
 - Agreement with Department of Irrigation,
 - Administration and Financial Management, and
 - Procedures for Meetings, Elections, etc.
2. **Operation and Maintenance of the Irrigation System, viz:**
 - Water-share System,
 - Water Allocation and Management,
 - Minor Repairs by Community Based Working Groups ("petty contractors"),
 - Procedures for Major Repairs by Department of Irrigation,
 - Mobilising Local Resources (labour, skills, materials and finances) for operation, maintenance and repairs.
3. **Environmental Protection of the Irrigation System, viz:**
 - Slope Protection (livestock control/reforestation),
 - Landslide Stabilisation (bio-engineering),
 - Prevention of River Bank Erosion (bio-engineering),
 - Watershed Management,
 - Appropriate fodder, fruit and fuelwood trees/shrubs/grasses for protection works, and planting techniques.
4. **Agronomic Improvement of Cultural Practices**
 - Improved seeds,
 - Better access to credit and input supplies,
 - Local community savings groups,
 - Compost making
 - Improved land preparation, and
 - Farmer -to-farmer training (IIMI-model).

Figure 1: Traditional Construction Oriented Process

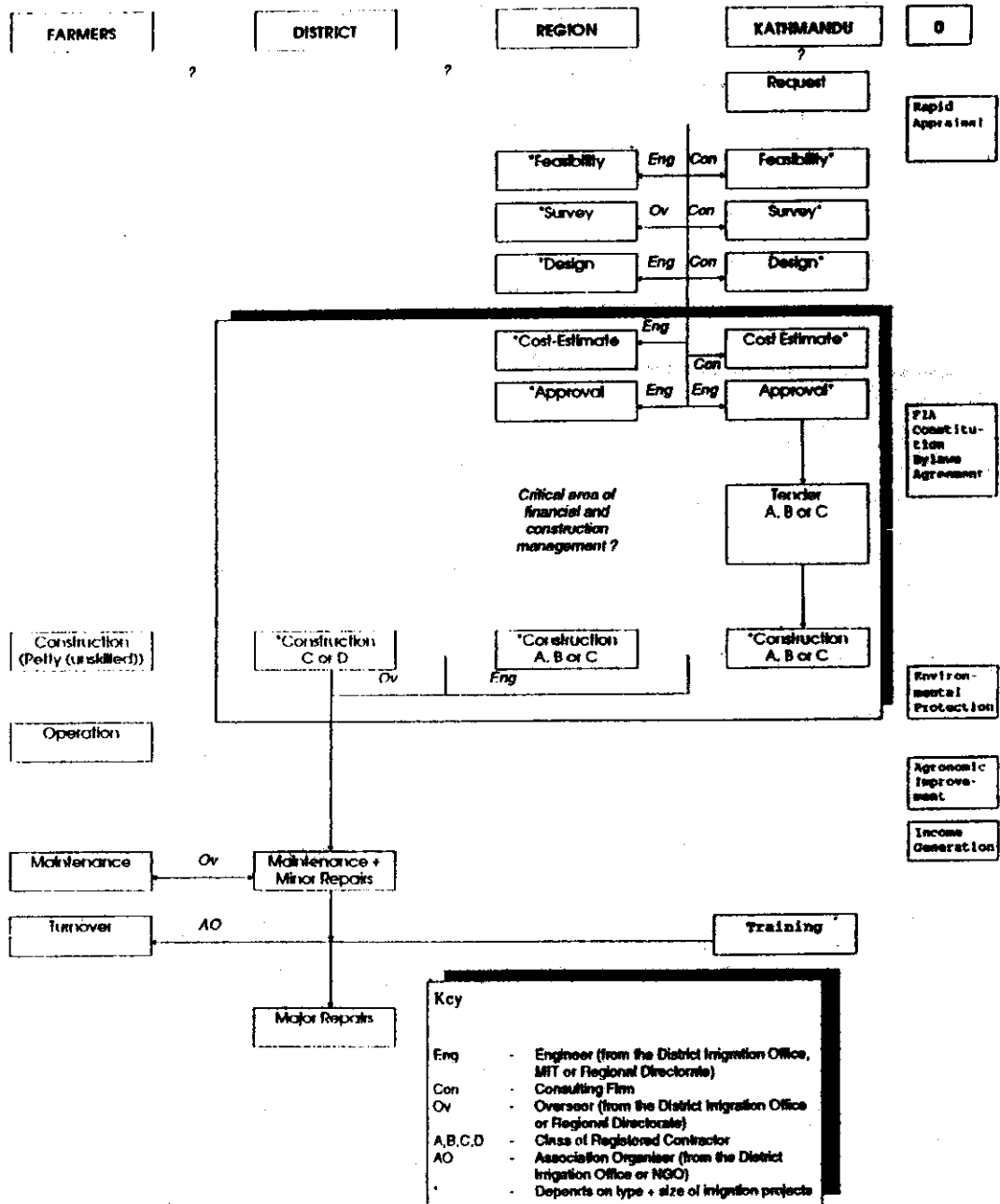
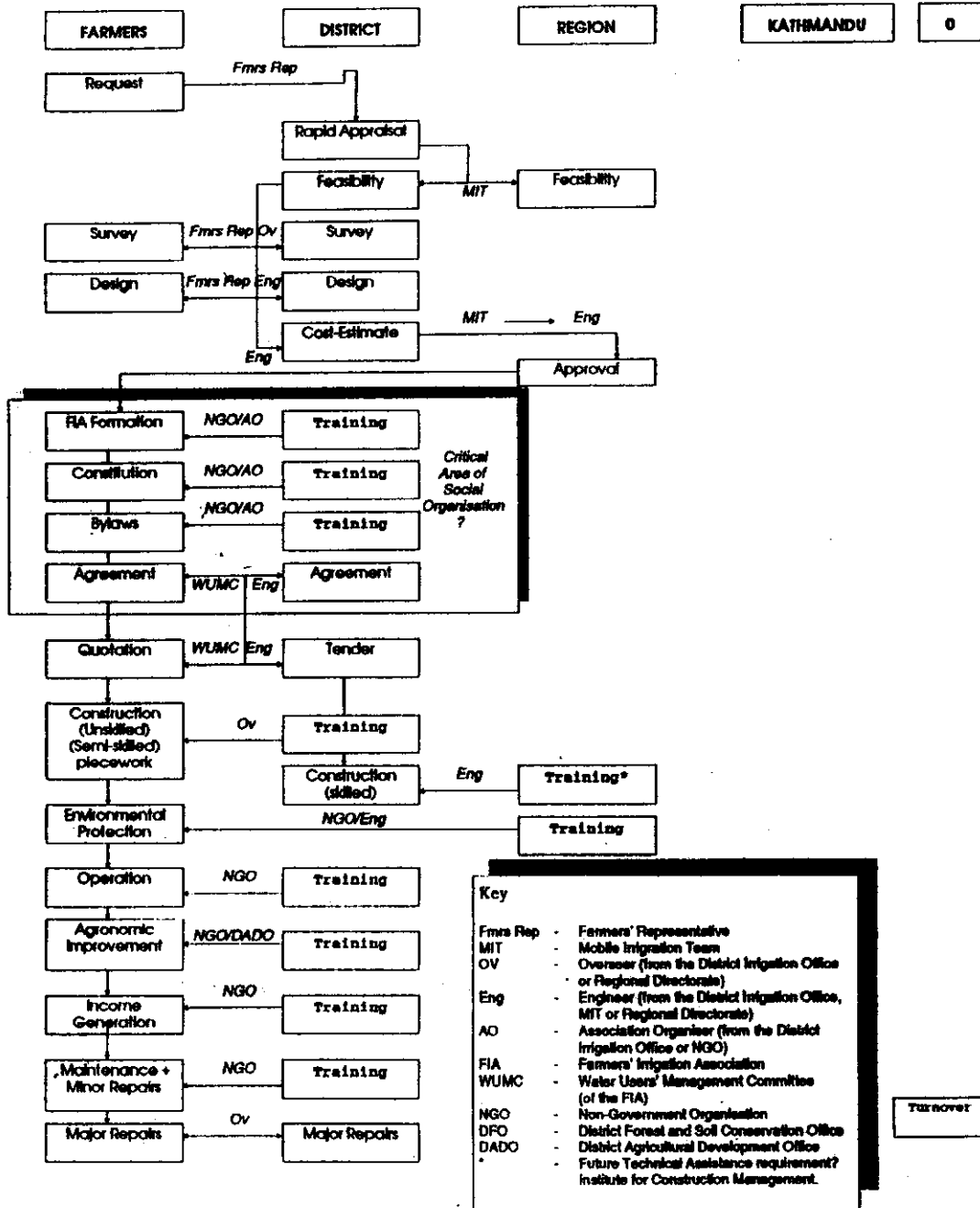


Figure 2: SPWP Participatory Process



NGOs in Irrigated Agriculture: A Review of Institutional Instruments

U. Gautam¹

Premise

NGOs²) are most prominently observed in the irrigated agricultural sector of Nepal. Primarily an agricultural country, Nepal can take pride in the time-honored tradition of these NGOs. Various sources estimate that out of the presently irrigated agricultural area in the country, 60 to 80% is provided with irrigation service by these NGOs. The role of these NGOs are varied and involve meeting the basic food need of the population, managing scarce water resources, maintaining agri-environmental balance, and increasing the measure of sustainability, both in terms of local resources mobilization and agricultural productivity. For this work, NGOs should receive sincere recognition from all who have a stake in the development and modernization of the country.

Government Policy: Acts and Plans

This year HMG/N has already come out with three institutional instruments³) to provide recognition and support to NGOs in the irrigated agricultural sector. They are: Irrigation Policy (IP) 2049, Water Resources Act (WRA) 2049, and Eighth Five Year Plan (2049/2054).

One of the objectives of IP is to " strengthen and widen the Nepali farmers autonomous irrigation management tradition in the private sector." The IP intends to limit the government role in the areas of sectoral policy review and development, resource mobilization, economic analysis and technology promotion by maximizing the participation of the private sector and NGOs in program implementation. The IP classifies irrigation development program into four categories : i) jointly managed by agency and farmer organization, ii) farmer-owned and managed irrigation systems, iii) agency turned over irrigation systems to farmer-owned and managed irrigation systems, and iv) individually managed irrigation systems (covering less than 10 ha.in the hills and 25 ha.in the tarai). The IP states that NGOs can run program in the fourth category. But at the same time it also states that this provision does not bar NGOs to do projects beyond the scope of this category.

The WRA for the first time in the legal history of Nepal recognizes water user organizations (WUO) as the autonomous corporate entity with a right to perpetual succession. The WRA also enables the government to transfer government-administered irrigation systems to farmer-ownership and management. It also provides for a provision whereby government can enter into contract with organizations to develop,utilize and extend the water resources services.

1 President, Consolidated Management Services Nepal (P) Ltd.

In the Eighth Plan,⁴) the following measures have been adopted to bring about NGOs participation into the development process of the country :

- Administrative procedures be simplified and streamlined to protect NGOs efforts and prevent obstacles
- "One Window" system adopted to make government decision-making system efficient
- Clear and defined NGOs policy will be formed and implemented. This includes arrangement of liberal laws and regulation, decentralization of power, simplification of association registration procedures, more autonomy to association and creation of an environment to make them more accountable etc.
- INGOs will be encouraged to work through Nepali NGOs
- NGOs will be motivated to be supportive and supplementary to the local agencies. They are also encouraged to orient themselves towards creative and new activities of public importance.
- Information, data and communication system on NGOs would be appropriately established.

In the irrigated agricultural sector, the Eighth Plan also speaks of a management fee that the public irrigation agencies would provide to the NGOs for their irrigation management works.

Another relevant document for NGOs in the irrigated agricultural sector is the policy report 4) prepared by a task force for the Ministry of Social Welfare and Labour/HMG. In a section titled "Policy to be adopted by HMG on national and international NGOs", the following "principles" among others are stated:

- a) Enable NGOs to fulfill a role supplementary to the government in the development process
- b) Provide autonomy to NGOs in its task of fulfilling their objectives
- c) Prior approval of the Social Services National Co-ordination Council shall be required for NGOs assistance agreement with foreign agencies
- d) Tax, custom duties, sales tax exemption and visa requirements for expatriate consultants and volunteers would be done through SSNCC.

Gaps and Problem Identification

The government so far has been unable to differentiate between two broad but substantive categories of NGOs; that of the Professional NGOs as opposed to socio-economic NGOs. Professional NGOs are those who provide technical assistance to socio-economic NGOs who actually locally manage a task or group of tasks (like NGOs in the irrigated agricultural sector) on a day-to-day as well as long term sustainable basis. A socio-economic NGO may also provide professional services to fellow NGOs. This categorization is done not to inhibit development of NGOs from one form to another but to help form analytical categories so that present trend in NGO status and roles can be appropriately differentiated. Lack of clear differentiation between two types of NGOs has severely

limited proper understanding of Nepal's NGO tradition and recent entry of a segment of Nepal's educated work force into professional NGO market. Government SSNCC policies so far largely seem to center around these professional NGOs.

A paternalistic tendency is still evident in the government's policy and other operational instruments for NGOs promotion in the country. The government wants to make NGOs "more autonomous", "more accountable", "more efficient and supplementary to the government development efforts".

Government policy and other operational instruments voice the need for NGOs, but bureaucratic and political reorientation and matching reforms in the bureaucratic and political spheres is either very slow or irrelevant. The prolonged conflict of interests noted in the process of approving the new irrigation policy itself clearly reflects lack of consensus among the officials in the irrigation bureaucracy. Intense conflict has been noted among the irrigation bureaucratic subcultures for resources and strategic position in the irrigation bureaucracy. In a socio-political set-up where the government has been playing an omnipresent and omnipotent role, NGOs seem to have been recognized simply as a valuable appendage to the Government's development program. The situation has led to the establishment of a number of "mock" or "renegade" NGOs at the cost of those who have been working sincerely.

In sectors like that of irrigated agriculture, the tradition of farmer NGOs has been severely undercut by rampant government intervention in the form of various development projects. Government superimposed projects have been debasing local initiative and sustainable endeavors. Imminent evolution of participatory development program across the irrigation sector has yet to be fully comprehended by irrigation bureaucrats and political leaders who have been more conversant with the project approach. Until now, out of budget outlay of Rs. 2.05 billion for irrigation in fiscal year 1992/93, about 70% is allocated for conventional type of irrigation projects.

Restructuring irrigation bureaucracy to match with the participatory irrigation development program which helps promote NGOs would initially sharpen the gap between restructured/reorganized irrigation bureaucracy and some staff. Organizational instability would be caused by both strong and weak staff leadership. In both these cases, restructuring of the irrigation bureaucracy gets politicized.

Functions like use of water legislation for managerial purposes and for providing water resources management have been viewed as a foreign concept by irrigation bureaucracy. The new Water Resources Act declares that ownership of water resources found in the Kingdom of Nepal shall be vested in the Kingdom of Nepal and their use shall be made subject to the provisions of the Act. The Act also states that the concerned water user's organization will have ownership over the project once it is handed over to water user's organization. However, the differences between state ownership of water resources and water user's organization ownership of projects are not defined. In the document entitled "Handetar Irrigation System Turnover Agreement between WRID/DOI/HMGN and Irrigation User Organization", it is mentioned under Clause 1, Subclause 1.03 of the Agreement that despite the system turnover, the ownership of Handetar Irrigation System and land covered by it shall continue to remain under the ownership of DOI/HMGN.

The government's Eighth Plan and proposed NGO Policy includes NGOs within the framework of government decentralization. Conceptually and in principle, it is yet not understood that there is no central power location of NGOs. They different plural field interests, different various functions and are spread throughout the country.

Suggestions

The government should provide more development priority to the country's socio-economic NGOs. These NGOs should be the point for investment and be recognized as the sustainable base of local resource management. Professional NGOs should be rated against their promotional support to these NGOs.

The government should get rid of its paternalistic view of NGOs. Like the government or public sector, NGOs are a sector in themselves. The degree of NGOs autonomy, accountability, efficiency should be guided and decided by NGOs own organizational culture. NGOs themselves could decide the problem areas to work in.

NGOs requirements should not be government or donor driven. As a matter of fact, the government or donor should adjust themselves to the objectives of local national NGOs. Clout and influence of a government or a donor would be more positively utilized if the local NGOs are encouraged to apply their discriminatory power in selectively utilizing the resources available at government and donor level. For this purpose, government and donors should start to learn from their past blunders and go on to reorienting themselves by adopting a supportive role.

A time bound program should be formulated to cover the whole irrigated agricultural sector with participatory development program.

Instead of focusing on individual leadership in the irrigation bureaucracy, particular care should be taken to ensure that a restructured irrigation bureaucracy helps to keep in place a system of authoritative and accountable relationships so that an individual leadership's strength/weakness is not unduly allowed to politicize the organizational process. This could well create more instability and lack of direction in the organization.

An explanatory note should be prepared to educate NGOs and agency staff on the ownership issue. This should authoritatively differentiate "ownership of water resources" from "ownership of irrigation project or system" and give all implications of the ownership issue.

Government should be supportive of establishing a federation of NGOs in Nepal. This federation should replace SSNCC. The federation should promulgate all the operational rules and performance criteria required for NGOs.

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Perception of Bureaucracy on the Role of NGOs in Irrigation Programs

R.S.S. Neupane¹

Executive Summary

Nepal has a history of 35 years of planned irrigation development. Before this, farmers managed 823 million hectares of irrigated land. Up to seventh plan (1986-90), 547788 ha was managed by farmers and 267000 ha was managed by the irrigation agencies. Irrigation development planning has to be tied up with food grain requirement of Nepal by 1995, some 600,000 mt/year of cereal have to be produced in order to balance the present food deficit. For this, two alternatives are at hand 1) increasing new irrigated area and 2) improving the performance of existing irrigation schemes.

The first approach needs huge amounts of money while the latter is low cost, involving a variety of intervention options. The Department of Irrigation lacks both the capability and the capacity to invest vast amounts of money, so, the involvement of NGOs is justified for the second alternative of improving existing irrigation schemes.

The new irrigation policy of 2049, through its sub clause 3.2 and others, allowed enough room to support NGO involvement. There are many concepts regarding the selection and utilization of experience of NGOs in the irrigation sector. The issues of NGOs' job, accountability, work performance, and roles are the main topics that are necessary for discussion in order to bridge the gap in understanding between NGOs and the irrigation sector.

Although, the present development needs in the irrigation sector justify the urgent need for NGO involvement, the credibility and capacity of NGOs have to be increased through intensive training.

Non-profit oriented organizations must be given first preference. The service, roles, responsibility and accountability of a NGO can be achieved with proper evaluation to allow for optimum desired performance.

History of Irrigation Development in Nepal

Before 1950, major irrigation scheme development was undertaken by the farmers of Nepal. Today's data show that nearly 823000 ha of irrigated area are being managed by Nepalese farmers. During 1932-45 the Chandra Canal (the first irrigation project undertaken by the government) was constructed. During this decade the Juddha Canal and Jagdishpur barrage in Sarlahi and Kapilbastu districts were initiated. During 1950-55 some irrigation projects like the Kosi and Gandaki irrigation development projects agreement were initiated. Other medium sized irrigation projects were started

¹ Chief, Research and Training Branch, Department of Irrigation.

than this). But development and well being of the people will cause decline in the population growth rate in future.

The above table shows a great difference in food grain requirement and food grain actually obtained from present agricultural irrigation practice. (item no. 4 and 5).

Critical Factors Affecting Agriculture Production

Besides other critical production support services, irrigation alone contributes to agricultural yield. If irrigation is given a share of the responsibility for a greater role in agricultural production, a mandate for irrigation and management changes will allow for performance improvement of existing irrigated areas. So in order to make up the present food deficit, the Department of Irrigation should run two types of irrigation program with the following clear cut visions.

- a) New irrigation area development at the rate of 50,000 ha/year
- b) Performance improvement program at the rate of 100,000 ha/year

New irrigation development would add 3 t/ha/year to rainfed yield whereas performance improvement program would add 3-4 t/ha/year on normal irrigated areas. Performance improvement program costs Rs. 2,000-10,000/ha where as new irrigation cost Rs. 60,000-80,000/ha. A target of 600,000 MT/year to cover the food deficit can be achieved if the above mandate is given to the Department of Irrigation. Or, any combination between (1) and (2) can be made based on food requirement and budget.

Increasing production through performance improvement program is a low cost effective approach which many developing countries are unaware of. These programs include, irrigation management transfer, joint management, systematic canal operation and maintenance, system rehabilitation and performance improvement assistance to farmer managed irrigation schemes. Assessment, implementation and evaluation of such programs need multi-disciplinary approaches which are not available in the Irrigation Department.

Performance of Irrigation Development and Management

The total area completed up to seventh Five Year Plan is only 51% of the total targeted during a 35 year period. The average annual rate of irrigation development in the country is only 16,000 ha. During Sixth and Seventh Plan the achievement was higher, because during this period many agencies shared the programs.

If the food deficit is to be made up by only new irrigated area, then nearly 150,000 ha of cultivated area have to be brought under irrigation each year. In this case, nearly Rs. 9 Arab is needed annually. However, if the food deficit is to be totally made up by performance improvement program nearly 150,000 ha have to be developed annually and the total cost comes to be Rs. 30-60 crore. It involves more than 200 trainings, many problems solving researches, gangs of water users organization development, lot of production service support promoting personnel and units. These are all beyond the present capability and capacity of Department of Irrigation. It needs tremendous quantity of manpower support from NGOs.

NGOs Support in Irrigation

If irrigation development is to be planned to support food grain requirement of the country, then a variety of new interventions with new technologies have to be implemented in the irrigation sectors. These new innovations and methods have to be managed by one central unit and implemented by many more agencies in the country. Many NGOs' national or international were involved in the irrigation development process of the past. At present, the following NGOs are working in different activities of irrigation development association with the Department of Irrigation. The last two of this list are international, non-profit organizations while the first six are profit-oriented consulting firms. It is thus important to differentiate between the various types of "non-government" institutions.

Irrigation Development Works

- a) Nipon Koe (P. Ltd.) Japan - Morang Sunsari Irrigation Project - Assisting project in design, supervision of irrigation system development and management. This company is providing similar service to project management of Narayani Irrigation Project.
- b) Sir, Halcrow and partners, England - Mahakali Irrigation Project - Assisting project in design development.
- c) Tahal Internation, Israel - Bhairawa Lumbini Tubewell - Assisting project in design and development of tubewell.
- d) Shamhu Construction Company, Korea - Babai Irrigation Project - Assisting in project construction.
- e) NIA Consult, Philippine and East Consult (P) Ltd., Nepal - Irrigation Sector Program - Assisting in promoting participatory irrigation development program.
- f) CADI, USA and GEOCE, Nepal - Irrigation Management Project funded by USAID - Assisting in promoting irrigation management concept and skill in Department of Irrigation.
- g) International Labour Organization - Special Public works programs and technical assistance to Dhaulagiri Irrigation Development Project.
- h) International Irrigation Management Institute - Irrigation Management Research assistance to Department of Irrigation.

New Irrigation Policy 2049 and Its Provision

The new irrigation policy 2049 through its sub clause no. 3.2 has adequately explained the involvement of private or non-government organizations (NGOs) in irrigation program implementation and operation.

Also for individual irrigation systems, NGOs can implement irrigation programs on a cost-sharing basis. This provision is made in sub clause 3.32 of the irrigation policy 2049.

A great emphasis on developing and expanding the construction and management of farmer managed irrigation system is given. In these systems, users will be NGO owners and construct, maintain and operate the irrigation system.

Lessons Learned and Concepts about NGOs

Realization

Need for NGOs is realized because of the following reasons:

- a) NGO services are mostly realized by the donors only. In the project paper, the need for NGOs is written and hence NGOs are employed. It is the general concept of how NGOs enter the irrigation sector. In many donor assisted projects, this occurs often.
- b) NGO services are needed because the work load is unmanageable. When a huge amount of budget is available, ambitious programs are made. When it seems unmanageable by the agency unit, NGO services are sought.

Selection

- a) NGO selection and nomination is the job of superiors. The working unit chief or officers never refer or discuss the type, quality and need for NGOs. So, NGOs appear on superior's will and disappear by that person's will. What are the responsibilities and tasks of the NGO is not clear.
- b) Expatriate NGOs are for the donor's interests alone. Expatriate NGOs are donor driven and depend on the interest of the donor. Such NGOs should not be consulted or much discussion be had with them because donors would be offended and hence, money does not come.

Utilization

- a) NGO involvement in the implementation unit has many advantages:
 - If NGO certifies difficult tasks, it is easily accepted by donors and listened by superiors.
 - Many technically difficult and objectionable tasks can be passed onto the NGO.
 - If any process, procedures or design goes wrong, NGOs can be used as shield, by taking the blame.
- b) They can be good advisors and helpful when the need arises. Some NGOs really supply competitive and knowledgeable personnel who can be of great help and use when needed.

Experience

- a) Not all NGOs have adequate experience to deal with problems. NGOs and their personnel submit manipulated bio-datas, so, when they are put in actual situations, their inadequate performance de-motivates local farmers for further involvement.
- b) NGOs employ new and inexperienced persons generally to make a higher profit. NGOs are mostly profit oriented, so, irrespective of institutional welfare, they are more centered to their benefit and profit. So, sincere devotion, sacrifice and painstaking effort cannot be expected with inexperienced NGOs.

Program Sustainability

- a) Program implementation through NGO is very costly and unsustainable. Programs like canal operation and maintenance which takes long time to establish becomes a costly business if it is run through NGOs.
- b) Only short period program should be run through NGOs.

Issues and Problems

The following issues and problems were experienced by many while working with NGOs.

- a) Leadership and personality issue: NGOs and their personnel working reflect uncomfortable behavioral activities that has led to ambiguity in the leadership role needed to accomplish the organizational objective. Whether NGO is responsible to accomplish the job or the agency being assisted by the NGO is not clear often.
- b) Job description issue: Generally, in the terms of reference of NGO the word 'assistance', 'ensure' and 'coordinate' are seen. These are ill defined and mis-interpreted frequently to suit the situation.
- c) Accountability issue: To whom, to what level and how the NGOs are accountable are not mentioned and briefed to client office. This leads a luxurious stay and unproductive output of NGO. Whom should NGO be accountable for?
- d) Work performance issue: A NGO has never been found penalized for its wrong program lead, unproductive program concept, and wrong system design. Who should supervise, monitor and control such NGO. Great complaints were listened about wrong feasibility study in sector program.
- e) Issues regarding the roles: Expansion of irrigation development training has become the fun of many agencies now in irrigation sector. Are these NGOs responsible for uplifting the capability of rural poor or do they have development role, or guiding role or assisting role?

If they have implementation role, how about maintaining or stabilizing role? Whether such role is really beneficial to rural poor?

Conclusions and Recommendations

The following conclusions and recommendations can be made regarding the involvement of NGOs in irrigation sector development in Nepal.

- a) If irrigation development planning is to be tied up with food grain requirement and population growth of the country; and if cost effective approaches are to be followed varieties of interventions efforts through many more organizations (NGOs) is a must to balance food deficit in the country.
- b) For performance improvement focused irrigation intervention programs local NGOs' performance is not adequate and also INGOs performance is unbalanced to local needs, so there is a need to be highly specific and particular in selecting both of these NGOs.
- c) To develop credibility and reliability of the services of NGOs conduct intensive training for performance improvement irrigation programs. Adopt learning process and process documentation activities on all these programs. This is the only way to be mature for implementing appropriate technology suited to locality.
- d) Profit oriented NGOs are unsustainable for frequent needs, hence, promote non-profit organizations. These organizations (national or international) must get first preference in the program.
- e) Minimize or reduce bureaucratic control on NGOs. Establish a mechanism through which such organizations can have easy access for development resources.
- f) Define criteria of service, roles, responsibility and accountability of NGOs to be employed and strictly monitored and evaluate the performance of NGOs. Make timely decisions on continuing or discontinuing the services of such NGOs.

ROLE OF NON-GOVERNMENT ORGANIZATIONS IN IRRIGATION DEVELOPMENT AND MANAGEMENT IN THE CONTEXT OF REVAMPING THE ADB/N STRUCTURE

N.P. Upadhyay¹

Executive Summary

Nepal being an agrarian country, the growth of the economy is largely dependent on the performance of the agricultural sector. This performance has been sluggish in relation to the growth in the population. The stagnation in the agricultural performance is partially attributed to the state of dependency on the rainfed agriculture. Irrigation is, therefore, one avenue which can create revolutionary effects on the performance of the agricultural sector. It is in this context that the ADB/N was involved in the field of irrigation development through its lending programs. In the process, ADB/N, besides extending credit to irrigation development activities, also intervened in the dissemination of irrigation technology. It also started intervening in the construction and development of surface irrigation systems.

Government and Donors also started channelizing irrigation subsidies through the bank because its network could be used as a good vehicle for service delivery. But due to ADB/N's inadequate technical competency and its ability to cope with the increasing demand for irrigation, the role of NGOs was realized and INGOs like CARE, IDE and organizations like SNV were invited to extend a major technical role in its irrigation program.

In spite of many constraints and its unwillingness to formulate a long term policy and strategies within its organization, ADB/N was carrying out small scale irrigation activities. During this, the bank was becoming more technocratic and moving away from its primary banking culture. Also operations on subsidy programs attributed to a reduction in profits. Although not much attention was being paid to these fundamental issues for many years, only recently a policy of a major revamp in ADB/N's organizational structure and functions was adopted. Accordingly, the bank has already taken steps for continued structural and functional changes to re-orient itself as a primary banking institution.

In a nutshell, it can be said in conclusion that a) His Majesty's Government's present policy of 1) relying more on privatization, 2) liberal approach and facilitation of NGOs involvement in development activities, and 3) turning over of irrigation systems and b) ADB/N's present action policy, attitude and current activities opens a broad scope for the active involvement of NGOs in Irrigation Development and Management in the country.

¹ Founder Chairman of "Centre for Poverty Alleviation."

Historical Background

Nepal being an agrarian country, the growth of the economy is largely dependent on the performance of the agricultural sector. This performance has been sluggish in relation to the growth in the population. The stagnation in the agricultural performance can partially be attributed to the state of dependency on the rainfed agriculture. Irrigation is, therefore, one avenue which can make revolutionary effects on the performance of the agricultural sector. It is in this context, that the Agricultural Development Bank (ADB/N) had emphasized the development of irrigation in its lending programs.

The irrigation development history of ADB/N goes back to 1968 when it started lending money for pumpsets. In its history, the bank has achieved successes and failures and had reached a stage when its name became included in the Irrigation Bureaucracy.

Performance of ADB/N

In Nepal, there are two agencies-the Department of Irrigation (DOI) and the ADB/N which are involved in irrigation development. ADB/N has been dealing with small scale irrigation systems. The bank has been playing a major role in releasing credit and subsidy installments to the farmers besides providing technical guidance within its crucial limitations. This approach has contributed in the irrigation field of nearly 120,000 hectares of land.

NGOs Involvement in ADB/N Irrigation Program

NGOs differ from one another in relation to their scope, objectives, structure, scale and level of operation. The INGOs/NGOs could be an effective media for irrigation development if they can mobilize local NGOs/water users and move in accordance with the themes of NGOs work. The themes of NGO action are viewed as:

- a) being good at reaching the poor,
- b) using participatory processes of project implementation,
- c) being innovative and experimental, and
- d) carrying out their project at low cost

The performance observations of INGOs like CARE International which has been working in Nepal shows that to a great extent they have been able to achieve the above in their work.

Due to inadequate technical competency and inability to cope with the increasing demand for irrigation, the bank had to welcome some INGOs like CARE, IDE and organizations like SNV for its irrigation development activities. These organizations have been playing major technical role either solely for irrigation or as a part of their rural development interventions.

The experiences have shown that NGO interventions have always been fruitful in irrigation development programs. An inherent feature of NGO interventions is the continuous involvement of

beneficiaries to create a sense of ownership of the system by farmers which ultimately reduces the farmers dependency on outside assistance. His Majesty's Government has also been encouraging such programs as it relieves the Government from a heavy burden of operation and maintenance cost.

The roles played by different organizations/NGOs are:

a) CARE's Role

The specific responsibilities of CARE in the implementation of ADB/N irrigation projects are:

- training of technical staff
- engineering feasibility studies
- socio-economic feasibility studies
- engineering design and estimates
- procurement and logistic support to sub projects
- construction supervision and
- implementation of agro-forestry activities

b) Role of International Development Enterprise (IDE)

In Nepal, IDE introduced manual irrigation pumps nearly 7 years ago, later adding the treadle pump. During the last few years indigenous production of both of these pumps has begun and these pumps have been marketed through a private dealer network and Gobar Gas Company. During the period, IDE has been playing a important role in such fields as

- research and development,
- manufacturing, and
- training and technical assistance

c) SNV's Role

SNV's role have been mainly

- engineering feasibility studies,
- engineering design and estimates,
- construction supervision, and
- logistic support

d) Lessons Learned from NGO's Involvement

- effective farmer mobilization,
- better physical performance,

- better economic productivity,
- more rational social welfare,
- more sustainable irrigation system management, and
- policy implications such as turn over of the systems.

Constraints with ADB/N

The major constraints which the ADB/N has always faced in its history of irrigation activities are:

- a) the lack of technical staff: The technical manpower engaged in irrigation in most of the field offices are far from satisfactory. Apart from the availability of manpower, there is also a problem of competency and quality of available manpower.
- b) the lack of motivation: The technical staff lack the motivation to work for long in ADB/N particularly in irrigation programs.
- c) working conditions: In most of the offices, the physical facilities for technical services either do not exist or are quite poor. There are no drawing boards and equipment available. In a few offices a set of levelling instruments and a theodolite are available but given the workload, these are not sufficient. Similarly, either lack of transportation facilities or its unavailability for irrigation work and lack of budget for repair and maintenance also pose serious problems.
- d) absence of a system maintenance fund
- e) inability to coordinate with other irrigation organizations/offices
- f) delays in communication between the ADB/N Head Office and the sub-projects.
- g) overhead cost: A banking institution going into irrigation programs and reluctantly bearing the overhead cost of the technical staff is not in a position to bear the technical supervision cost of the system. This puts a question mark on the system's quality and performance; (i.e. Balthali irrigation project in Kavre district, constructed under the sole technical guidance of ADB/N).
- h) operation on subsidy: The bank operates irrigation systems with 40-75% subsidy from the Governments which considerably reduces the size of credit investment. This reduces the interest earning capacity of the bank and poses a serious challenge on the profitability of a banking institution.
- i) the lack of long term policy vision: In spite of tremendous potential and demand for irrigation development in the country, ADB/N had never taken pain in devising long term policy for irrigation development within its organization. It always carried over its irrigation programs with "Management by Crisis"; a short sighted theory.

The result was it always had a hard time spending annual subsidy provided by the Government.

Organizations like USAID/CARE/SNV had always making serious efforts in working with ADB/N to cope with the increasing demand for, and to maintain the quality of irrigation system. It has been pleading to improve the structural, technical manpower and logistic bottlenecks within the organization.

In spite of generous financial support from USAID for a) establishing irrigation units, b) improving engineering capability, and c) providing program subsidy, the problems continue to exist.

Necessity of HMG/Donors to Use ADB/N in Irrigation Programs in the Past

In the past, the ADB/N had a service oriented network rather than profit oriented one. Its then widely spread network facilitated the Government/Donors to reach the under privileged rural populace. On one hand Government Donors could use ADB/N's geographically spread network in the past as a vehicle for multiple service delivery and easy channelization of subsidy programs, and on the other hand, ADB/N also had the advantage of a) using interest free capital and b) acquiring training opportunities from the Donors.

With the dawn of democracy, the validity of above compulsion may expire. Quite a few development banks are being established; the government is giving priority to privatization, and activating the NGO movement for development work. Even the irrigation systems are being handed over. Under these circumstances various options, alternatives and choices are available and their effective mobilization could help in boosting irrigation development and management programs in the country.

Recent Policy and Attitude of ADB/N

An observation of ADB/N's present policy and attitude highlights the fact that it is trying to reshape itself as a financially viable banking institution from a sick rural development organization. Its revitalization policy have been towards:

- consolidation and restructuring of the institution,
- stabilization of its financial structure,
- reduction in its operating expenses, and
- cut in non-banking functions like irrigation programs.

Accordingly, the measures have already been devised for

- closure of Zonal offices,
- closure and downgrading of unprofitable branches,
- closure of Technical Division, solely responsible for irrigation activities,
- closure of Technical Units in Zonal Offices which was responsible for implementation of irrigation programs whether on their own or under the joint collaboration with other INGOs, and

- reassignment of its technical staff to focus on normal banking operations.

Current Activities of ADB/N

ADB/N has already made major changes in its organizational structure. It has formally closed the Technical Division in the Head Office. It has also dissolved all the 14 Zonal Offices including Technical Units. It has already started amalgamating and consolidating Small Farmers Development Projects (SFDP). The massive transfer of technical staffs has also been undertaken.

The above changes may be important from the ADB/N's financial viability point of view but, at the same time, it might affect the communication and co-ordination between water users, ADB/N and INGOs which in turn will affect the implementation of small scale irrigation systems and projects whether solely funded by ADB/N or under the joint venture. Besides, dissolving and merger of SFDPs will effect water users' mobilization, group lending, construction and operation and maintenance of irrigation projects.

Government Policy on NGOs and Handing Over of Irrigation Systems

The democratic government has increasingly realized the importance of NGOs, as they could play a vital role in development. The Prime Minister Mr. Girija-Prasad Koirala, in his address to NGOs' National Convention organized by SSNCC, has already stated that the government policy is one of non interference and positive facilitation. It is also evident that the government has accepted the view that the NGOs have more advantages than government organizations in working with, and in reaching, the under privileged with poverty alleviation programs and that NGOs can mobilize additional local resources. Therefore the Government is actively encouraging the promotion of NGOs and liberalizing the administrative procedures for registration of NGOs. Also the Social Welfare Act has been devised for facilitating the work of NGOs. Accordingly, SSNCC has been entrusted to co-ordinate and monitor the activities of NGOs operating in the country.

HMG is giving due consideration in the total shift of the irrigation systems from agency to farmers. Increased irrigated areas demand huge allocation of budget on operation and maintenance of the systems. Due to inadequate Government budget on Operation & Maintenance, farmers are not cooperating in irrigation activities. Therefore Government is giving priority to the reduction of O&M cost and improving the performance of irrigation systems by handing over. Besides the reduction in cost sharing, objectives like leadership development, performance improvement, rational use of resources and proper operation and maintenance could be achieved through handing over whereby NGOs can play a prominent role in association with users' groups.

Potential Role of NGOs in Irrigation Development and Management

HMG's overall policy of relying on the private sector and private initiative for the country's development work and increasing interest in the NGOs programs brings a very broad scope for NGOs' interventions in irrigation development. Similarly revamping the ADB/N's structure and functions to revitalize its financial viability and profitability also provides a open platform for NGOs for their

active and massive involvement in irrigation development and management work. The NGOs can play an active roles in irrigation development and management through

- mobilization of local resources,
- ensuring effective participation of the beneficiaries,
- organizing and strengthening water users' organizations,
- facilitating the handing over of the irrigation systems,
- training water users and irrigation personnel,
- identification of technology,
- conducting feasibility study,
- construction/renovation of the systems,
- development, transfer and promotion of technology,
- research/action research,
- dissemination of information, and
- integration of services.

Recommendations

NGOs, if they are strengthened, can easily reach resource poor farmers through grass roots organizations and intensify agricultural production by developing and transferring cost effective irrigation technology. They can also play an active role in bringing the under privileged rural poor into the main stream of development through irrigation network.

After a careful examination of the ADB/N's present action policy, attitude and structural reforms towards being a profitable banking organization, I would put forth the following recommendations:

- a) ADB/N should stick to primary banking culture
- b) It should confine itself to credit operations in shallow tubewells and pumpsets.
- c) It should not intervene in surface irrigation systems
- d) It should not operate subsidy programs
- e) ADB/N should refrain from its attitude of creating monopolistic market in the field of multiple service delivery system.

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Collaboration with International Non-Governmental Agencies for Community Surface Irrigation Development and Management - Experience and Future Scope

R. Shrestha¹

Executive Summary

Agricultural Development Bank has collaborated with CARE/Nepal and SNV-Nepal in the implementation of its Community Surface Irrigation Program (CSIP).

Collaboration with CARE/Nepal was extensive and included capital subsidy supports along with free technical supports. With SNV-Nepal collaboration is limited to technical manpower supports in the form of Development Associates (DAs)

Both collaborations have their own usefulness and drawbacks; direct involvement of CARE/Nepal gave rise to identification of problems while SNV-Nepal's DAs had some status and appropriateness problems.

Scope exists for ADB/N's collaboration with INGOs, provided the INGO remains in the background and also with NNGO, provided it jointly implements the CSIPs.

Introduction

Since its inception, the Agricultural Development Bank (ADB/N) has been extending credit supports for the development of irrigation facilities in the country in order to supplement the agricultural development programs in general. More specifically it has augmented the agricultural credit demands by encouraging the farmers to take up extensive and intensive agricultural production activities.

ADB/N has maintained this policy with enough flexibility so that all types of possible irrigation facilities could be developed. There is no bar on the basis of geographical location or the client being an individual or a group of persons. Even the budgetary funding allocations are not limited.

Similarly, the interest rate fixed on the irrigation loan is a bare minimum, of 18% and the HMG/N also has provided subsidies of 40 to 75% of the capital cost. This is to assist willing farmers to develop potential schemes with their own resources.

1 Chief, Surface Irrigation Section, Agricultural Development Bank of Nepal, ADB/N.

The Surface Irrigation is a sizable component of the irrigation development program of ADB/N. The policy of ADB/N is to harness potential sources of water to gravity-feed the production pockets or areas on both individual and community ownership, operation and maintenance basis.

The main features of ADB/N implemented CSIPs are low cost, locally suited designs, use of local materials, beneficiary participation from survey to construction to operation and maintenance, environmentally safe, credit supports by ADB/N, capital subsidy provision, free of cost technical support services and the beneficiaries' participation through labor contribution.

The advantage with ADB/N Community Surface Irrigation Development Program is that ADB/N supports not only with the financial assistance (in the form of credit) but also with free technical supports. Organizational supports as well as post-completion back-up programs also exist, specially in the SFDP areas.

Collaboration with CARE/Nepal

Background

ADB/N started the Community Surface Irrigation Program (CSIP) as a regular program on the basis of community participation from 1983/84 in collaboration with CARE/Nepal. ADB/N provided irrigation loans whereas CARE/Nepal extended material supports in the form of subsidy and the farmers contributed their labor and finance as equity participation. Thus, ADB/N extended credit up to 30% of the total project cost whereas CARE/Nepal provided grant supports up to 50% and the remaining 20% was mandatorily borne by the beneficiary farmers through their participation in the form of labor contribution. Both ADB/N and CARE/Nepal together provided the entire technical supports services free of cost from the identification phase of the projects to their surveying, designing, cost estimating and actual implementation phases. This collaboration was limited to the Small Farmers Development Project (SFDP) area only and it lasted for five years until 1988/89.

From 1989/90 onwards, this community surface irrigation program has been supported by His Majesty's Government of Nepal (HMGN) through the provision of 60% of the total project cost as a capital subsidy and the program was extended to the areas outside of SFDPs as well. Of the remaining project cost, 30% was provided by ADB/N as a loan and the 10% equivalent borne through compulsory labor participation by the beneficiaries.

The Agreed Main Roles of ADB/N and CARE/Nepal

a) ADB/N

- Selection of potential project sites.
- Selection of small farmer groups with established working relationships.
- Provision of project site overseers to be assigned to the individual project sites from survey, design, cost estimates to work implementation phases and bearing their costs involved.

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- Provision of services of Group Organizer to assist participating small farmer groups implement irrigation projects.
 - Provision of irrigation loans to the farmer groups of up to 50% of direct costs and production credit loans.
 - Ensuring the materials and equipment provided are used exclusively for the intended purposes.
 - Issuing completion certificate to CARE/Nepal .
 - Resolution of conflicts.
- b) CARE/Nepal
- Providing up to 50% of direct project cost---materials, equipment, transportation of materials, site labor, training and technical support and supervision.
 - Provision of two qualified field engineers to collaborate with ADB/N technical personnel from site selection to work supervision.
 - Provision of a field agriculturist to advise participating farmers on crop production.
 - Providing community management co-ordinator/expert for institutional development like Water Users' Associations.
 - Training of ADB/N technical personnel on survey to implementation aspects.

Work Executed

- Construction of 14 new irrigation schemes and 19 rehabilitation/improvement schemes, thereby providing irrigation to 1824 ha (new) and 1364 ha (rehabilitation) of land in 13 districts.
- Carried out three training courses for the ADB/N junior technical staff.
- Carried out two training courses for the farmers.
- Not much was done in institutional development at the farmers levels.

Experiences

- Most of the ADB/N and CARE irrigation schemes are operating with little trouble, technically as well as in a socially harmonious way.
- However, some large complicated projects which were constructed with set targets in view, failed due to technical capability.

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- Mechi Kulo, 388 ha (Bahundangi, Jhapa) - The side intake structure on the Mechi River has been washed away by river degradation irreparably.
 - Altai Khola kulo, 99 ha (Sijuwa, Morang)- Scouring damages at intake
 - Ratu Khola kulo, 70 ha (Tulsi, Dhanusha)-Upper reach of canal washed away by Ratu Khola
 - Rajaiya kulo, 25 ha (Jyamire, Makwanpur)-Failure of intake on Rapti river
- On-site visits by technical teams were frequent (made easy by CARE's own vehicular facilities).
 - ADB/N technical staff, almost all of whom were recruited with the initiation of the ADB/N and CARE joint program, gained limited knowledge and skill in design and work supervision but gained enough confidence in design and construction of low-cost but technically sound small-irrigation schemes.
 - But the irritants were:
 - The joint venture irrigation schemes got identified unduly much more as CARE schemes rather than joint schemes. (Perhaps due to field work supervision by CARE personnel, CARE's payment authority for subsidy works and use of CARE's vehicles during supervision trips to sites).
 - The junior technical staff of ADB/N got high expectations, and they became spoiled-there was a tendency to expect the same facilities as they had experienced during the joint venture period.

Collaboration with SNV-Nepal

Background

ADB/N collaborated with SNV-Nepal in the implementation of the Bank's CSIPs by way of the later providing its Development Associates (DAs).

The Bank had requested SNV-Nepal to provide the DAs with minimum qualification of B.Sc. Civil Engineering with specialization in Irrigation Engineer/Water Management to discharge the following tasks and responsibility:

- a) to undertake detailed feasibility studies of the Small Farmers Community Irrigation Schemes
- b) to provide technical guidance for the construction of irrigation systems to the community
- c) to train the local community to the undertake construction work to maintain the irrigation systems

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- d) to train ADB/N Overseers and Sub-overseers to undertake feasibility studies, construction and maintenance of the irrigation systems
 - e) to prepare a completion report of the system.

Work Executed by DAs

- a) They were engaged most of the time in conducting feasibility studies, design, cost estimating and construction supervision of CSIPs with the very active cooperation and help from civil engineering technicians of ADB/N.
- b) They hardly managed to participate in training the local beneficiary communities on O&M of the CSIPs or even the junior civil engineering technicians of ADB/N. This was because of the limited scope for such activity in the ADB/N and also due to heavy workload in construction activities.

Experience

ADB/N had accepted the manpower supports in order to ease its own limitation of capable manpower, but the Bank's experience with DAs is very mixed:

- a) The perceptions about the scope and extent of functions of DAs differed between SNV-Nepal and ADB/N. This caused some confusion as to the DAs functions, utilization and authority without accountability.
- b) There has been some difficulties arising out of the professional background of some DAs as against the actual requirements of ADB/N. Moreover, ADB/N was left without capable manpower once the DAs have completed their contract. The DAs were only able to gain experience but minimally help in improving the capability of the ADB/N staff.
- c) Repeated insistence for provision by ADB/N of counter-part civil engineers to DAs, despite the fact that ADB/N had precisely asked for DAs due to shortage of civil engineers in the Bank. This has been a bone of contention between ADB/N and SNV-Nepal.

These factors have affected the success level of SNV-Nepal and ADB/N cooperation in the CSIP.

Future Scope of Collaboration with INGO and NNGO

Based on the experiences from the Bank's collaboration with CARE/Nepal and SNV-Nepal in CSIP implementation, future cooperation with INGOs and NNGOs should be along the following lines:

Collaboration with INGOs

- a) Providing direct or indirect capital support in any or all of the following:
 - Provision of construction materials, in kind or cash for use in irrigation schemes.
 - Provision of engineering equipment and/or two wheel drive form of transport.
 - Provision of sponsorship for local technical/engineering manpower on contractual employment by ADB/N.
 - Provision of sponsorship for local experts/manpower through NNGOs for institutional development
 - community organization works at farmers level
 - irrigation system O&M works at farmers level
 - water utilization and production capacity development work at farmers' level

Skill and experience development training and exposure visits of ADB/N technical staff in-country and/or abroad
- b) Limiting the role of INGO to joint program planning and monitoring of progress and impacts while assigning the main responsibility of work implementation (survey to turn-key completion) to ADB/N and NNGOs joint teams.

Collaboration with NNGO

- a) Joint implementation with financial sponsoring from INGO
- b) Training of farmers for institutional/capacity developments through mobile teams
- c) Post-implementation supports and counselling on
 - O&M of irrigation systems, and
 - provision of agricultural production packages

An Experience of Rural Based Grass Root NGOs in Irrigation Management

P. Acharya¹

Introduction

During a visit to Lamjung district for assessing the institutional capability of local NGOs/User groups, a group of surveyors happened to visit a farmers' managed Mashar irrigation system in Bhalayakharka Village Development Committee.

The command area of this irrigation system is 10 ha of land owned by 40 farm households. The land was unirrigated before 1964. As the population pressure increased, the local people realized the need of increasing food production in order to feed their families. The local people organized themselves and explored the irrigation potential from Chhi Khola. They formed a user group and developed the community irrigation system (contributing one month's labor for construction of the irrigation system from each household) in 1964. The system was developed from the steep slope of the hills. Each household also contributed 12-15/days for repair and maintenance every year. The unreliability of the system made the farmers realize that the system should be permanent and they requested the concerning line agency for financial help. In 1972, the community received Rs.4000 in a grant to repair the system. The beneficiary community again requested the line agency for additional financial resources to make the system permanent. In 1988, they become successful in developing the linkage with irrigation line of credit project implemented in the district.

The irrigation line of credit project approved Rs.400,000 for the permanent improvement of the system. The construction work was assigned to a contractor undermining the importance of the local community. The community thought that if they could obtain a petty contract from the contractor they could mobilize local resources and generate some savings for the operation and maintenance of the system. Accordingly they approached the contractor, obtained a petty contract worth Rs.90,000 from the contractor and were able to save Rs.30,000. The amount thus saved has been deposited in the bank. The community has used it for repair and maintenance work. In this way, they are (as of June 1992) operating their system efficiently. This is one example which demonstrates the capability of the local institution/NGOs. There are other similar cases to cite. Such cases imply that the user managed irrigation projects could be sustainable in the long run.

Approach in Irrigation Management

Management of community controlled water implies making efficient use and best distribution of available water resources. Successful operation of the irrigation system requires sound management and mobilization of local resources. This can be achieved through the participatory approach

1 Rural Development Specialist, SAPPROS/Foundation.

in the community. In the past, the tendency was to divert the technical and financial inputs to agency managed irrigation system and the experiences indicate that the system developed and the managed by the external agency failed to develop the mutual trust and feeling of ownership among the beneficiaries of the system. Thus the question of sustainability of such irrigation system remains open to query. Keeping in view the above situation, a new modality of the participatory approach integrating the technical and financial know-how of the external agencies and traditional functioning style of the community has to emerge for sound management of the community irrigation system. This approach can be implemented creating the local institutions/NGOs as intermediaries.

Grass Root Participation in Irrigation System

An organized effort, through a collective approach outside the government is the basis of community involvement in promotion and development of a community irrigation system. Thousands of local indigenous NGOs have been operating informally since time immemorial in Nepal. Many of them are operating small irrigation systems. It is estimated that there are about 17,000 such systems in Nepal.

Past experiences indicate that such informal indigenous NGOs have managed the community irrigation program with dedication and faith from individuals and the community. These local institutions have been more successful in managing the community development work even in inaccessible areas. Remoteness and harsh topography have induced the local people to work together in order to cater to their common needs. These type of self-evolved institutions are functioning very actively and are generating their own resources for operation and maintenance by creating awareness among the beneficiaries whereas agency persuaded local institutions are more dependable on outside agencies even for repair and maintenance of the community work. Bhotedar Community Irrigation System of Lamjung district managed by the hill food program is a good example which shows that the community did not have interest in maintaining the system because the community was not involved in all steps of development process e.g. alignment, survey, construction etc. Whereas the community managed irrigation systems, constructed by the community and financed by the external agency, are functioning very effectively in terms of management of water sharing, operation and maintenance.

Managerial Capability of Local Institutions/NGOs

The recent study of local institutions involved in irrigation system in Lamjung district² highlights the managerial capability of the local users' group and NGOs. The findings are very much relevant in this workshop on the role of non-government organizations in irrigation development and management.

2 *Users' Group Management Assessment Study, SAPPROS/Foundation, Nepal, July 1992.*

All together 37 community irrigation systems developed in the district were surveyed and the capability of the local institutions in various aspects assessed. Some of them are as follows:

Capability In Planning

Most of the user groups/NGO are capable of identifying and prioritizing their needs. They are also capable of assessing the potential of resources, and developing the plans according to their felt needs.

Capability In Implementation

The local institutions/NGOs are efficient in implementing the irrigation project. In the case of self-evolved institutions/NGOs, they are implementing the irrigation projects much better than the agency persuaded system.

Capability In Monitoring

Most of the institutions/local NGOs maintain a record of both financial and other transactions of the project that they undertake. However the transparency system between the donor and beneficiaries is virtually non existent.

Capability In Organization and Management

Organization and management part of the local institutions/NGOs are relatively poor. Lack of working guidelines (such as a manual) and proper training hamper the management capacity of the committee member. The summary of the findings of the community managed irrigation system shows the capability of local institutions in various activities are as follows:

Table 1³

S.N.	Activities	Capability in Percent
1	Planning and project identification	81.91%
2	Implementation of project	87.37%

3 *Users' Group Management Assessment Study, SAPPROS/Foundation, Nepal, July 1992.*

Empowerment

The main thrust of decentralized planning lies in (i) encouraging people's participation at grass root level planning, implementation, monitoring and evaluation of development projects, (ii) empowering the beneficiaries through delegation of authority for decision making at the local level. The Decentralization Act also intends to empower the local institutions to carry out the community development projects. Very often these local institutions are not involved in any planning based on their own priorities but rather, they are forced to accept the model proposed by the external agencies even though such models do not suit the local condition. This functioning modality has made the irrigation management system more complicated. A new modality has to be introduced involving the local people in all aspects of a irrigation system (i.e. alignment to water sharing) and making the donors/agencies a catalyst for serving the technical and financial inputs required for the implementation of irrigation system.

Strengths and Weaknesses of Local Institutions/NGOs

Local institutions involved in irrigation management system have demonstrated better prospects for management of local resources. The irrigation system developed and managed by the self-evolved institution is functioning very actively in terms of (i) local resource mobilization, (ii) development of ownership feeling, (iii) effective co-operation, (iv) creation of local leadership. These positive aspects are contributing in one way or the other, towards the betterment of irrigation management. The sustainability of the local institutions are also largely dependent upon effective implementation from the people themselves.

Weaknesses

The local institutions/NGOs engaged in community irrigation system have not served the community as envisaged. The major factors responsible for this is as follows:

- a) fully dependent on external assistance,
- b) lack of savings generation for repair and maintenance of the system,
- c) over-involvement of agency and frequent intervention in the construction phase,
- d) lack of ownership feeling in the irrigation system,
- e) selfish leadership among the ex-office chairman in the local institution, and
- f) vested interest.

Future Role of Local Institutions/NGOs

In the changed political context the recent enactment of District Development Committee and Village Development Committees Act has recognized local institutions/NGOs as vehicles for carrying

out development activities. Thus the role of NGOs for development of the country in general and rural development in particular becomes vital. Under the environment of decentralization and liberalization, community development activities require the development of a range of institutions through which the community can choose how to make their own investments and the government can choose how best to deploy the resources that it has to support local endeavor. The NGOs established by the local user groups can match the local felt needs with that of outside resources and operate the management process by being the intermediaries.

Suggested Strategy

It is widely accepted and recognized that development work has to be initiated at grass root level through people's participation while developing their own institutions. Organization of local institutions is not an end in itself but only a means towards effective local participation and they can articulate the local needs and design the appropriate technique through a bottom-up process. The experiments of community level irrigation systems implemented over the last three decades show that grass root institutions with participatory approach are urgently needed for community managed irrigation programs. It should be realized that unless these institutions are given authority and appropriate recognition they are not likely to motivate the people and enhance their participation (whether physical, moral and financial) required to achieve their goal. The future strategy of community irrigation management system should focus on the following issues.

The community should be empowered to carry out community level irrigation projects from alignment through to the construction phase. The prevailing tendering and bidding system for construction of community irrigation projects should be eliminated thus empowering the users to carry out projects either themselves or as per their decision. The funding agencies should provide financial and technical back-up. This approach will promote the community involvement in irrigation management system.

The cost sharing system introduced in community irrigation programs has been useful for creating the sense of ownership of the irrigation project and also helped motivate them to accept the responsibility of maintenance and supervision. The cost sharing arrangement should be made uniform among the various agencies irrespective of any public or private sector.

Labor is the only available resource which has not been used effectively and the system has not been developed to save labor resource at the time of need through a conversion mechanism that converts labor into capital resource. It is proposed to implement this strategy distributing labor certificates to the labor contributors making entitlement of the resource generated through this process. The proposed scheme will generate the savings from labor resources and enhance or promote the labor contribution in the community irrigation system. The provision of resource generation in the construction phase of irrigation will equip the local institution with resources and also the accumulated resource can be used in repair and maintenance work of the irrigation system. The sustainability of the local institution largely depends upon the availability of local resources. The conversion of labor into capital resources will boost the community irrigation management system effectively. The labor certificate scheme is already implemented in drinking water projects of Ghyalchowk and Bhumlichowk Village Development Committee of Gorkha district. The details of labor mobilization and certificate scheme is in Annex 1.

The implementation strategy adopted by the local institutions/NGOs varies in irrigation management system. The strategy adopted by some local institutions are in right direction whereas achieve-

ment of some others are not encouraging. The variation in all activities of community irrigation prevail in irrigation management system. It seems necessary to introduce the working guidelines and procedure of irrigation program to minimize the problems encountered by local institutions. In this connection, it is necessary to prepare the simple and understandable irrigation management manual covering all aspects of community irrigation project (planning, implementation, decision making process, financial and resource management, record keeping sharing of water, repair and maintenance, monitoring and evaluation process, savings generation for repair work etc.) and provide the manual to local institution/NGO before implementing the community irrigation system. The proposed manual is expected to be instrumental in capitalizing the strengths of local institutions/NGOs in rural development effort by minimizing the problems encountered and weaknesses inherent in such institutions.

The other probable key issues are possibilities of channelizing the technical and financial resources to local level institutions/NGO. Mobilization of technical resources may not be problem but financial resource mobilization will require substantial change in financial regulation. It is suggested that an intermediary agency be created in order to channelize the financial resources.

Labor Mobilization and Labor Certificate Arrangement

Present Situation

Labor dominates a key role in Nepal's abounded resources. Effective mobilization of labor resources serves as an indicator to economic development. If the heavily dependent laborer on agriculture land could be diverted to non-farming activities this may have a direct positive impact on economic development and help poverty alleviation programs. Examples can be cited of developed countries like Japan, Korea, Taiwan etc. whose economy has substantially been improved due to prudently managed labor resources.

National Policy

The national policy on Labor envisages:

- creating employment opportunities through Labor intensive programs,
- promoting rural community participation in rural development.
- encouraging Labor intensive programs, and
- diverting the agriculture based labor to non-farming activities.

Past experience has indicated that rural communities have significantly contributed to socio-economic activities. Although Labor contribution from disadvantaged people in rural areas presupposes encouraging signals, expected results cannot be achieved due to lack of Labor mobilization in an organized way. Also these participants have not been able to receive due social recognition.

Objective

Against the background of productive Labor employment for economic development, it is equally important to create a united and organized dispersed Labor force, as such organized institutional development is a prerequisite for development. As such, in order to bring the rural Labor force into the mainstream of development, the following objectives should be fulfilled.

- Creation of association/groups of participants at ward/village level.
- Labor certificate should be distributed to participating communities in Labor contribution to recognize them socially and economically.
- Resources to be made available on the basis of prevailing wage rate of total Labor contribution and to be deposited with association/group.

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- Priorities to be given to Labor mobilization through people's participation in Labor intensive programs.

Labor Certificate

A Labor certificate (Annex - 1) shows the total Labor contribution by an individual/community, mentions the amount of total Labor contribution calculated on the basis of the prevailing market rate. This arrangement of Labor certificate helps determine the volume of work in a given project.

Usefulness of Labor Certificate

The direct Labor contribution comes from poor people and the rich ones either send someone else on or their behalf or provide cash in rural areas. The Labor certificate gets the following benefits and is helpful for Labor mobilization.

- a) The disadvantaged people will receive social recognition of his/her labor contribution.
- b) The Labor contributing community's association/group will thus pool resources.
- c) The organization/individual initiating developmental work will provide a subsidy ranging from 25 to 50% to the Labor contributor's association/group calculating cost on the basis of prevailing market price of wage of total Labor contribution.
- d) The association/group will deposit or invest in income generation activities the amount received stipulated in Labor certificate.
- e) The association/group can use this amount as a guarantee fund to take out loans (fourfold of guarantee amount) from a self-help fund or another commercial bank.
- f) Arrangement will also be made to get loans on the basis of this amount mentioned in the Labor certificate from the association/group fund.
- g) The Labor contributors themselves will be entitled to receive the interest earned from the deposited amount.
- h) This arrangement will promote the system of Labor contribution to social/community program.
- i) This provision will encourage the government policy to develop rural areas through people's participation.

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- j) Resources mobilized through Labor certificate will facilitate rural needs as well as the resources thus collected expands the opportunities of credit expansion serving Labor certificate as collateral.

Labor Certificate Distribution and the Process of Facilities Provision

The Labor certificate is provided to those who contribute Labor without charge to develop their Labor use. The interest will be provided at no less than the interest earned from any commercial bank's saving account of the amount deposited in the name of association/group.

Book-keeping of Labor Certificate

- a) Attendance record of those contributing labor will be kept by association/group (Annex-2).
- b) As per attendance, record the days/amount equivalent to Labor contribution and thus the actual amount deposited will be mentioned in the Labor certificate.
- c) Individual account will be maintained on the basis of the Labor certificate.
- d) Priority will be given to those contributing Labor for community skill training program.

Legality of Certificate

Although the Labor certificate provided after labor contribution does not possess legal recognition yet, the amount deposited on the basis of Labor certificate will have a guarantee provision. The certificate, however, can be used as collateral to self-help fund, commercial bank and the organization of Labor contribution.

Group/Intergroup No...../Association
 VDC.....District

Certificate No.....

Date:

LABOR CERTIFICATE

Mr. of ward No..... has been duly presented this Labor Certificate due to his/her active participation through labor contribution to totaldays commencing from the dateto A sum of Rs..... which comes out of Rs.as a total labor contribution has been deposited to Association/Intergroup No. under the ownership of this certificate holder.

.....
 ()
 Secretary/Treasurer

.....
 ()
 Chairman

Facts About Labor Certificate

1. The deposit holders will receive divided/interest not less than the interest on saving account in commercial bank in Shrawan/Bhadra of each year of the amount deposited to association/group on the basis of labor certificate.
2. The deposit holder will receive loan equivalent to two fold of deposited amount from association/intergroup.
3. Loan Particular

Date of Loan Received	Purpose of Loan	Interest Rate	Repayment Schedule	Remark

4. Interest Payment particular

Interest Rate	Interest Received Date	Interest Amount	Remark

Irrigation in Bajhang: The Role of NGOs

D.S. Rana¹

In the following pages, I will give some preliminary thoughts on the role of non governmental organizations (NGO) in irrigation management. Though they are only exploratory, I present them here so as to provoke a discussion and receive feedback in order to develop these thoughts further. I will begin by painting the historical and physical background to irrigation in Bajhang District. Farmer-managed irrigation systems (FMIS) are found throughout the District; these have a long history which has produced an institutional form in-tune with location-specific factors (labor, knowledge etc.) where the systems are found. This introductory section will be followed by a short case study of an irrigation system which will highlight the present problems. This will be followed by the section on the possible role NGOs can play in resolving the problems faced by irrigation projects. I will argue that NGOs have a genuine role to play in the motivation and mobilization of grass roots organizations, which may take responsibility for and operate government sponsored development projects. However, it is my belief that this micro-level action is not enough. I will argue that NGOs must also work at the macro-level to influence Government policy, to describe alternative development models and to change local government practices, so as to create a more conducive environment for the indigenous utilization of natural resources by the local communities.

Irrigation in Bajhang

Bajhang District is remote by any standard - far from the national center, no motorable roads, poor population, poor agriculture. Yet throughout this District one comes across "kulos" (FMIS canals). What may be even more surprising is that the Government had no hand in their construction and do not have any hand in their operation or maintenance. For whatever historical reason most of the larger agricultural areas of the District are endowed with these "kulos" possessing histories stretching back over centuries. During the Rana regime, and probably since the beginning of feudal principalities, at the least, the governing authorities played a negligible role in the exploitation of natural resources. They may have had a heavy hand in commanding the local people to undertake certain activities, such as road maintenance, but they left the locals to their own devices when it came to the utilization of natural resources. The people were seen as sources of labour and taxes, not as recipients of the government largesse. In this environment the locals formed self-help institutions (definition: Institutions is a complex of norms and behaviours that persists over time by serving some socially valued purpose, while an organization is a structure of recognised and accepted roles - Uphoff 1986) mobilising sufficient human resources to effectively utilise natural resources such as water. These still persist to this day in the form of "kulalchays" (canal overseer) and the farmers' groups which look after their kulos.

¹ *President, Udaya-Himalaya Network.*

Although all the "kulos" are unique to a particular location, they all have broadly similar characteristics. For the sake of simplicity I will divide the kulos into two arbitrary categories based on their length from source to the head of the agricultural area. For each category I will describe the institutional characteristics which operate at the present. I am afraid my study was too limited for me to state categorically that these institutions have enabled the systems to be operated and maintained over time.

For the longer canals (anything over 1 km, the majority of kulos encountered were between 1 and 2 kms in length) Kulalchays are selected by the farmers from among themselves. There does not seem to be any sort of formal meeting, but a general consensus is arrived at over a few days just before the rice transplanting begins. The "kulalchay" is usually retained during the critical agricultural period from mid-June through to mid-September. He is responsible for bringing water to the "jiblow" (equivalent to a phant, a flattish land some metres above the river which is usually irrigated), and in some cases to ensuring its equitable distribution among all the fields (Note, not all systems give kulalchays responsibility for distributing the water). In order to ensure that the system can deliver the water when and where it is needed, he must continuously check the system. If there is a breach in the system, he will personally try to repair it - where possible, but otherwise, he will request help from the farmers nearest to the breach, and if this is insufficient he will notify the whole village. Though he does not have the authority to order the villagers to help in the repair works, he seems to be able to influence them due to some form of communal compact which ensures that the majority of the households do participate in the work.

At the time of his selection the farmers and the kulalchay will exchange written agreements which state the exact responsibility and authority of the kulalchay and the amount of grain that each farmer has to pay him for his task. Payment of this "mana-pathi" system can either be based on individual land holding on the jiblow, or fixed at a flat rate irrespective of land holding.

In the case of shorter canals - distance from source to agricultural area being less than 1 km - the whole community takes responsibility for operating and maintaining the system. Initially just before the peak labour demand period, all the farmers spend a day cleaning the canal, clearing it of any blockages, deepening it where necessary, reinforcing sections which may be weak, and generally ensuring that the canal can bring sufficient water to the whole jiblow. Since water is such a critical commodity for paddy rice cultivation if there are any breaches during the monsoon, repair work begins as soon as the breach is discovered, it does not need any coercion or motivation on part of the farmers.

A Short Case Study from Bajhang

I will now present a short case study of an irrigation system, from which I hope to draw out lessons. The next section will deal with the possible role of NGOs in the irrigation field.

A days walk along the Seti River to the south-west of Chainpur, the District Headquarters of Bajhang, lies an area known as Thalara; an area of sharp relief dissected by tributaries of the Seti. Nestling in the folds between the rivers and ridges are some of the most productive agricultural lands in the District, among them is Pruchundi-Sayra Jiblow on the north side of the Thuli Gad. The soils of this area are meant to be red, but biannual deposits of compost has produced a layer of black soil. Due to three to four kulos the whole of this jiblow is irrigated, and has been for the past century. All, even the oldest inhabitant of the area at 87 said the kulos had been built before their grandfather's day.

Sometime in the mid-1980s some "pardeshis" (outsiders) came to survey the area. They told the locals that they were surveying the line of a proposed canal to the village on the other side of the ridge. A few years later other "pardeshis" appeared. This time they said they had come to build a "nahar" (the local people seem to differentiate between a "nahar" and "kulo" on three counts. If the canal is large, cemented-lined and provided by an external agency it is a "nahar"). The locals were even more surprised to hear that these outsiders were only going to line their main "kulo" with cement. But in order for this to occur the "pardeshis", who were the contractor, the engineer and overseer, informed the locals that they would have to form a water users association (WUA). At a small gathering - not all had heard about the meeting, the WUA was formed.

The "nahar" construction has now taken place, the "pardeshis" have left the area and water still flows through the system. But the lessons from this experience of Government development should not be forgotten, as it still occurs throughout Nepal. Asking a simple question such as, why the "kulo" was rehabilitated to a "nahar" when the supposed beneficiaries i.e those farmers with land on the "jiblow" had not even requested for a canal will be instructive.

To answer this question one has to look at the history of Second Hill Irrigation Project (SHIP) who re-built the system. The loan of US\$20 million for this Project was approved in November 1982 by the Asian Development Bank. However, surveys by consultants to locate 4,000 hectares targeted for irrigation by this Project came up short; only 2,000 ha could be found, for they discovered that the vast majority of areas which were suitable for irrigation already had some form of FMIS. However, this did not put off the ADB or HMG, who went ahead with the Project. The irrigation systems are a classic example of "donor-driven development", irrigation systems built not for the sake of the people in the area, but those in Kathmandu and Manila who process the loan, who can receive a Landcruiser, who can go on shopping trips to Bangkok and Hong Kong under the "overseas training" component and so forth. The first point is that development projects, more often than not, are for the sake of the bureaucrats and the donor agencies, rather than the declared beneficiaries.

The second point is that development projects lack accountability to the supposed beneficiaries. The Project was meant to benefit the farmers on Pruchundi-Sayra jiblow. But has anyone from SHIP, HMG or ADB, bothered to ask the people whether they are happy with their "nahar" ? The people on the WUA mention that the canal has yet to be handed over to them. They strongly state that until they are satisfied with the work they will not sign any paper accepting the canal. They believe this will force the contractor to return to finish his task so as to get paid. However, when told that the contractor has already been paid for the work, they express surprise. How, they ask, can SHIP "ok" a canal without asking the WUA whether they are satisfied ? The contractor, by whatever means, satisfied the engineer. It is the latter, and only his, signature that is needed for the contractor to receive his full payment. Where is the accountability there?

The third lesson is the lack of participation of the local people in the Project - the nominal beneficiaries. Not only did they not request the Project, but when it did become a reality, there was no mechanism for their meaningful participation. The contract was put out to tender in Kathmandu and the project headquarters in Dhangadi. Once the bid was won the contractor moved into the field with his own staff of qualified workers from the East. The Project pretends the people can participate through the WUA, which has to be established before work on the "nahar" can actually begin. This is mere tokenism. The engineer, overseer and contractor call a meeting where a number of people are nominated to become members. At that meeting they are told of their responsibilities - that's the extent of their "training" - and sign a paper stating they understand their responsibilities and those of the village. Theoretically they are meant to oversee that the contractor does not take any short cuts in the work, but without training, and no formal power or authority how are they supposed to ensure the contractor remains on the straight and narrow ? Now three years after the completion of the "nahar"

if you ask people if there was such a thing as a WUA, most will claim they have never heard of one, and those "press-ganged" into the Association will tell you that they could not do anything. In any case, set few people attended the meeting that one cannot in any way say that the WUA formed represented the communities, hence participation was non-existent throughout the Project.

The Role of NGOs in Irrigation Management

From the lessons highlighted above I will tentatively propose possible role for NGOs in the irrigation field. I strongly believe that the NGOs can become involved with irrigation at two levels - micro or field level and macro or policy level. I do not think NGOs should be constrained to work solely at one level, for though NGO projects are important, they do not by themselves provide solutions to problems on a national scale. But their field level experiences can give policy makers important insights about the effect of certain policies on rural communities and suggest alternatives. This could lead to the evolution of a more conducive macro-environment for development.

But before launching into the main thrust of this section I would like to add a caveat and here I can do no better than Micheal Cernea (1986) who warned, "...recognition of the key, growing, contribution that NGOs can and do make should not be accompanied by the mistake of idealising them," and went on to suggest that, "an objective approach to the limitations and weaknesses of NGOs is required for strengthening their own structures and performance, as well as for making their activities technically and economically sounder, and more replicable."

Motivation-Mobilization

NGOs, through motivation and mobilization activities, can help in the formation of grass roots organisation. NGOs are ideally suited to the motivational-mobilization role for a number of reasons:

- a) they are not "tainted" in the minds of the rural people as are Government bureaucrats who are usually thought of as corrupt, high-handed, and having no real understanding or feeling for the rural people,
- b) they are usually innovative and not as "objective-bound" as the Government bureaucracy, who have their targets to meet. This is not to say that NGOs are completely unfettered to do as they wish,
- c) NGO workers are generally more understanding and interested in involving the local people in development programs due to their training and outlook, and
- d) they can reach the poorest level, and utilize participatory means of involving the people in development initiatives.

The mobilization and motivation of grass roots organizations will ensure that the local people are full participants in the development process. They are the ones who will plan, prioritize, decide, implement and evaluate development projects. These should, generally, be appropriate and sustainable since the initiative comes from the very people who will be affected by the project rather than some bureaucrat sitting in Manila or here in Kathmandu.

Intermediary

An NGO or a development worker can act as an intermediary between the village/community and the bureaucracy. An NGO is better placed to understand the problems, needs and aspirations of the local people as they operate within a small geographical area and spend longer in the field with their constituents - the villagers. Meanwhile the bureaucrats have much larger areas of responsibility ensuring heavier workloads and hence, less opportunity and time to focus on any specific problem. These two interlocking factors would suggest an intermediary role for NGOs. They can put a strong and reasoned case for the villagers in front of the bureaucrats and in return, put the opposing case of the constraints and problems faced by the Government in front of the villagers. I hastily add that I am not suggesting NGOs should become "apologists" for Government inaction or corruption, but rather provide a facilitative service between the friction of village needs and Government resources, and can try to ensure that bureaucrats are transparent over proposed development plans and are in some way accountable to those who could be affected by the project.

Catalyst

NGOs can spark the process of development by the attitude they display towards their activities, the way they respond to the local people, their knowledge and views. NGOs by asking the "right" questions which will initiate a process of reflection and debate among the people can get the "ball rolling" - so to speak, for an indigenous, grass roots development initiative. This is the catalyst role, which can only be undertaken if the people of the area, trust and respect the organization or individual. They can also catalyse the people by providing the appropriate assistance which enables the people to surmount a particular obstacle. For instance, keeping irrigation and Bajhang in mind, a breach has occurred in a cement-lined canal. The locals may not have the technical skills and/or materials to repair it. A catalytic organization would organize the locals to raise the funds to pay for the cost of a specialist and the materials. This organization would then find and provide a specialist, who would not only repair the breach but would at the same time teach the locals the skills to do the job themselves next time, and get the required cement.

NGOs, by being innovative, can undertake new activities and test new ideas. In terms of irrigation for example, they can undertake mobilization and motivation activities so that government sponsored irrigation systems could be handed over to the local communities. If this proves successful, the NGO can play a catalytic role in spreading the idea, and persuading those with power and budget, such as the Government, to take notice and encouraging them to adopt it on a wide-scale.

NGOs can act as catalyst in changing some of the contradictions inherent within the Government bureaucracy - firstly, it is not in the interest of bureaucrats to ensure a transformative development of rural people leading to their empowerment, since it would reduce their power and authority. And secondly, the bureaucrats do not possess the right "mindset" to support or help the villagers. NGOs can pass on some of the lessons they have learnt so that the bureaucrats can become more effective development workers.

Empowerment

The long term goal of all rural development NGOs should be to put themselves out of business. At present they have a genuine role to play, but they must strive to enable and empower the rural communities to take responsibility for their own development process. This can only come about if the NGO consciously and earnestly aims to build up the self-confidence of all sections of village society through such programmes as, legal literacy campaigns, and adult and functional literacy programmes among others. This process involves giving the villagers the opportunity to reflect on their needs and problems, prioritize their needs and decide on the development initiatives to be attempted.

Empowerment needs to occur at all levels, even with bureaucrats and the Government. At this macro-level NGOs can, and in other countries have, provided the necessary constituency and intellectual support through mobilization of people and in-depth research, for Governments to challenge long-standing orthodoxies. For instance, in the Phillipines, NGOs have forced the Government to scrutinise all loans accumulated during the Marcos regime to determine their legitimacy (Clark 1991). It can even occur here in Nepal for loans accepted during the Panchayat era.

Networking

Networking involves the building up of strong networks of like-minded NGOs. These networks can a) act as a forums for debating developmental issues and theories, b) exchange information and swap experiences and lessons, and c) give voice to NGOs, so as to generally build up a supportive environment for small-scale, transformative development initiatives. It will provide mutual support and motivation thereby overcoming any sense of isolation that may be present. NGOs, through networking both within Nepal, or Southern countries, could create a climate which may change the course of the present developmental paradigm. This change cannot and will never occur without strong webs of support and information exchange.

In terms of irrigation NGOs can facilitate networking between farmers groups involved in irrigation throughout the country, so that these groups do not feel isolated. They can share ideas and experiences, and visit each other to foster solidarity and train each other in some particular technique or lesson the other has found useful.

Advocacy

The NGO, which mobilizes grassroots organises and is involved in popular participation, will soon realize the importance of the macro policy and institutional environment for during the course of its work it will come against established obstacles. One soon realizes that if the NGOs work to promote sustainable development is to be successful the NGO itself has to move the Government to remove policies which actively discourage self-reliant local initiative. A good example, though not about irrigation, is highlighted by Stephen Mikesell (1992) in his paper, "The New Local Government Law : Diluted Raksi in an Old Bottle" in which he states, "Close analysis of the logic of this new law and the projected form of its implementation shows that the participatory terminology is mere window dressing for a law that gives no new substantial governmental powers to the people, while reintroducing institutions that extend bureaucratic control further into the villages." NGOs working in the

irrigation field can undertake advocacy activities which enables the local communities to take charge of their water resources.

Conclusion

At present NGOs have a "window of opportunity" to influence the shape of projects being executed by official agencies and, more importantly, to influence critical aspects of development policies itself. In terms of micro-level activism NGOs can facilitate the incorporation of local communities into the development process. Both levels have to be utilised if NGOs are to play any meaningful role in irrigation management.

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CARE/Nepal's Experience in Developing Irrigation Systems in Nepal

B.B. Gurung¹

Executive Summary

There are thousands of farmer-managed irrigation systems in Nepal; some of them have been in operation for centuries. The Department of Irrigation (DOI) is responsible for developing larger irrigation projects. It cannot provide assistance in developing minor systems due to resource constraints. However, the area irrigated by farmer-managed systems is more than the DOI operated systems. Therefore, there is a high potential for developing farmer-managed systems to meet the increasing food grain shortage in Nepal. The assistance and cooperation of the INGOs, NGOs, government agencies and communities to promote smaller farmer-managed systems is of critical importance.

CARE/N has been involved in the development of medium and small scale irrigation systems in the rural communities since 1983. It has experience in working with different government agencies to improve irrigation systems in different geographical locations of Nepal. The objective of this paper is to highlight some of the major issues and problems that are normally being faced and lessons learned in the collaborative efforts.

We hope that it will be some use in developing irrigation systems through the joint efforts of INGOs, NGOs, the Government and communities.

Background

CARE/N is a Non-profit, Non-governmental International Organization which has been involved in the development of Nepal since the agreement made with His Majesty's Government in 1978. CARE/N started its activities by focusing on strengthening the health care in hospitals and health posts. This was achieved by graduating and providing in-service training for nurses. It was later felt that infrastructure development in Nepal had high potential to help the poor. CARE/N started building suspended or suspension bridges since 1981. It was realized that more than 90% of Nepal's population rely on agriculture. With a view to increase the agriculture productivity and thereby uplift the living standard of the people, CARE/N expanded its activities in promoting the farmer-managed irrigation systems in 1983.

CARE/N signed an agreement with Agriculture Development Bank, Nepal (ADB/N) in 1983 to assist and promote the small farmers' irrigation systems within the SFDP working areas in eastern, central and western region (8 out of 14 zones) under Small Farmer Community Project (SFCP)

¹ *Technical Adviser, CARE/Nepal.*

program. To make the best and long lasting use of irrigation systems, agriculture and agro-forestry activities were launched side by side in the project areas. Under this SFCP program, 33 irrigation systems were rehabilitated in the east, central and western regions and 13 in Rapti zone by end of 1989. The SFCP program in east, central and western regions was terminated in 1989 but is still continuing in Rapti zone. An additional 9 irrigation systems have been undertaken under ADB/N and CARE/N collaboration from 1989 upto June 92.

In SFCP projects, cost sharing was based on 50% contribution from CARE/N in the form of materials, tools, equipment and transportation cost of these materials upto the project site, whereas the remaining 50% was borne by communities in terms of up to 30% ADB/N loan for payment of skilled labor and local material transportation and 20% as voluntary labor. The working policy was later revised because it was found that people normally tended to inflate their contribution so that they could obtain cash adjustment from CARE/N. According to the new policy, CARE/N has to provide imported materials as per the demand of the project and in turn community has to provide all local materials and voluntary labor. On average, CARE/N contributes 60% of the total project cost and 40% is borne by the communities. In addition to the physical assistance, ADB/N provides site overseers while CARE/N provides engineers.

CARE/N is gradually expanding its activities in both remote and non-remote areas with different counterparts. The Natural Resource Management Project (NRMP) which is a collaboration between CARE/N and SSNCC is implementing irrigation and drinking water projects in Mahottari and Mustang districts. Remote Area Basic Need Project (RABNP) is operating in Bajura, Gorkha and Solukhumbu as a joint effort between Remote Area Development Committee (RADC) and CARE/N. Similarly, projects in Kaski Begnas Tal Rupa Tal (BTRT) and Syangja districts are an undertaking between Department of Soil Conservation and Water Management (DSCWM) and CARE/N for watershed management and soil conservation. In all projects, irrigation is the important component to promote community irrigation systems.

CARE/N has been involved in the development of irrigation projects with different counterparts for 10 years and has had the following experiences:

- a) From ADB/N-CARE/N collaboration: It has always been easy to work with agencies which have grass roots level network. Since SFDP is an ADB/N field level office, both SFDP group organizer (GO) and people know each other better and it is more convenient to communicate with communities through GO who plays a mediator's role between communities, CARE/N and ADB/N.
- b) If communities are bound to contribute a certain percent of cash in addition to their voluntary labor, it should be carefully considered in the beginning as to how poor people can contribute cash, as the cash flow situation in a village is always restricted. It may result in delay of construction work and perhaps in some cases, rich people will take undue advantage of the poor. This problem was not experienced with ADB/N since SFDP had to provide a loan to the small farmers' group whenever required.
- c) Agreement should be made on a realistic basis, considering the availability of material resources as well as human resources since it was found to assignment of staff, especially, overseers was difficult.

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- d) It was felt that the staff from different agencies working at same level in the project had different salary scales. The staff getting a low salary became discouraged and inefficient which hampers the implementation of irrigation systems.
 - e) While working with ADB/N, irrigation activities should not be confined within SFDP areas because there are high irrigation potential sites outside the SFDP boundaries.
 - f) In the context of ADB/N and CARE/N collaboration, some farmers were unwilling to take an ADB/N loan as required by the ADB/N policy. It would be better if there is some flexibility in the policy which would avoid such situation. In some cases farmers are able to pay cash and do not require a full loan.
 - g) Many agencies prefer working in non-remote areas where there is accessibility for vehicles. This should be seriously considered by the government and agencies should be encouraged to work in needy remote areas with high irrigation potential.
 - h) In some cases, more than one INGO or NGO were working in the same area resulting in duplication and overlapping of activities. This may have a negative effect on the relationship between the donor agencies. This is even more crucial if different subsidy rates are effective. In such situations, people start bargaining and may create conflict between donor agencies. Such situations must be avoided.
 - i) It was found that communication, coordination and cooperation (3Cs) between INGOs or NGOs are sometimes lacking and need to be maintained in a healthy atmosphere. j)
Sharing of experience among the INGOs and NGOs through seminars or workshops should be held from time to time to develop cooperation and co-ordination.
 - k) Community people should be involved in all stages of work. Their opinions and suggestions should be given due weight during designing, planning and implementation of projects. It not only heightens their morale but also stimulates their active participation in the project.
 - l) People find it easy to operate and maintain a system if indigenous technologies and local resources are used as much as possible, rather than copying a theoretically based sophisticated design.
 - m) Trainings should be not only an incentive for staff, but also help to upgrade their calibre and capability. This enhances their efficiency and effectiveness in work. It should be regarded as a part of the project.
 - n) Unless people are well motivated and the objectives of intervention made clear to them, there will lukewarm participation. Therefore, awareness building and generation of "ownership" feeling should be emphasized right from the beginning.
 - o) People have a tendency to get more and more from the donors thus eroding their self-help attitude. To check this tendency of dependence, there should be very clear guidelines as to how much each party has to contribute. There should not be any provision of cash adjustment since people will tend to inflate their contribution.

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- p) Farmers having small landholding normally contribute more labor than big farmers, and no adjustment is made for contributing more voluntary labor. Some mechanism needs to be developed in favor of the small farmers.
 - q) Rich farmers tend to exploit the share croppers by forcing them into voluntary labor contribution. Hence, certain measures should be developed to check such a tendency.
 - r) Rich farmers or influential people usually hold important positions in the committees and tend to take undue advantage of their position. This issue should be seriously considered during formation of committee and small farmers should be encouraged to take better/fuller participation in such committees.
 - s) Physical improvement and system management are two sides of the same issue. Both should be equally emphasized. But in many cases system management is given less priority. Most of the host agencies prioritized system completion even though the result is an ineffective system.
 - t) It is difficult to organize people for longer period projects especially if it involves more than one community, as people's participation gradually reduces with time.
 - u) Construction work is easier in clustered and homogeneous communities.
 - v) Projects commonly suffer from social conflicts especially in the issue of water rights when the same source is being used by many communities. In such cases, consent of all communities is necessary to smoothly start the projects.
 - w) In cases of projects receiving external inputs, the project life or agreement should be for a minimum of 5 years. Shorter time periods will not be sufficient for effective planning and implementation of any, but, the smallest irrigation systems.
 - x) Irrigation projects are meant to increase the agriculture productivity and this is not possible until improved varieties of seeds and technologies are used. Extension services play a vital role to meet this objective and need to be emphasized right from the initiation of an irrigation project.

Today the meaning of development is incomplete without the concept of integrated approach. For instance, for a more effective working of an irrigation project, preservation of forests and afforestation, soil conservation in the catchment area and provision of extension services in the command area, should all be highly emphasized. However, in reality, it is not possible to achieve all this through one agency or organization. It calls for the cooperation, communication and co-ordination among all involved organizations. Their joint efforts in the multi-faceted development field are essential.

Irrigation Development Experience of Rural Based NGOs from Chherlung I

B.B. Saru¹

Introduction to Chherlung Tallo Kulo Irrigation System

When the Thulo Kulo started delivering water in 1989 B.S., the villagers downstream demanded water from it but they were denied the water because of low discharge available from that system. Then the construction of Tallo kulo was started through the initiative of Mukhiya/Jamdar Pratap Singh Saru and Mukhiya/Jimwal/Lieutenant Hastabir Saru. The construction contract was given to the same group of Agri workers who had constructed the Thulo kulo. The contract amount was Rs. 5000 and four years was taken for completion.

The water was then distributed among the shareholders based on the capital contribution. Each one was entitled to receive one share for his contribution of Rs. 100. In total, fifty-five shares were established. One share meant one inch of water (the size of a thumb was taken as one inch for the purpose). The wooden weirs (sancho) were constructed to distribute the water proportionately. It was also established that the water shares can be sold. Nowadays, one water share is sold for Rs. 10,000.

All necessary tasks of canal operation, resource mobilization, conflict resolution and water distribution was left as the sole responsibility of the two leaders themselves.

A seven-member committee was formed in the year 2026 B.S. for regular cleaning, information exchange, resource mobilization and assisting Mukhiya and Jimwal.

About 2.5 kms length of canal was washed away by landslide in the year 2034 B.S. Since water could not be obtained from the canal, the water was brought from Taplek Pokhariya canal after widening the damaged portion of the canal. Later on, the canal was extended to Atrunga village (the total length being 9 km.) with the financial assistance of Rs. 95,000 from the District Panchayat and Rs. 62,000 raised from the beneficiaries themselves in the year 2036/37 B.S. The water share was increased to 59 inches. The increased amount of 4 inches was given to Atrunga village with the arrangement to provide 16 laborers for maintenance in return.

Water is distributed continuously for the rice season while rotational practice is observed for the winter crops. Two watchmen are hired from Shrawan to Kartik. For other periods the water users manage the canal themselves. Users are appointed on a paying a basis from the month of Shrawan to Kartik to take care of canals. Maintenance works which need about 10-12 persons are done by using the Khetala while for bigger works, Jhara or Mahajhara is summoned. As per rule of Jhara, one share holder needs to contribute one labor.

1 Chairman, Chherlung Tallo Kulo Committee.

Maintenance works are carried out every year during the month of Jestha. Mass meetings are held in the months of Kartik and Jestha. The tasks of reorganizing the committee, presenting the income expenditure account, making future programs, modification or addition or omission of rules and regulations are done during the course of such meetings.

The members enjoy remuneration for services rendered to the organization. The Chairman is waived the khetala equivalent to one share while the secretary and other members are waived the khetala amount worth Rs.30.

About 394 visitors from various national and international organizations involved in the field of irrigation have visited this irrigation system for training and research programs.

The chairman and other farmers of the system have attended various seminars and training programs as resource persons. The chairman attended the workshop "Irrigation Management in Nepal" organized by IIMI and IAAS held in Chitwan in 2043. Likewise, the chairman participated in training activities on construction of wooden weir (gates) in Sindhupalchowk Irrigation Project by organized by WECS and IIMI. The chairman and others have also participated in other training programs as resource persons for farmers of Second Hill Irrigation Project of Doti and Dipayal District, and also in training programs organized by ILC for different members from Kaski, Lamjung, Gorkha and Syanja districts.

This organization has gathered experience of about 60 years relating to various irrigation activities such as construction, development of local technology, distribution and division of irrigation water, water share or water rights issue, the selling of water shares, land development, mobilization of internal and external resources, repair and maintenance, conflict resolution, formulation of rules and regulation and participation in training program as trainee or resource persons. This wealth of experience has strengthened the organization and enabled it to be sustainable as a non governmental institution.

There should be an effort from the government in promoting non governmental organizations. Some of the suggestions in this matter are as follows:

- simple procedure for registration in Local Administration Office,
- autonomy and no interference from the government bodies,
- financial assistance from time to time, and
- provision of credit facility with minimal interest rate.

Irrigation Development Experience of Rural Based NGOs from Chherlung II

R.B. Pandey¹

A Brief Introduction to Chherlung Thulo Kulo

The 7 kms Chherlung Thulo Kulo canal was constructed with local resources in the 1985 through the leadership of two social workers of Chherlung village. At the time of canal construction the famous technicians were called Agris from Dhamukhani village, Parbat district. Agris had taken the contract for Rs 5,000 for the construction of canal and after 4 years the canal was completed.

After receiving the flow of water in the village, the water allocation was made on the basis of investment during the canal construction. The total investment of Rs. 5000 was divided into 50 shares, those farmers who had invested Rs. 100 had received one share of water or equivalent to one inch of water in the canal. Wooden sanchos was cut in vertically on the measurement of Thumb which was equivalent to one inch total discharge of water in the canal and was divided into 50 inches for allocation of water through the wooden sanchos. In 2043, thirteen inches of water was sold in the canal with Rs. 1300 which was spent on repair of the canal. The share of water in the canal was increased from Rs.5000 to Rs.6300 and 50 inches 63 inches of water in the canal. At present, the share of the water in the canal has been increased of Rs.6400.

In 2022, ten members of the committee formed the irrigation management. The committee consists 7 thari (members) from each day of the week, mukhiya, jimmwal and secretary. The remuneration of mukhiya is Rs.125 per month including excuse for one physical labor jimmwal is excused for 3 physical labor, and secretary and members are excused 1/4 labor for the work.

Every year in January the committee holds a general assembly meeting. The tenure of the committee members is one year.

In the monsoon (from middle of July to middle of November) 2 "guards" are hired in the canal each day for proper delivery of water and patrolling the canal. During the winter only one guard is hired for the canal. The main function of the guards is to patrol the canal, repair the canal's bund and plaster the leakage of the water and increase the water from the intake. If the are guards unable to repair sufficiently, they have to report to the mukhiya and the laborers mukhiya will send 10-12 as Khetala. If more than khetala are needed then jhara is called for completing the work in the canal. For jhara each share holder contributes one labor and if he/she is absent from work a fine is levied. Auditing is done for winter in May and monsoon in November.

The function of the chairman includes mobilizing labor for repairing the landslides, allocating and distributing water, calling meetings, resolving conflicts and problems related to water. Annual income and expenditure, record keeping, presentation of the account in the meeting, meeting minutes

¹ Member, Chherlung Thulo Kulo Committee.

record keeping and dispatching notices according to the chairman's instructions is done by the secretary.

Passing messages to all farmers, collecting fines and fees, sending the labor rotation and repairing and maintaining the canal is main function of the committee.

Bob Yoder and Ed Martin from Cornell University, in the year of 2039/040 did research on this system, and during this time they brought farmers and officials from the Rasuwa, Nuwakot and Galayang Irrigation Project for educational tours to the Chherlung Thulo Kulo. Similarly, Ujjwal Pradhan has also done research in the system from Cornell University; he also brought the farmers from the Phalebas Irrigation System to discuss and exchange the ideas.

The members in the committee and farmers from the Chherlung Thulo Kulo visited the Sindhu-palchowk Irrigation Project jointly implemented by Water and Energy Commission and IIMI/Nepal for the purpose of training about construction and installation of sanchos in the canal to allocate the water.

To mobilize the local and external resources for construction, repair and maintenance of the canal, extension of irrigable land, development of leadership, and other related irrigation issues NGOs officials, farmers, International students and even the government have proved that the committee of this system has potential to form a local NGO in irrigation management.

Formulation and implementation of rules and regulations, autonomous, independent, creative and financial support from the HMG is essential to develop local NGOs in irrigation management.

Irrigation Development Experience of Rural Based NGOs from Argali

D.D. Regmi¹

Brief Description of Argali Royal Canal (Raj Kulo)

King Mani Mukunda had ruled Palpa from B.S. 1604 to 1630. During his reign, he established a Trust (Guthi) at Argali with some land to worship daily the Lord Rishikesh whose temple was built in Ridi. He constructed the royal canal to irrigate the land of trust. Since the canal was constructed by a king the name remained as royal canal (raj kulo).

A 5 member working committee was formed to manage the irrigation. The committee consist of a chairman, a secretary and two Duty Officers and one Water Inspector.

At present, to help, suggest, recommend and to provide direction to the working committee for the physical development a five member advisory board was formed representing each one from 5 irrigation sector.

To distribute water at the beginning and end with equal volume, wooden keys were constructed and development of irrigation sector was made in the terraces of Khutilam, Charsaya, Tinsaya, Uppalosaya, Tallosaya and Rabidash. With an objective to avoid exploitation and partiality in the distribution of water every farmer has his own key to get his share of water from the distribution point constructed by calculating in terms of fingers. Thus there is no partiality for less or more water.

Every year on 1st Jestha (May/June) a general body meeting of the farmers will decide the rules and regulation, selection of board members of the working committee, presentation of annual income and expenditure statement, repair maintenance and selection of new construction to mobilise the internal and external resources.

Repair maintenance and cleaning is done with equal labour from the land owners which gets right to use water traditionally. It has a system to repair after calling for a general body meeting in case of natural disaster.

To regulate the water, duty is assigned from Srawan 1st to Kartick 15 (July - October). There is a system of every day duty by 2 farmers according to the duty management. If it is a simple problem then these two people will repair the damage and keeps water running and if it is beyond their capacity then Water Inspector will be informed. The Water Inspector then inform to the Chairman and Secretary.

Mr. Bob Yoder and Ed Martin of U.S.A. had done research on the construction and management of this Argali Royal Canal and helped in introducing and publicise in the national and international field. Many farmers and officials related irrigation and agriculture programme from many districts visited this canal and learned in different aspects.

¹ Member, Argali.

The workshop seminar on "Irrigation Management in Nepal", organised by International Irrigation Management Institute and Institute of Agriculture and Animal Science at Bharatpur, Chitwan in 2043 was participated by the Chairman and a user.

This canal committee from the legacy has already developed the technology, management, water distribution policy, water distribution system, rules and regulations, problem solving method, mobilising local resources and training skill. Institutional development can be made to this committee if external direction and cooperation can be provided. For the institutional development a flexible rules and regulation with possibility to develop independently is essential.

Irrigation Development Experience of Rural Based NGOs from Chhatis-Mauja

Y.L. Bhandari¹

Brief Introduction of Chhatis-Mauja Irrigation System

This irrigation system irrigates some 10,000 bighas of land under 54 Maujas of four village development committees; Shankarnagar, Anandaban, Karaiya and Makahara situated near Butwal of Rupandehi district. This system was built by the farmers themselves who were from 36 Maujas originally (hence the name). The water source is from the Tinau river.

There is a 13-member executive committee which comprises a chairman, vice-chairman, secretary, nine members and one nominated person. The entire command area i.e. 54 Maujas is divided into nine regions and one representative is elected. These representatives will be the members of the committee. The main responsibility of the committee is to ensure the water rights of the farmers, to supervise the proper water distribution, to ensure the proper utilization of irrigation water, to maintain the main canal etc. The committee has employed two supervisors (meth mukhtiyars) and two chowkidars as staff. There are one mukhtiyar and one chowkidar in each of the 54 maujas.

The executive members enjoy some facility for the services that they render. The chairman is waived out the labor contribution equivalent to 40 labors and the labor contribution that need to be done for a land-holder of 4 bighas. Similarly, the vice chairman and the secretary are waived out the labor contribution equivalent 20 and 35 labors respectively besides the need to contribute for a land holding of 4 bighas. Likewise, the regional representatives who are the members of the committee need not to contribute their share of labor contribution equivalent to 4 bighas. However the mukhtiyar and the chowkidar get salaries of Rs.1000 and Rs.850 per month respectively.

The uppermost forum for the organization is the "mass assembly." All members have four bighas of land for the entire 54 Maujas.

The representatives of all Maujas and the executive members of the committee form a "general assembly" which is held once a year.

The duty of chairman is to decide on meetings like mass meeting, general meeting, committee meeting etc, to resolve the conflicts over the head reach, to supervise the job of water distribution in main and branch canals, to supervise the works of juniors and the staff.

The duty of the vice chairman is to preside over the meeting called for the movement of non-confidence against the chairman.

¹ *Chairman, Chhatis-Mauja Irrigation System.*

Many visitors who are concerned with irrigation management works and representing International, national institutions come to the Chhattis-Mauja irrigation system to better understand management practice of irrigation systems. Some the visitors are as follows:

- 32 visitors comprising the presidents of water users' groups under Mahakali Irrigation Project, consultants, engineers, agriculture specialist, coordinator, JT, JTAs and AOs (in 2047 B.S.).
- 15 visitors comprising farmers and staff from Banganga Irrigation Project through a program organized by DOI and IIMI (in 2048 B.S.).
- Visitors comprising the farmers and staff of Handetar Irrigation Project and consultants through a program organized by Irrigation Management Project of the Department of Irrigation (in 2048 B.S.).
- 19 visitors comprising irrigation professionals from Bangladesh Water Development Board and the tour organizer, APTEC Consult (in 2049 B.S.).

His Majesty the King granted a sum of Rs.400,000 in 2044 B.S. for the prosperity of the system, which was used for constructing the pucca diversion at the Tinau river. In 2048 B.S., one office building was constructed for the committee, through the funds raised among the beneficiaries themselves. The amount totalled Rs. 200,000.

In 2043 B.S., the Chairman and the Secretary took part in the workshop "Irrigation Management in Nepal" organized by IIMI and IAAS at Rampur. The same team participated in the central committee assembly of the Non-Government Organization in 2048 B.S.

The organization of Chhattis-mauja meant for the management of irrigation water has developed over the experiences of many years of its beneficiaries. It is hoped that due attention and recognition from the government side will be given to protect such efforts of the local people.

Suggestions

- There should be well established policies, rules and regulations for forming a non-government organization.
- Such policies, rules and regulations should be simple, liberal and practicable as far possible.
- Simple procedures/process should be observed for the registration of the organization.
- There should be provision of technical and financial assistance to such organization.

Irrigation Development Experience of Rural Based NGOs from Pithuwa

J.K. Shrestha, K. Kunwar, T. Dhamalae and K. Upreti¹

Brief Introduction of Pithuwa Irrigation Management System

His Majesty's Government under small irrigation project in 2025 canal barrage was constructed at Mutayaha in Kayar stream. Some branches were constructed in 2029 under the request of the peoples representatives of Pithuwa to His Majesty's Government. In 2031 construction of 17 branches were completed by Department of Irrigation.

In the same year Branch Management Committee of canal no. 8 was formed. Then after, Branch Committee were formed in all branches.

To coordinate branch committees, management of main canal, and to get government cooperation for repair and maintenance, a Central Management Committee was formed with 23 member where Chairman of the Village Development Committee as the ex-officio President. Vice President and Secretary are selected from the general farmers. Seventeen chairmen of all branch committees will be the members of the Central Committee. There is a possibility to nominate three members from the elite. Working period of the committee will be of two years.

Duties and responsibilities of the branch committee are: a) to ensure equal distribution of water, b) repair and maintenance, c) to collect and register the statistics of the land, d) to settle the misunderstandings between farmers, e) to report water requests, f) to report problems to the Central Committee. g) to fine and penalize the workers who are not following instructions from Central Committee. and h) to ensure that work has been carried out according to Central Committee's directives.

Government, non-governmental organisations and farmers related to irrigations come to visit the irrigation system of Pithuwa. The main objectives of the visit is to get information on irrigation management aspect. Representatives of Bhutanese and Sri Lankans under the leadership of Dr. Prachanda Pradhan, representative, International Irrigation Management Institute, Nepali and Foreign Students came for research for their thesis from the University of Netherlands, and representatives from other irrigation systems of Nepal made visits to Pithuwa. The group had discussions on management aspect and observation of the system.

The chairman of the Central Committee participated the "Irrigation Mangement in Nepal" workshop held at Bharatpur, Chitwan in 2043 organised by joint programme of International Irrigation Management Institute and Institute of Agriculture and Animal Science. He also participated in "Involvent of Government Organisation in Irrigation Management and Management" national workshop jointly organised by Department of Irrigation and Institute of International Irrigation Mangement held in Kathmandu on Baisakh 17-18, 2049.

¹ *Chairman and members of the committee respectively.*

This organisation has been running the canal for the last 18 years from 2031 to 2049 at the same time participating in various training, workshop on irrigation management. Because of its practice and experience, this committee has enough tools to contribute to development of NGOs.

Before establishing NGO, officers of this committee should be properly trained in management extension and marketing by IIMI.

IIMI can do this by establishing a study center so that the institutional development of this organisation can be made possible.

Following are the important things to be observed while making act, rules and regulation for the non-governmental organisation:

- The constitution should be as per the peoples wish for the development of institution with the cooperation among each other organisations.
- There should be provision for the fair competition among the organisations.
- The policy should reflect the practical experiences of the presently active organisations.
- Technical sector should try to cooperate as far as possible to the management must be indicated in the policy and rule.

The Potential of NGO Networking in Irrigation Management

S.P. Dhungana¹

Executive Summary

With the growing importance and strength of NGOs in Nepal, owing to their better manageability, freedom from bureaucratic processes and delays, better understanding of the local realities and mobilization of local support, they have the advantage for more effective field-level operations. To date, they have shown readily apparent strengths in rural service delivery and poverty alleviation works.

With the increased number of NGOs in the country, the need for networking is also being realized. The NGO Forum-Nepal is one of the organizations which is trying to develop a bottom-up networking approach in Nepal. With its growing membership base, the NGO Forum-Nepal's networking system is a means to share the experiences of one another, to avoid duplication of work that so often happens in many areas of operation, to create a more effective program planning and implementation through cumulative support and development of its manpower/volunteer base, and to create a better consciousness-raising among the people by disseminating information faster and creating more sustained interest, and thus a better groundwork for positive action among the NGOs's targeted beneficiaries. To develop a strong networking system, several regular activities have been initiated such as the District Forums, Nepali and English publications for increasing the level of awareness and interest, strategy planning sessions, and resource centers both at the central and district levels.

On the other hand, in the irrigation sector, very few NGOs are operating and, networking in this area has not yet been initiated. NGOs in many development sectors are gradually developing but redirection needs to be done to organize the present farmer user groups into active NGOs in the irrigation sector and come into the fold of NGO networking. With Nepal's long tradition of farmer-managed irrigation, water users can manage the irrigation schemes and can mobilize local resources for construction and O&M. As self-reliant, manageable groups, these NGOs can best utilize their inherent strengths in developing either farmer-managed or agency-managed systems, participating actively in its system design and development, in using and maintaining them, and in evaluating the system from their own perspective. The sense of group ownership, responsibility and autonomy can be further developed and sustained given a legal mandate of these otherwise fragmented groups in the irrigation sector. As the NGO Forum and other organized groups in the other sectors have already initiated the networking concept to benefit its member NGOs, those water user groups NGOs in the irrigation sector can likewise learn from the experience and benefit from the many advantages of NGO networking.

¹ *President, NGO Forum-Nepal and Executive Chairman, Development Communication and Research (DECORE).*

Background

NGOs in Nepal have grown from solely religious-oriented, service delivery organizations to developmental partners with many facets. While compared with that of its neighboring countries, Nepalese NGOs have yet to grow and be used to its highest potential. Nevertheless, over the recent years, they have shown their apparent strengths, primarily in rural service delivery and in poverty alleviation works.

Because of the NGOs' often small size and hence, better manageability, as well as their freedom from bureaucratic processes and delays that so often characterize government and other large-scale programs, they have the advantage for more effective field-level operations. They are also often better placed than line agencies to respond to the actual needs of the rural mass as the groups (i.e. NGOs) are by themselves the spontaneous creation of local communities, thus they understand better the local realities and can mobilize local support more readily than line agencies do.

NGO Networking

After the recent political change in the country, many smaller NGOs were established, focusing on wide issues such as rural development, to more specific objectives such as environmental management, health service delivery, women's development and so on. Despite the growing number of NGOs and the expansion of those that have been in operation for many years, there has not been any networking system, aside from that provided by the Social Service National Coordination Council (SSNCC) which was instituted in 1976 by His Majesty's Government as the umbrella organization of the Nepalese NGOs. However, it has been observed that SSNCC has poorly directed its activities towards the concept of developing strong networking with spontaneously favored participation of NGOs within the umbrella. It operated with the government mandate to control and administer the NGOs in the country. Hence, its experience working for the NGO sector for a long period left no tangible impact. SSNCC's six committees which are supposed to be creating program networking did not give much importance to the agricultural sector and neither to the irrigation sector. Realizing many shortcomings, SSNCC is undergoing major changes including revision in the Social Service Act - to the extent that even the name of the SSNCC has been proposed to be changed once the new NGO act is passed.

In other words, while some NGOs are doing very good works and achieving high impact in the rural villages, there is very little sharing of information and experiences among NGOs, particularly with those less able. And in many cases even the good experiences are not shared or known to many who could have benefitted from such experiences. Similarly, the bad experiences that could have been avoided by learning from the previous ones are not heard of.

With the increased number of NGOs in the country, the need for networking is also being realized, and has resulted in some good efforts. NGO Forum-Nepal is one of the organizations which is trying to develop a bottom-up networking approach in Nepal. So far we have heard some of the efforts of networking that have just started such as those dealing with the environment and the health sector. However, at this stage it is very difficult to assert to what extent these networking efforts have been effective. As we know, very few NGOs are working in the irrigation system and networking in this area has not yet been initiated.

The NGO Forum and Its Networking Approach

The NGO Forum-Nepal, established in 1991 by a core group of seven member NGOs operating in the various districts of the country, is basically concerned with the use of NGO networking for the benefit of its member NGOs. Now with its growing membership base, the NGO Forum-Nepal's networking system is a means to share the experiences of each another, both good and bad, with the good experiences serving as a role model and the bad ones serving as warnings to avoid the same failures. The networking was also conceived as a means to avoid duplication of works that so often happens in many areas of operation, with both the government, NGOs and INGOs, and commonly, the private sector. It was also conceived to create a more effective program planning and implementation through cumulative support and development of its manpower/volunteer base. It was also intended to create a better consciousness-raising among the people by disseminating information faster and creating a more sustained interest, and thus a better groundwork for positive action among the NGOs' targeted beneficiaries.

To develop a strong networking in Nepal NGO Forum has taken lead in establishing a number of regular activities as given below:

- **District Forum:** The concept of a district forum is basically to create an informal program-wise network for sharing information at the action level and to create a database for better program co-ordination. NGO Forum assigns a member organization to act as the focal point and co-ordinate the district forum. Six monthly networking meetings (according to the need, the frequency is adjusted in different programs) are held in each program area at a convenient place in the district with the active support of the co-ordinating NGO at the district. Participation in this networking meeting (the 'district forum') is open to all NGOs, government line agencies and any other institution or organization working or interested in the related field. All receive invitations from the co-ordinating organization to attend the meeting in advance. The co-ordinating agency provides the basic facility to hold such a forum and does the secretarial work too. Participation in the forum is voluntary. The data created by this regular forum becomes a part of the data base of the forum in the district which is pooled at the central level and kept in the computerized form for better sharing of information with all the concerned agencies for co-ordination purpose. Hence, by this system it is hoped to encourage full participation of existing organizations in districts, in as much as being left out of the forum can likely reduce their image and credibility in the eyes of other organizations and agencies working in the district and their isolation from others can be viewed with suspicion. In effect, it is hoped to create a pressure to join the district forum and be part of the mainstream. A standard form is developed for information sharing by the NGO Forum which is used uniformly by all the district forums. The first such district forum has been started in Jhapa district. Its first meeting is planned to be held on 20th of September 1992. The other District Forums in the offing are in Gorkha in the western region, in Dang in the Mid-Western Region and probably in Nuwakot in the Central Development Region. If this initial approach is successful, this can be replicated in any other program area later.
- **Publication:** To supplement the District Forum and to create a higher level of awareness and interest in such networking, regular publication is desired. At present, the NGO Forum publishes two news bulletins, one in Nepali (quarterly) called *SAHABHAGI* ("participant"),

and the other one in English (half yearly) called *NGO Updates* which is targeted to the policy level people at the central level and all the concerned donor and expatriate communities. These publications highlight the district level activities of different NGOs and other agencies, and introduces the work of lesser known small NGOs. These are distributed free of cost (initially) to all the NGOs, related line agencies, district level key authorities and informants and at the central level to all the related agencies and organizations. We are hoping that these publications will slowly develop as a true people's developmental news magazines and will reach a broader section of people at the grass roots level.

- **Strategy Planning Sessions:** In these sessions, yearly program activities are assessed, the next year's program of action lined up, and strategies developed based on the district situation of each NGO. The report of the strategy planning session is published and made available to all the member NGOs.
- **Resource Center:** The NGO Forum maintains a Resource Center at both the district level and at the central level. Detailed program-wise data and the agency-wise activities are kept in the Resource Center's data bank. All the publications and any relevant documents/materials are also maintained in the central Resource Center. At present, our Resource Center is focusing more on the education, environment and health sectors. As more and more NGOs will start coming in the agriculture/irrigation sector, we may be able to also include this sector in the Resource Center.

NGO Networking in Irrigation Management

It has been documented that 30% of the present surface water irrigation development system in Nepal is agency-managed and 70% farmer-managed. Similarly, of the total irrigated area recorded as being developed using groundwater in the Terai, 73% is under farmer-managed tubewells and the rest is under agency management. Hence, these figures show that more than two-thirds of Nepal's water surface irrigation development has been carried out by the private sector.²

It has also been documented that the overall performance of the government-managed surface water irrigation system in Nepal has been poor, which means considerable losses in production impact. It has also been asserted by specialists in the sector that among the major causes of this poor performance are inadequate system design, unsatisfactory system management and insufficient operation and maintenance budgets and expenditure. Moreover, it has also been said that there was a lack of beneficiary involvement in system design, construction and operation. Farmers also often lament the lack of a sense of ownership over the facilities given to them and no commitment to maintain the structures. Since more often than not, the organization of water users groups was left till after construction was over and even, then was done very superficially, farmers view the system as public facilities which the government is obliged to operate and maintain. Similarly, the farmer-managed schemes are often beset with the problem of the high cost of maintenance and the increasing difficulty in mobilizing voluntary labor, particularly when off-farm labor opportunities are at its peak.

² *Nepal Agricultural Sector Review, the World Bank, March 1990.*

Hence, they often seek government assistance for O&M, which if not given, may lead to the gradual unavailability of many systems.

It has also been said that the new thrust in irrigation policy recognizes that the government alone, with its limited resources, cannot handle the substantial requirements for irrigation development and management. Hence, water users themselves will need to play a key role in sustaining irrigation services.

In terms of irrigation investments, it has also been observed that the expansion of private shallow tubewells in the Terai is largely constrained by the large number of small holdings and the fragmentary nature of these holdings, indicating that relatively few farmers can afford to invest in shallow tubewells on their own. Therefore, to further expand shallow tubewell operations, it has been suggested that group ownership and the use of shallow tubewells should be actively promoted.

With this background, if users groups can be organized into active NGOs, and with the advantages of NGOs manageability and less bureaucratic constraints, along with the networking concept, they can play a substantial role in the promotion of farmer-managed irrigation schemes and promoting institutionalized group ownership.

Organizing the water users groups into the field of active NGO management can be a viable process of institutionalizing the people's strength in this sector. With Nepal's long tradition of farmer-managed irrigation, water users can manage irrigation schemes and can mobilize local resources for construction and O&M. With stronger NGOs in this sector, networking can be established and sustained to achieve efficiency in the following areas of irrigation management:

a) in developing the system

In view of the disappointing irrigation performance trends in recent years, the government's reoriented strategy and policy calls for greater reliance on the private sector through farmer participation. The establishment or expansion of NGOs at the district level can be directed to the agriculture sector which is the traditional source of livelihood of the large majority of the rural population. In the agriculture sector, even if the agricultural support system is not yet well developed, each individual thinks consciously about their agricultural support system. Indeed, this growing tendency of farmers to be more concerned to have better access to technology, supplies, manpower and even credit support system which at times are community-initiated, should be institutionalized through the formation of NGOs in the irrigation sector. As strong and active NGOs, and with legal mandate and bearing, these organizations can have a larger say in all stages of irrigation development that are targeted for their benefit.

b) in using and maintaining the system

With the NGOs' principle of self-reliance and the networking concept, the farmer-managed systems can be assisted in developing and/or strengthening the mechanism for maintaining local initiative, responsibilities and autonomy. The networking can also facilitate the sharing of experiences, including the necessary liaison opportunities with line agencies and other concerned sectors on matters that concern the development, use and maintenance of the system.

The NGOs' strength of advocacy can be put to its best use by demanding from the concerned agencies a greater sense of accountability to farmers they are supposed to serve. As improved services is a prerequisite for better cost recovery, the irrigation system NGOs organized can

also be strengthened in the area of cost recovery, which has been a serious bottleneck in many public irrigation systems in the past. Some better system on water charges payment schemes can be developed, either among themselves as water user groups/NGOs, or through other external systems; whoever can efficiently handle the high rate of payment of which would be the determining factor for improved services from the concerned line agencies. Given the opportunity to participate at the outset in the system design and development, efficient and cost effective use and maintenance can be expected from the users groups NGOs.

c) in evaluating the system

Evaluation is part of the total system's process. In this case, such evaluation must emanate from the farmers point of view. As long as the farmers can feel the difference from the past our perspective must emerge from these indicators. Institutionalizing such monitoring indicators and evaluation techniques will be highly beneficial for program networking through NGOs.

Conclusion

NGOs in many development sectors are gradually developing but there is a need for refocusing to organize the present farmer user groups into active NGOs in the irrigation sector. As self-reliant, manageable groups, these NGOs can best utilize their inherent strengths in developing either farmer-managed or agency-managed systems, participating actively in its system design and development, in using and maintaining them, and in evaluating the system from their own perspective. The sense of group ownership, responsibility and autonomy can be further developed and sustained by giving a legal mandate to these groups, otherwise they would remain fragmented and isolated from each other. As the NGO Forum and other organized groups in the other sectors have already initiated the networking concept to benefit its member NGOs, those water user groups NGOs in the irrigation sector can likewise learn from the experience and benefit from the many advantages of NGO networking.

Possibility of Creating a Network of NGOs Working in Irrigation Management Following the NAF Model

H.R. Baidya¹

Summary Statement

The Nepal Agro-Forestry Foundation (NAF) is a Science and Technology (S/T) oriented, non profit making NGO dedicated to enhance agro-forestry among people of low economic level through participatory "bottom up" approach and also acting as a clearing house for agro-forestry support services and a network for the same. Agro-forestry is considered by many as a forest related-science which is not always true. Nepali farmers have been practicing agro-forestry on their farmland for centuries and sustaining their agriculture and livestock. NAF is now interested to introduce S/T in the management of these farm agroforestry activities of the poor people by introducing participatory group efforts to the users. NAF has inherited the experience working with such people for 15 years and based on this experience has developed certain goals of which networking and clearing house is one. This may be applied in the formation of irrigation system management by the users groups. NAF's activity is like a triangle with research, training and extension as its three sides and they are all interlinked. Each of these components are focused towards the users and users and NAF function as equal partners. There are several NGOs who are in contact with NAF and these have benefitted by NAF support system and vice versa. It is proposed to extend the "bottom up" development system by asking beneficiary groups of 5-15 to nominate one of their members to participate in NAF organized trainings during which the whole focus will be on their needs and problems. In order to expand this concept of development, NAF also conducts exposure sessions to administrators and policy makers. This process of expanding its activities may be adapted by IIMI and others if a true participatory irrigation management program is developed. The paper is supported by five annexes to explain (i) farm agroforestry concept, (ii) steps to be taken to develop a users group (PO/NGO) network, (iii) concept of user centered Agroforestry program, (iv) trainee centered "bottom up" training concept and (v) technical difference between "Involvement" and "Participation".

Introduction

"NAF" (Nepal Agro-Forestry Foundation) is a Science and Technology oriented, non-profit making NGO established with the objective of networking various NGOs and users groups (POs) actively involved in an overall sustainable agro-forestry system development for resource poor people, through their participatory "bottom-up" activities. It also acts as a clearing house for agro-forestry support service.

¹ Nepal Agro-Forestry Foundation.

What is Agro-Forestry?

Since the word 'Agro Forestry' or Krishi-ban in Nepali, was introduced into our development vocabulary a little over a decade ago, in connection with the reclamation of degraded forest back to economically viable forest, most farmers, policy makers, scientists and others consider this as a forestry science and activity. This is true when someone talks in terms of forest.

However, Nepali farmers, particularly of the mid-hills, have been growing fodder trees and grass in their cultivated, unirrigated lands at odd corners, for centuries. They grew and maintained fodder trees like badahar (*Artocarpus lakoocha*), kutmiro (*Litsea polyantha*) koiralo (*Bauhinia variegata*), Kabro, Khanayu, nevaro (all *ficus* sp.) and grasses like amleso (*Thysanolaena maxima*) Chitray banso (*Degetaria* Sp), Kutil Kosa (vetch) and many others. Often fruits trees were also planted. Total land was utilised efficiently to meet their fodder requirement. Animals were well fed and so farm sustainability and economy was well maintained. Nothing bothered them when things were plenty, but now the situation is different. Science and technology must now be applied to this kind of vegetation management or farmer oriented agro-forestry. NAF is focusing its support in this kind of agro-forestry concept, in which Legumenous trees and grasses, useful as fodder, get the priority. They are planted stet terrace slopes. In this way, poor denuded land is permanently turned into farm forest. Present land under agricultural crops is not disturbed. Trees and plants are recycled, not man. In the pure agroforest land management concept "Forest trees get the priority." Alleys between rows of forest trees are cultivated for agricultural/cereal crops like maize and finger millets or cash crops like ginger and peanuts. After 10 years or so most trees are tall. Agricultural crops are discontinued and farmers shift to a new site. Man is recycled much ahead of the new forest (Annex No.1)

NAF's NGO and PO Ancestors and Experience

NAF is one of the outcomes of approximately 15 years of a tri-partite partnership efforts and experiences of Bahdha-Bahunipati Family Welfare Project (BBP) under Family Planning Association of Nepal (Nepali NGO), local people/user groups (PO's) and World Neighbors (a US based NGO) who financed the Project. The objective of BBP was to study the impact of integrated community development inputs on family planning acceptance with economically depressed classes in Nepal. One such community selected for study was a small Majhi community of about 100 households, a little above the small village bazar of Bahunipati on the bank of Indrawati river in Sindhu Palchowk district.

Project staff decided to try in 1978 an exotic fodder tree, *Leucaena* (Ipil Ipil) already tested in 1977 for its adaptability under Bahunipati condition, as an entry input for more intensive development activities. Five farmers agreed to plant a good number in their "bari" lands. Three came out with 80% survival rate and were willing to plant more and be demonstrator farmers. One lady farmer planted 5000. Ipil Ipil extension was integrated with other aspects of community development like irrigation, drinking water, sanitation and livestock development. The area program was intensively supervised, supported with regular follow up and training to be developed as a demonstration village. Table 1 summarises the change between 1983 and 1989. This village became a training cum extension - demonstration site for the farmers by the farmers and other interested GOs, NGOs and INGOs. Interested institutions requested training and technical support programs. Linkages were thus established with NGOs like Tamakosi Sewa Samiti of Ramechhap, Non-formal Education Service Centre, Dhadhing, Save the Children Federation, Redd Barna, UMN, Action Aid and others. This training

facility site has shifted to Haguwapati nursery in Kavre Palanchowk district about half an hour drive from Panchkhal on the same road to Bahunipati.

Table 1
Progress of the Majhi Village 198-1989

Item	83	86	89	
Leucaena adopters %	3	85	90	
Livestock increase %		40	NA	
Livestock improved 5%		54	NA	
Animal sale Rs.	15,000	195,600	383,000	
Cropping intensity	100	-	241	
Food one year family %	13	50	73	
Per capita food/day	-	402Gr.	518Gr.	Country av 505 gr
Population growth %	-	3.5	1.9	Family planning impact +

All this was too much of a load for BBP and World Neighbors. While this particular fodder tree and the effective training methodology attracted more people and organizations, one problem that always haunted the project staff, donor and consultants was the rapidly advancing Ipil devastating psyllid, insect which started moving west from Florida in 1983 to Hawaii, Philippines and Indonesia and then towards the Asian mainland. This insect, as expected, appeared in Nepal in 1989 summer. BBP and World Neighbors had already started policulture styled agro-forestry in which local fodder trees and grasses were included besides exotic ones and psyllid resistant varieties of Ipil. Trials were conducted at Sindhu Palanchowk, Kavre Palanchowk, Ramechhap and Dhading with the help of local farmers, NGOs and consultants.

While this particular fodder tree Ipil Ipil and its pros and cons, interest of NGOs in agroforestry became essential to keep abreast with the demand and it was too big a load for BBP and World Neighbors to handle. Agro-forestry Advisory Service was organized in Sept 1988, to meet the demand. The above organizations and other technical individuals were invited to join. To further strengthen and support agro forestry activities through appropriate research, extension and training this Advisory Service was renamed and registered as Nepal Agro-forestry Foundation in 1991. It thus inherited more than a decade of tripartite participatory poverty alleviation experience in community development and in agro forestry and capitalized on it. It has already established links with likeminded NGOs and now is in the process of developing a suitable network. (Annex No. 2)

NAF's Goal

It is focussed on Human Resource Development of interested NGOs and POs through objective oriented participatory training to:

- a) restore loosing soil fertility and protect it.
- b) better and more fodder for livestock.
- c) meet fodder, fuel and timber requirements of individuals from their own bari and denuded land and so indirectly reduce pressure on community or national forest.
- d) increase the number of NGOs with farm based Agro-forestry programs replicating what some NAF supported NGOs have done.
- e) establish a NGO/PO/ Beneficiary network to extend agro-forestry in Nepal through "bottom up" planning, and finally.
- f) be a clearing house for agroforestry information, inputs and plant materials.

How NAF Operates?

NAF administration is run by an Executive Director (ED) who is also the Member Secretary of the Executive Board. At present he is also the Chief trainer and extension worker. NAF is too young at this stage to have many staff although the ED has adequate field and office staff. The executive Board consists of 7 elected members from the present members of 25. The Executive Director post is paid.

NAF activities are all beneficiary farmer or user focused (Annex 3). They are expected to participate in all fields of research, training and extension to promote S/T in agro-forestry in the villages. For example:

- a) Research starts with users' feed back and problems as they are in the field. Research is conducted in their fields with their participation (Ref Annex 5 for definition of participation). Management is the responsibility of the participating farmer. He is also a demonstrator, an extensionist. The NAF researcher collects data and analyses it and communicates the findings to the concerned farmer/s and any other person or institution/s interested in knowing the results. NAF has several such reports.
- b) Training is conducted by experienced farmers trained as trainers so that training become practical, objective oriented and therefore worthwhile for the trainees. NAF draws upon a pool of qualified and experienced professionals for special sessions. All farmer training are participatory. Training are also extension oriented. Rs. 200/ per day per trainee is charged as training fee to include tuition, training materials, lodging and food. Fees are negotiable for small NGOs and similar POs.
- c) Extension is from farmer to farmer or through present link-NGOs. NAF is trying to reduce the gap between extension with training. NGOs are requested to form users groups of 5-15. They nominate one of their members as a group trainer to receive technical and extension skills in Training of Trainers (TOT) sessions. He is expected to transfer the skills he acquired

during training of trainers to other group members as a volunteer. This volunteerism has made training and extension effective at "no cost" (Ref Annex 4).

NAF also provides brush-up/follow up training to support extension. For example, at one stage NAF shifted its quarterly training to field sites of group leaders at their request. This gave an opportunity for everybody to participate more in exchanging their views and ideas, learn more and teach more. It also was a mini clearing house and a network at the same time. Training and extension efficiency went up.

NAF visits link/network NGOs-POs as follow up after training to make extension effective. NAF also has been arranging one day exposure sessions at its new training site at Heguawapati Nursery of BBP for administrators, policy makers, agriculture and forest graduates, GOs, NGOs, INGOs and others. It is expected that this will lead to the establishment of an more effective agroforestry network and clearing house idea.

Currently, NAF is working at 6 NGO sites in supporting 16 community project nurseries and 28 home nurseries and it provides partial support to 20 NGO and GO projects in their agro-forestry promotion activities. There is a plan of expanding NGO development projects to a total of 10 NGOs within the next few years. Good working relation have been established particularly with the Ministries of Agriculture and Forestry who are interested in conducting research activities with the farmers as per NAF model.

NAF is at present supported by the Ford Foundation financially, with World Neighbors/Nepal providing office space and logistics while BBP provides training site facility.

Scope of Establishing an Irrigation NGO Network

Details of how NAF developed and wants to proceed towards network and clearing house development has been presented. Of late there are other organizations working hard under strong leaderships to establish NGO networks with specific objectives. For example:

- a) NGO-Federation Nepal's basic aim is to create a network with mainly the grassroot NGOs at district and national levels, conduct development policy research, act as catalyst and pressure group to promote people centered development policies and programs and provide clearing house service to its members.
- b) NGO-Forum stated its Strategy Planning Session (25 Oct 1991) objective as an attempt to develop a communication network of NGOs.
- c) SAP-Nepal objective is to build linkage among voluntary agencies and community groups in South Asia and in Canada in the spirit of equal partnership.

If these four NGO groups, including NAF, are taken as a sample to analyze the possibility of substantiating a NGO network, all have:

- a) focused on grassroot POs/NGOs using words like "people centered" "bottom up" and "equal partnership",
- b) expressed the need for linkage, network and clearing house for the benefit of associated NGOs/POs, and overall development of the country, and

- c) however, NGO-Federation and NGO-Forum does not state a specific need for any major GO or INGO role.

This workshop rightly envisages NGOs having a role in water users organization and expects NGOs to provide training, conduct research and undertake information/ communication exchange activities, (which equals extension related to irrigation) to facilitate transfer of power and management. NAF has exactly this kind of experience which has been very clearly explained earlier.

It has been stated in the workshop objective (No. iii) that rural based NGOs will be organized to implement irrigation activities developed by GO and the private sector network. If this is the interpretation of objective iii, it is a "top down" approach not consistent with the "bottom up" 50-50 participatory approach which NAF and its link NGOs follow. (Annex 5)

Objective (iv) (c) is to "match rural NGO capability with agency and project consultants "needs". If any progress is to be made in networking

for training, research and extension, in fact any development work for the grass root people, agency and project consultants' capabilities should fit into the PO/NGO needs and not the reverse. This is how NAF, its staff and consultants practice, without which NAF would not have so many link NGOs.

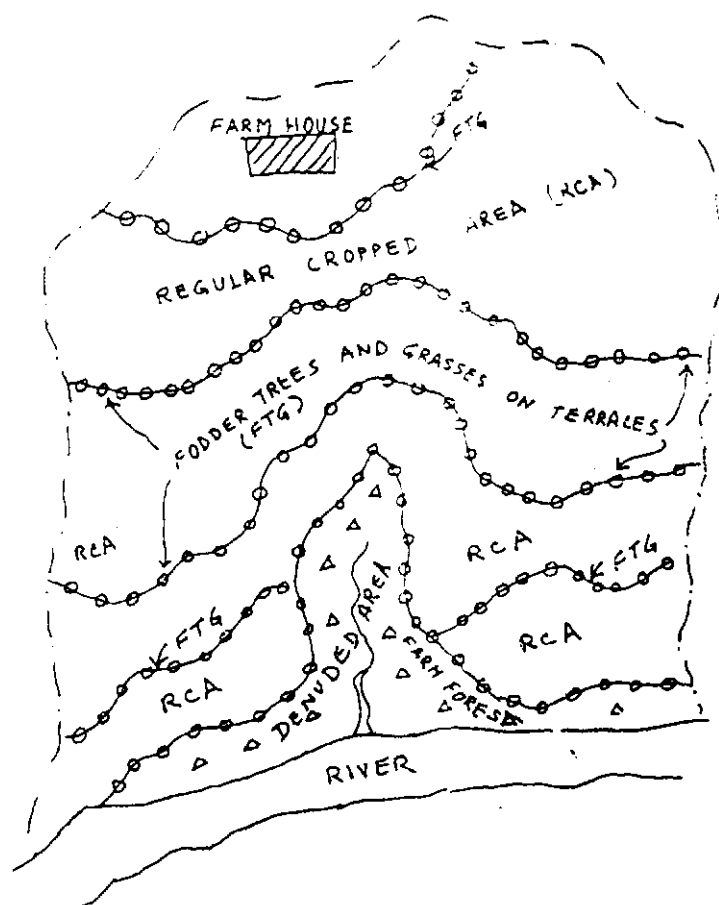
There is a big scope of introducing S/T in irrigation management for NGOs. There is a lot to learn from them before launching a program for them.

Suggestions to Foster and Sustain any NGO Focused Network

- a) Define "Irrigation Management". Otherwise IIMI will have the same problem as NAF in making people understand agro-forestry.
- b) Develop one good farmer centred research-training-extension site.
- c) Seek the full participation of the users/beneficiaries in the design planning, implementation, management and evaluation of what you do. Honour their feedback.
- d) Help NGOs to coordinate programs with government activities to maintain national integration.
- e) Plan ahead with long term goals and objectives. Baseline data is essential to convince people about accomplishments as well as planning.
- f) Careful monitoring and follow-up is a must with good record keeping practice.
- g) Farmer trainers and project staff must understand the participatory approach.
- h) Integrate other 'felt need' programs if it supports the overall program.
- i) It is very essential to integrate skills, attitudes and ideas of donors, consultants and management with that of the users as equals.
- j) There should be free socialization opportunities among these groups.

ANNEX NO. 1

CONCEPT OF AGRO-FORESTRY IN AGRICULTURE AND IN FORESTRY

AGRICULTURE CONCEPT

Leguminous trees and grasses, useful as fodder get the priority. They are planted on terrace slopes on their tops. Fodder is harvested all year round in a sustainable manner. Poor denuded land is permanently turned into farm forest. Present land under agricultural crops is not disturbed.

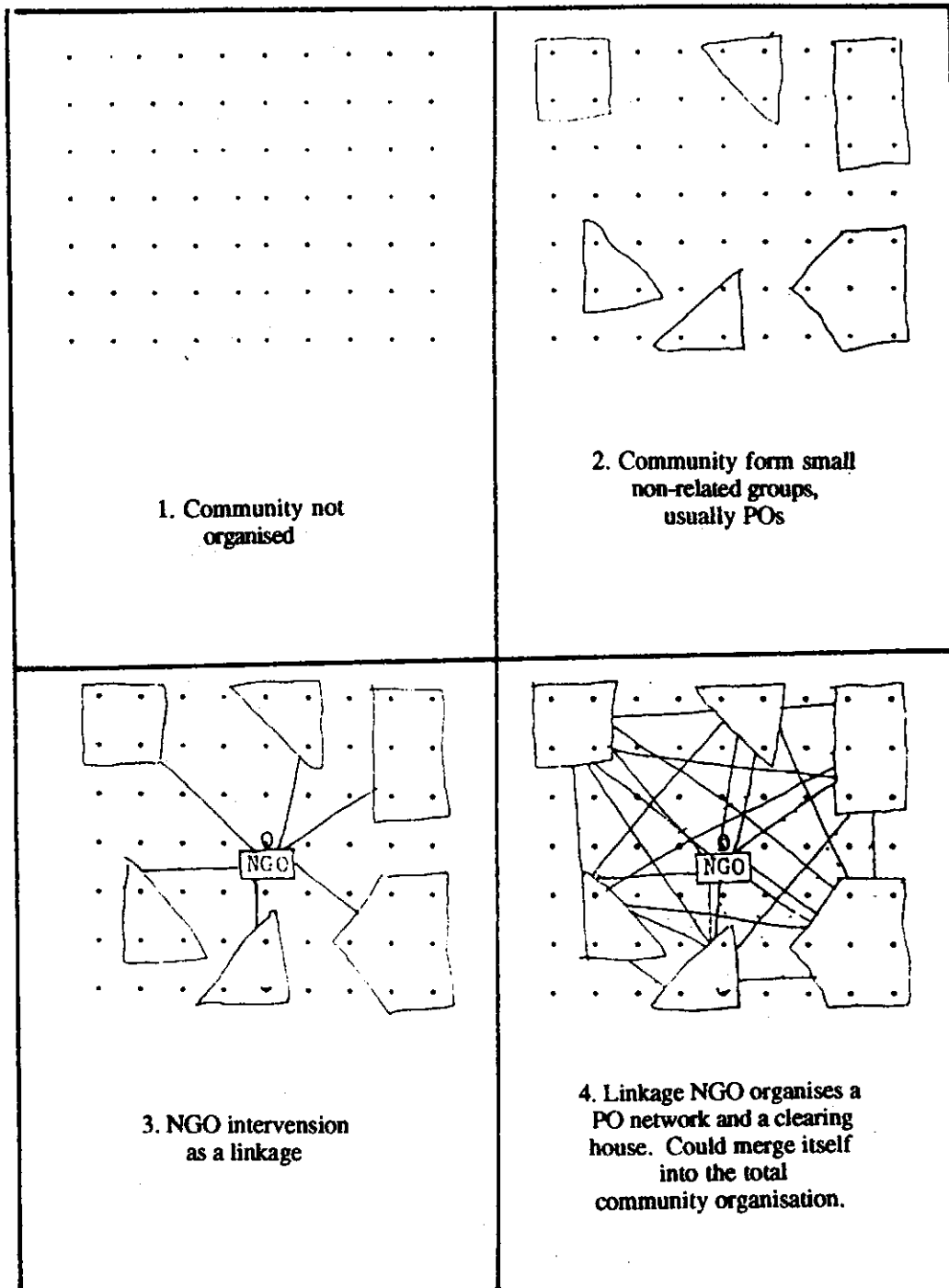
TREES AND PLANTS ARE RECYCLED, NOT MANFORESTRY CONCEPT

Forest trees get the priority. Alleys between rows of forest trees are cultivated for agricultural/cereal crops like maize and finger millets or cash crops like ginger and peanuts. After 10 years or so most trees are tall. Agricultural crops are discontinued and farmers shift to a new site.

MAN IS RECYCLED MUCH AHEAD OF THE NEW FOREST

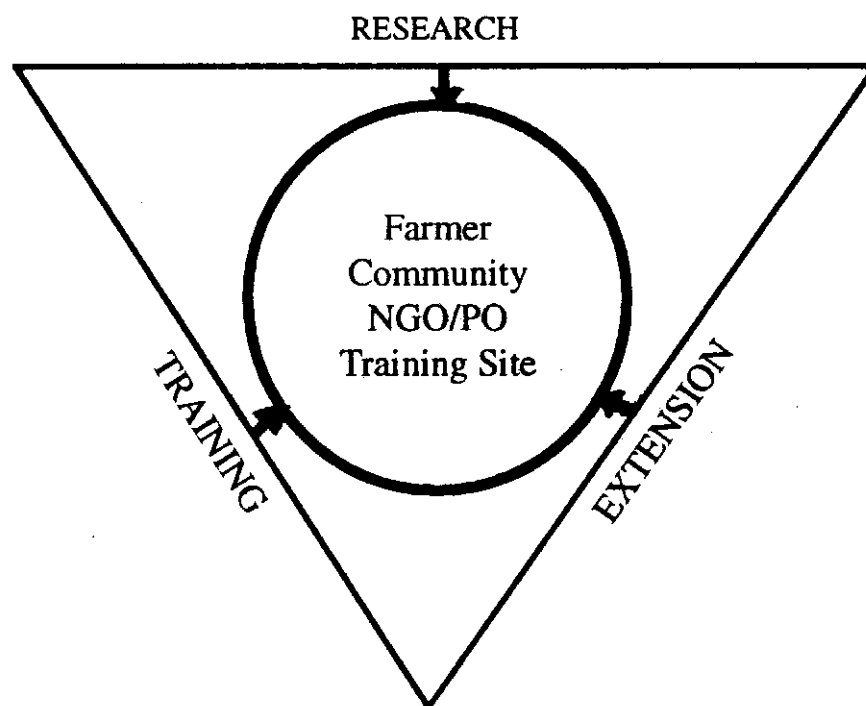
ANNEX No. 2

STEPS FOR DEVELOPING A NGO NETWORK



ANNEX No. 3

Concept of User Centered Agroforestry Programme

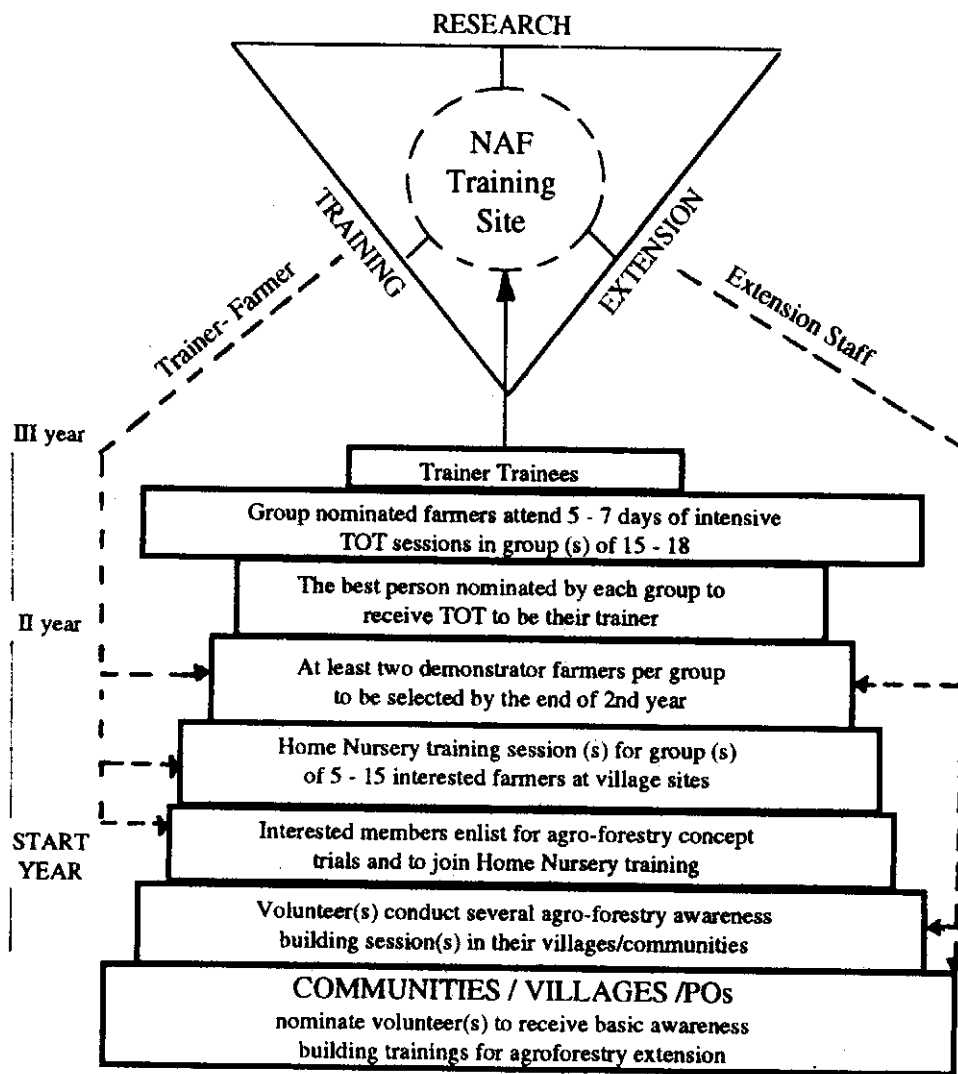


The Nepal Agro-Forestry Foundation Triangle

ANNEX No. 4

Trainee centered "bottom-up" training concept

The NAF Traingle



ANNEX No. 5

TECHNICAL DIFFERENCE BETWEEN "INVOLVEMENT" and "PARTICIPATION"

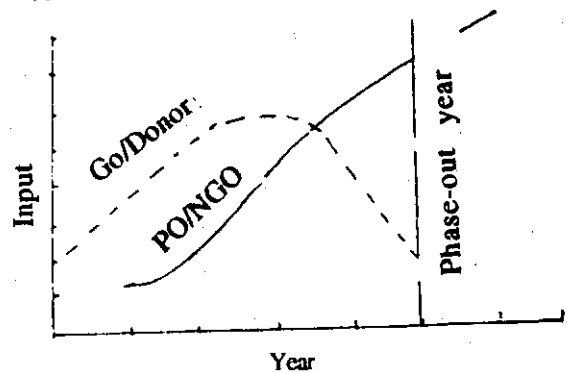
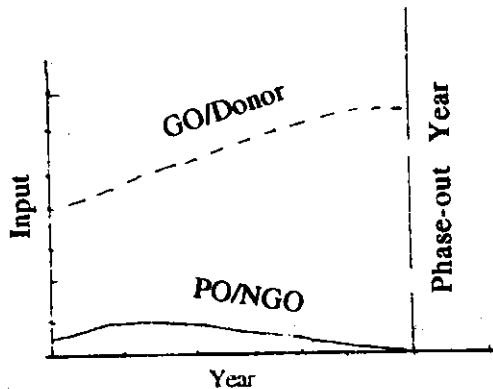
Involvement

Participation

1. May appear in the middle of a project or form the start as an appendix (Road Clearing)
2. Easy to start. Investment of time and money may fade away once non-local support phases out

Should appear from the very start of a project on an equal responsibility partnership basis to include
 a) Concept development, b) Project planning, c) Programming, d) Budgeting e) Project operation and f) evaluation. (Community drinking water)

Time consuming and difficult to start. Time and money investment of users increases. Result will be long-lasting and sustainable even after non-local support phases out



3. Objective may not be clear to associates.
4. People will work as told. It is therefore top-down and authoritarian.
5. Insensitive towards results. May not develop ownership feeling.
6. Book-keeping is not clear
7. May not be cost effective.

objective must be made clear to each of the associates.
 Will work as a team to fulfill stated objective. It is bottom-up and democratic.
 Pride of ownership and the joy of accomplishment.
 Book-keeping is clear at all times.
 Cost effective in most cases.

Role of Geographic Information System (GIS) in Networking Organizations for Irrigation Management

I.S. KC¹

Background

Where are farmers / users?

Where is their land?

What are the characteristics (soils, productivity, cropping pattern) of their land?

Where is the source of irrigation water?

Where is headwork/intake located?

Where are regulatory works?

Where is the main canal?

How is distribution network laid out in relation to the land?

What is the total capacity of irrigation water supply?

How are those farmers/user groups related to each other?

What is the total command area of the irrigation scheme?

What is the total water demand and how is it fluctuating in relation to cropping pattern, soil characteristics and solar influx?

What are major land cover/use types in the catchment that may affect the discharge and quality of water, cause flood/siltation?

On a small scale -

Where are all the irrigation schemes?

In which irrigation scheme is a particular non-governmental organization involved?

Those are some of the basic questions to be answered for any irrigation management program. The answers to these questions pertain to the location of these features on the ground and the spatial relationships between them.

Our information system so far has been limited only to conventional record keeping on a report or a file which is not very commonly accessible to every organization (GO, NGO, INGO, other users)

1 Strengthening Decentralized Planning, UNDP/INPC.

who may need information. Most of the time, it is hard merely by looking at data, to define the spatial relationships of features -such as hydrological linkage of one irrigation system or user to another and spatial distribution pattern of plots of land having similar farming systems. As these complex variables interact in space in such a scheme, an appropriate system for analyzing them is required.

Geographic Information System

When all the characteristics and attributes of a certain activity are systematically referenced with respect to their geographic location, this forms the basis of a Geographic Information System (GIS). All the above information has geographic characteristics - meaning that the attributes can be referenced to their spatial location on the ground. This is carried out by means of a set of appropriate computer hardware and geo-processing software.

Geo-referencing: In a GIS, data is generally arranged in the form of layers; each layer or coverage having different characteristics or attributes for the same geographic area (this area can be extended horizontally). Because such geo-referencing is the basis of a GIS, any point within the spatial coverage can be examined simultaneously with respect to various other characteristics.

Geo-relating: Features on the earth's surface are represented by means of point, line or area on map. A map can represent only some aspects of reality (*a map is not the territory*), but in a GIS's geo-relational model, it is possible to represent a multiplicity of spatial objects (represented by means of their unique identifiers, IDs) and tie to them all necessary set of information or attributes (variables such as crop type, productivity, soil properties etc.). This can be understood by the analogy of bunch of keys hanging on a nail. The nail is one ID and keys are various attributes. Another bunch of keys can be attached to the former key-ring and so on. It is possible to examine attributes by key graphic elements and vice versa in a particular coverage. This forward and backward data mapping capability and other functions of GIS form the crux of complex spatial querying and analytical modelling.

In a GIS perspective, problems and solutions become spatial. The conventional data collection procedure changes without much difficulty and it can be structured for use in a GIS environment which enables multitudes of spatial analyses and multi-disciplinary/multi-user interactions and the sharing of spatial data becomes a reality.

GIS and Irrigation/Facility Management

An irrigation management scheme comprises two main components that can be managed, interrelated and analyzed by means of a geographic information system. These are:

a) System's Component

Firstly, in an irrigation system, there are engineering features such as water source, intake and headwork, pumping stations, canal alignment, regulatory works, cross drainage works, access roads, etc. located at different sites. Their operation and maintenance are critical to the success or failure of irrigation management.

b) Service and Environmental Component

Secondly, an irrigation scheme has a command area, catchment or watershed, drainage and discharge, ground water table, farming system, land use characteristics (both existing and future change caused by the project), and ultimate end-users - the people of a certain area with its own demographic pattern.

Geo-referenced Data

Data source: Various possibilities of data sources for a GIS for irrigation management are remote sensing and aerial photography, ground and household surveys including engineering design data, census survey, and existing digital or manuscript maps. In a GIS, all old and new information can be viewed from a temporal perspective, but in a newer context. Large and small scale data can interact to supplement each other.

Global positioning system: With the advancement of GIS and satellite technology, data collection in the field has been revolutionized to the extent that digitizing data right in the field has become an affordable reality. Global Positioning System (GPS) receiver (available at an affordable price for individual projects) can make very fast and accurate surveys in the field. The basis to this is the capture of a signal from various Global Positioning Satellites by a portable (either backpack or hand-held) GPS receiver to find its position on earth. What was considered a very time consuming and tedious job two years ago has become very simple, fast, accurate and affordable to most geographic information collectors and users today. With this, mapping is no longer a sketch. A survey of a command area which would take a day by conventional method can be completed in a few hours. Even the socio-economic characteristics of a society can be analyzed in a real spatial framework. Each house or location of a user group, each facility of a scheme and each plot of land with seepage problem can be mapped to form a sound data base for irrigation management.

Infrastructures and engineering plans with their arbitrary location can now find their place on maps in relation with other characteristics on a larger area. Any amendment required for the design is a possibility. Any likely mishap can happen only in the computer with a GIS.

Coordination

Data sharing: A common information base would be needed to ensure the effective co-ordination of various agencies involved in a project. A good information system is one of the best ingredients of any successful networking of organizations. GIS's capability to share common database of information leads to better inter-agency co-operation as well as co-ordination and elimination of redundant and inconsistent data, and enhances the usefulness of information. **Aggregation:** Geographic information collected at a very fine grain that require high accuracy at a local level for local planning can be analyzed, aggregated and used for more general purposes that require less detail, such as regional or national macro planning. Detailed site specific engineering data about an irrigation scheme can be aggregated to the VDC (Village Development Committee) or district for land use planning purposes. This demands co-ordination among field based local organizations and their larger regional and national counterparts.

Interrelating data: Multi-source, multi-scale, multi-date, multi-thematic, multi-type data, as long as they are geo-referenced, can be integrated and interrelated in a GIS. This can lead to new perspectives on a problem and provide an innovative approach to the solution. Thus, nature of a GIS encourages integrated activity amongst multiple agencies so that they can approach problems in a more comprehensive and systematic way. This increases the likelihood of solving problems and delivering benefits to the right people.

Monitoring and Temporal Analysis

A regular feature of any project is its monitoring and evaluation in terms of resources expenditure and further work required to meet the objectives. A management information system (MIS)-based tool to monitor and evaluate is deficient in providing the geographic dimension. Conventional MIS are not well equipped to support the information from the ground, but this can be provided by the Geographic Information System (GIS).

Change over any two periods, time series and trend analysis carried on geographic space, using GIS tools is an effective management need. For example, the change in the extent of cultivated/irrigation land for various farming systems (cropping patterns, cropping calendar) with respect to soil characteristics (texture, fertility, water requirements etc.) can be analyzed and for such site specific problems, site specific help and guidelines can be devised for farmers to maximize productivity.

Conclusions

Irrigation management schemes fail in the geographic domain and demand a much more integrated approach to successfully implement and monitor plans. Geographic information systems can play very effective role from the very beginning of planning and designing the scheme to provide effective service delivery to the users.

Geographic information system (GIS) is a good inventory, data management, processing and decision support tool. As GIS helps integrate data from the field survey and interrelate with multi-source, multi-agency data, it thus creates opportunities to co-ordinate and cooperate to share common information. This reduces duplication of efforts and solves problems more systematically.

Once GIS finds its role in day-to-day project activity, it is possible to monitor the programs not only in monetary and temporal terms but in a more realistic spatial sense. GIS can relate all information systems to management needs.

Acknowledgement

Paul A. Lundberg (Chief Technical Adviser) and Janet Gardener (Deputy Team Leader). Strengthening Decentralized Planning Project, Nep/88/009, for their support.

The Role of NGOs in Irrigation Management in Nepal: Some Tentative Issues

U. Pradhan¹

Introduction

In the past few years Nepal has witnessed a mushrooming of NGOs. Some are genuine while others exist only on paper. There seems to be a confusion in terminology too when the organizations are characterized as either non-profit or profit oriented, private, public, or voluntary. Despite these confusions, there is a potential for a positive role of the private sector in irrigation development through a more decentralized process.

At the policy level, the government of Nepal wants to "turnover" selected currently agency managed irrigation systems (less than 500 ha in the hills and less than 2000 ha in the plains) to the farmers. The government proposes joint/participatory management with the water users organizations (WUOs) in larger agency systems. At the same time, the irrigation bureaucracy is being "thinned out" and a greater role for the farmers through their water users organizations is envisaged. The necessary legislation, policies, and guidelines are being prepared but have not yet been field tested. Many of the activities that were previously undertaken by the government are gradually being turned over to the non-government sector.

Given the supportive environment for the growth of NGOs and the fact that there are financial, managerial, and expertise constraints within the government to allocate resources so as to manage and operate government irrigation systems, a positive role for NGOs in organizing and strengthening water users organizations is envisaged. The NGOs can facilitate the transfer of power currently held by the government in their systems to the farmers themselves as is the government's current policy for certain irrigation systems. The NGOs should therefore have the capacity to provide training, conduct research, and undertake information/communication exchange activities related to irrigation management so as to facilitate this transfer of power and management. NGOs can be very instrumental in targeting those very groups of the underprivileged who have been bypassed by "development". NGOs can bring about poverty alleviation in targeting the resource poor. Access to and management of irrigation could be one avenue that NGOs could undertake to fulfill their community development objective.

To date, there are very few NGOs involved in irrigation. There are however several international NGOs that have a history in irrigation involvement in Nepal. These INGOs have also had interactions with local NGOs in their various activities. IIMI feels the need for promoting the role of NGOs in irrigation management. NGOs at various levels could fulfill certain objectives of the broad goal of enhancing irrigation management in Nepal.

1 Social Scientist, IIMI-Nepal Field Operations.

NGOs though they are skilled and knowledgeable in community development processes seldom have the skills and knowledge related to irrigation organizations and management. NGOs skills in communicating with rural communities and agency staff will be very helpful in bridging the gap between agencies and farmers as well as facilitating the process for farmer control of irrigation systems. This workshop has been organized to explore the positive role of NGOs in irrigation management.

Workshop Objectives

The main objectives of this workshop are:

- a) to bring together relevant NGOs involved in irrigation and discuss their experience, lessons learnt, and problems encountered.
- b) to bring together relevant NGOs and discuss their potential role in organizing and training rural-based NGOs for irrigation development.
- c) to formulate a strategy for organizing rural based NGOs to be implemented by a network of government and private sector agencies involved in irrigation development, and
- d) to organize the above mentioned working network which will: a) organize rural NGOs; b) train rural NGOs; c) match rural NGOs' capability with agency and project consultants' needs; and d) train national NGOs in irrigation management.

We had solicited papers that dealt with the following topics:

- a) Specific experience of an NGO or several NGOs in irrigation development. { The focus was to be on case study or studies of NGO experience in irrigation management. The actual processes undertaken, lessons learned, and problems encountered were to be highlighted. }
- b) Experience of Rural-based, grass roots NGOs in Community/Natural resources development and irrigation management. { Actual case studies and issues involved were to be highlighted with specific examples. }
- c) International NGOs' and National NGOs' collaboration in irrigation management: Current Experience, Potential and Future Roles. { The nature of collaborative efforts, the issues involved, lessons learned, and problems encountered were to be emphasized with specific examples. }
- d) Government Policies: Acts, Regulations, Directives and Guidelines for NGO Participation in Irrigation Development. { A critical analysis of policy and legal framework promoting or stifling NGO movement in natural resource management and irrigation development was to be undertaken with specific examples wherever possible. }
- e) Potential role of NGOs in irrigation management and the possibility of creating a network of NGOs working on irrigation management. { This network concept was to be substantiated by examples of similar networks of NGOs in other natural resource management activities. The relationships with government and other private sector agencies were also to be examined. Suggestions to foster and sustain such a network were also to be elaborated. }

- f) Perceptions of two major irrigation bureaucracies, i.e., on the potential role of NGOs (local or rural-based) in their irrigation programs. (The paper was to focus on one bureaucracy alone substantiating its policy framework and attitudes and current activities regarding NGO involvement in irrigation.)

We have all indeed benefitted from the presentation of papers by the various authors and the subsequent discussions. A definite highlight was the presentation made by the farmer representatives which illustrated the time-tested organizational capacity and appropriate technologies of the irrigation groups, which to a great extent, are the major actors in irrigation development in Nepal. Their member-based organizations (which may not be registered under formal legal provisions) carry out irrigation service oriented activities. These organizations and their functionaries have been involved in irrigation tours, studies, training and consultancies -- far more effective than what "outsiders" have been able to achieve. We indeed marvel at their knowledge, skills, and organizational capacity which other member-based NGOs can emulate. It is with this concern that we propose, as a specific objective of this workshop, the recognition of these farmer groups and the necessity of promoting these member-based rural organizations.

In view of the papers that we heard and the discussions that we participated in, I have listed some tentative issues for further discussions regarding the role of NGOs in irrigation development and management. Since we spent quite some time discussing about the nature and types of NGOs in several of the session, I propose that we discuss other topics during this session. Likewise since the issues of policies and legal provisions need further background study and preparation, I propose that we leave this topic out of our discussion too. However, I have included both of these topics in the following list for future reference.

The following are some of the issues and topics related to the general and irrigation specific aspects of NGOs and the network:

Nature and Varieties of NGOs

What do we mean by NGOs?

What are the various types of NGOs? e.g., profit-oriented organizations, non-profit oriented organizations, grass roots organizations, charitable relief organizations, local/community development organizations, or those that are oriented towards structural change, etc.

What are the relative advantages/disadvantages or weaknesses/strengths of these different types of NGOs given their different mandates, structures, resource mobilization, etc.. in relation to each other (i.e., the NGOs themselves) and in relation to the government?

What existing policies and institutional arrangements foster or stifle them meeting their objectives?

What types of NGOs foster irrigation management and for what aspects of irrigation management and development?

Law and Policy

What are the existing legal and policy provisions for the establishment of NGOs?

What types of NGOs are promoted by the existing legal and policy provisions of the government?

Do these types of provisions stifle certain innovative types of NGOs?

Is autonomy of certain NGOs guaranteed by certain legal provisions? Which types of legal provisions for which types of NGOs? Which legal provisions do not guarantee autonomy? How is NGO accountability ensured?

What changes or types of new legal provisions are necessary to foster natural resource management and community development oriented NGOs?

Resource Mobilization (internal and external)

What are the different mechanisms for resource mobilization or fund raising adopted by the various NGOs?

To what end are these resources used?

On the basis of resource mobilization and allocation, which types of NGOs would be more suitable for promoting institutional development in irrigation management, e.g., facilitating the formation of water users organizations, training of agency staff on community or farmer-oriented development, etc.

Can the different NGOs still retain their autonomy even if resources are mobilized from outside donors. How is accountability ensured?

Should there be a change in the tax structure and tax incentives so that resources can be mobilized from within Nepal for and by Nepali NGOs?

What are the relative advantages and disadvantages of resources mobilized through: i) tax deduction/incentives (Nepali donors wishing tax deductibles), ii) grants and loans from donors, iii) loans from banks, and iv) government money allocations? The above are to be seen within the context of sustainability of NGOs, fulfillment of objectives while retaining autonomy of the NGO.

NGOs Role In Irrigation Management

What are the comparative advantages of government agencies and specific types of NGOs in the various activities of irrigation management?

What are the specific activities that NGOs can undertake to support government's policies in joint management and turnover?

What types of NGOs have comparative advantage over other NGOs in irrigation management?

What specific role can certain (specify which ones) NGOs have on the following:

- construction
- maintenance

-
- operation
 - institutional development of farmers
 - training to WU construction, O&M, WU's roles and responsibilities
 - training to agency staff and technical campus students in water management, farmer interaction, and community/farmer oriented development
 - policy recommendations
 - research
 - irrigation database management

Farmer-Based NGOs

Is there a need for such member-based NGOs?

If yes, how can these be promoted? What legal provisions exist or need to be created for the promotion of these NGOs?

On what existing institutional arrangements can these be promoted and guided?

At the initial period, how can the sustainability of these NGOs be maintained in terms of work and funds?

What specific role can these NGOs play in terms of:

- training other farmers where irrigation projects are underway
- policy and legal enactment recommendations to government regarding irrigation management and development
- developing farmer management capabilities
- assisting in the redefinition of government/farmer management rights
- assisting in dispute resolution between communities, and between community and government
- assisting in the transfer of farmer technology and indigenous knowledge
- assisting in the development of appropriate irrigation technology that can be maintained and operated by the water users themselves
- assisting in facilitating the formation of water users associations
- conducting joint research in irrigation management

Network and Coalition-Building

Is there a need for an NGO network for irrigation management and development? Why?

How can such a network be supported and promoted without it being controlled or coopted by either the government or some donor? In other words, should it maintain its own autonomy? How is accountability ensured?

How can INGOs help promote the growth of this network?

Similarly, how can the government and banks support this network?

What legal and institutional framework would be necessary for its maintenance?

Should government agencies, donors, and banks be included in the network? Why? What would be their contributions to the network (not necessarily in terms of funds)?

What types of NGOs are to be represented in the network?

What mechanism and strategy would be relevant for the promotion of such a network? Could an ad hoc network be created so as to start the process and streamline future strategy and activities for the network's growth?

What should be the network's scope of work and its relationship with the government?

Should the network facilitate the following and if yes, how? :

- information exchange
- cooperation and joint action
- negotiate with foreign donors
- act as a channel for disbursement of funds
- present a stronger front in negotiations with government
- grass root mobilization, development, and creation of awareness in various interests groups regarding irrigation management issues
- link farmers and agency expectations and needs
- empower water users and local communities

I hope the discussion on the four topics will guide us towards exploring the role of NGOs in irrigation development and management.

Summary of the Workshop Discussions

The summary of the papers are presented above and the following will deal briefly with the discussions on the papers presented and the issues raised.

Discussions on Papers Presented

The papers were divided into five topical sections dealing with: i) the general role of NGOs in the National Development of Nepal, ii) the experience and perception of the two major irrigation bureaucracies in their dealings with NGOs, iii) specific experience of NGOs that have been involved with irrigation development, iv) experience of rural-based NGOs in irrigation development and management, and v) NGO networking in irrigation management.

The discussions under the first topic revolved around the existing government capacity and the potential role of NGOs to bring about changes following alternative paths. A general concern regarding the apparent paternalistic attitude of the government through its policies and operational instruments was raised. It was felt that autonomy should be granted to the NGOs in the sense that they should not be government or donor driven. Positive experiences in NGOs promoting and facilitating participatory community development were shared.

The second topic drew in many controversies. A confusion over the terminology "NGO" occurred. Though one paper treated consulting firms as NGOs, other strongly opposed such a view. It seemed that the Department of Irrigation was accustomed to working with consulting firms, and to some extent with international organizations, but hardly with NGOs as non-profit development organizations. The issues of relative advantages and disadvantages of NGOs in comparison with other agencies were also discussed but only briefly. The papers on ADB/N were quite different in their approaches. In the discussion regarding how ADB/N dealt with NGOs it was clear that it too lacked experience working with national NGOs but had acquired experience with international ones. The potential role for NGOs to be involved in the irrigation activities of the bank was felt, however. But the modalities still had to be worked out, e.g., whether to ask for collateral from NGO or not, in what activities will NGOs be involved, etc.

The third topic revolved around specific activities of NGOs in irrigation systems. The presentations showed concrete activities that NGOs were involved in. The relationship between the type or nature of the NGO and its mandate, its development philosophy, and its program approaches were explored. Definitely, NGOs presented an alternative development approach. Certain NGOs were very innovative and even mediated to ensure the involvement of the community in projects that had consequences for the community. It was felt that NGOs can mediate and help empower local communities in their relationship with governmental or donor agencies. NGOs can enhance the local resource mobilization in community projects and help secure local contracts so that local employment and involvement can be guaranteed. The experiences of a specific international NGO was also explored and the avenues for collaborations with government agencies.

The session on the experience of rural based organizations was very informative. The farmer representatives shared with the participants their experiences in running irrigation systems as their major livelihood strategy. It was clear to everyone that these were the ones who really, at the grass

roots itself, brought about definite irrigation development and management. Some of these organizations had experience in training other farmers, orienting politicians and technicians on the institutional and organizational aspects of irrigation management, and participating in farmer to farmer exchanges. It was agreed that these rural based organizations should be promoted and due recognition and promotion of indigenous knowledge and technology should be made.

The session on networking and research or data gathering was informative for exploring the potential of newer technologies and methodologies for irrigation data base and the creation of a irrigation NGO network. The practicality and feasibility of Geographic Information System (GIS) was questioned in terms of the costs associated, the utility for field level work, and also the utility for farmers managing their own systems. The network models as applied to Agro-forestry and other development programs like education were explored as possible approaches to follow.

Workshop Issues

An issues paper was presented tying it with the workshop objectives and the attempt to explore the positive role of NGOs in irrigation development and management. Since the discussion sessions had already to an extent explored the controversial issues of the nature/types of NGOs and whatever legal provisions existed that promoted or stifled the growth of NGOs, the discussion was limited to the other four topics outlined in the paper. The participants were divided into two groups, one dealing with resource mobilization and NGO role in irrigation management, while the other group discussed farmer-based NGOs and Network and coalition-building.

The group that discussed the resource mobilization and NGO role in irrigation management pointed out that resources could be classified as: human, material, financial, informational, and technological. Resource mobilization could occur through i) existing village committees (wherever they exist), ii) local financial and other institutions, donors, the government, local government, and village or district development committees. It recommended a tri-partite arrangement between the funding source, village committees, and the NGOs. It also recommended the use of local skills and knowledge and the need to tap traditional information sources. This group was of the opinion that NGOs can bring about cost effective, good management, and equitable but adaptable/flexible approaches to operation and maintenance. NGOs can also play the role of motivators or facilitators for institutional development and provide training towards this. They can be rural based too. NGOs could be seen performing activities related to implementation and well as those of facilitators. NGOs could be seen involving themselves in all activities of the irrigation project cycle including evaluation and other non-technical activities like institutional development, training, policies, research, and extension.

The group that discussed farmer based NGOs and Network and Coalition were of the opinion that these farmer based organizations have not been registered and that the policies of the government itself is not clear regarding the different liabilities, rights, and responsibilities under different acts and legal provisions. The government ought to make these issues clear before such farmer based organizations can register. The process of registering should be made simple and practical. There was unanimous opinion that these farmer based organizations should be involved in the project right from the inception and that any agency involved in irrigation activities should take into account the concerns of the farmer groups. In such situations, these organizations are responsible in maintaining their own autonomy and standing. In terms of network and coalition building, it was felt that a network was definitely a must but first it would be useful to establish an ad hoc committee with members

drawn from NGOs, the implementing agencies, and farmer-based organizations. This ad hoc would have a mandate of one year. At the end of this year, a NGO network would be in place for irrigation management. The task of the ad hoc committee would be to explore the modality for the formation of the network, create awareness among various irrigation actors as regards the potential role of NGOs in irrigation management, and promote and train and use the expertise of farmer-based NGOs.

The participants later on met and ratified this idea of an ad hoc committee that drew members from the Department of Irrigation, Agricultural Development Bank of Nepal, Farmer irrigation organizations of Palpa and Rupendehi districts, Institute of Agricultural and Animal Sciences, national NGOs, and the International Irrigation Management Institute(IIMI). A couple of institutional experts were also included as resource personnel. This group was to meet and chalk out the mandate, objectives, strategy and activities of the ad hoc committee for the establishment of the NGO network. It was decided that IIMI would play an advisory role and that the ad hoc committee would be housed within a national NGO.

Workshop on the Role of Non-Governmental Organizations in Irrigation Development and Management in Nepal

29-30 September 1992

Venue: Nepal Administrative Staff College, Jawalakhel, Lalitpur

29 September 1992 (Tuesday)

- 9:00 - 9:30 Registration of Participants
- 9:30 - 10:00 Opening ceremonies (Master of Ceremonies: Dr. Ujjwal Pradhan, Workshop Co-ordinator, IIMI-Nepal)
- 9:30-9:40 Welcome Address of Dr. Tilak Rawal, General Manager
Agricultural Development Bank of Nepal (ADB/N)
- 9:40-9:45 Lighting of Ceremonial Lamp by Guest of Honor,
Dr. Binayak Bhadra, Member, National Planning Commission
- 9:45-10:00 Keynote Address by Dr. Binayak Bhadra
Vote of Thanks by Dr. Fred Valera, IIMI-Nepal
- 10:00 - 10:15 Tea Break
- 10:15 - 12:55 Paper Presentation on NGOs Role in National Development
Morning Session I
Moderator: Mr. S.N. Upadhyay, Executive Director, WECS
Rapporteur: Mr. R. B. Shrestha, ADB/N
- 10:15 - 10:35 Role of NGOs for Socio-Economic Development and Poverty Alleviation in Nepal presented by Mr. S. Lakhey, ILO-Nepal
- 10:35 - 10:55 NGOS as Facilitating Agents in Community Works under a Genuine Participatory Approach presented by Mr. C. Baker, ILO-Nepal
- 10:55 - 11:15 NGOs in the Irrigated Agricultural Sector: Review of Institutional Instruments presented by Dr. U. Gautam, CMS Nepal (P) Ltd.
- 11:15 - 11:35 Open Forum and Discussions
Morning Session II
Moderator: Mr. Devendra Bajracharya
Rapporteur: Mr. Pramod Poudel, ADB/N

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- 11:35 - 11:55 Perception of Bureaucracy on the Role of NGOs in Irrigation Programs presented by Mr. R.S.S. Neupane, RTB/DOI
- 11:55 - 12:15 Role of Non-Government Organizations in Irrigation Development and Management in the Context of Revamping of ADB/N's Structure presented by Mr. N.P. Upadhyay, CEPA.
- 12:15 - 12:35 Agricultural Development Bank of Nepal's Collaboration with International Non-Governmental Agencies for Community Surface Irrigation Development and Management presented by Mr. Ramesh Shrestha, SFDP/ADBN
- 12:35 - 12:55 Open Forum and Discussions
- 12:55 - 1:45 Lunch
- 1:45 - 5:00 Paper Presentations on Experience of NGOs in Irrigation Development and Management
- Afternoon Session I
- Moderator: Dr. G. Shivakoti, Member Faculty, IAAS
- Rapporteur: G.R. Shrestha
- 1:45 - 2:05 An Experience of Rural Based Grass Root NGOs in Irrigation Management presented by Mr. Pitamber Pd. Acharya, SAPPROS Foundation/Nepal
- 2:05 - 2:25 Irrigation in Bajhang: The Role of Non-Governmental Organizations presented by Mr. D.S. Rana, Udaya-Himalaya Network
- 2:25 - 2:45 CARE/Nepal's Experience in Developing Irrigation Systems in Nepal presented by Mr. B.B. Gurung, Technical Adviser, CARE/Nepal
- 2:45 - 3:05 Open Forum and Discussions
- 3:05-3:20 Tea Break
- Afternoon Session II
- Experience of rural-based NGOs in Irrigation Development and Management (Presentations and Discussions will be in Nepali Language)
- Moderator: Mr. Ajaya Dixit, Editor, Water Nepal
- Rapporteur: Mr. Durga K.C.
- 3:20 - 3:35 Irrigation Development Experience of Rural Based NGOs from Chherlung I, presented by Mr. Bir Bahadur Saru and Mr. Yam Nath Bhattarai, Chairman, Tallo Kulo
- 3:35 - 3:50 from Chherlung II, presented by Mr. Rewanta Bahadur Pandey, former Secretary, Thulo Kulo
- 3:50 - 4:05 from Argali, presented by Mr. Durga Datta Regmi, former member Advisory Committee

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- 4:05 - 4:20 from Chattis Mauja, presented by Yem Lal Bhandari, Chairman, Central Committee
- 4:20 - 4:35 from Pithuwa, presented by Mr. Rajesh Upreti, representative
- 4:35 - 5:00 Open Forum and Discussions
- 5:00 End of First Day Session
- 6:30 - 7:30 Cocktails
- Reception at Oasis Hotel, Patan in honor of the Workshop Participants, hosted by IIMI-Nepal
- 7:30 - 9:00 Dinner

30 September 1992 (Wednesday)

- 9:00 - 10:45 Paper Presentations on NGO Networking in Irrigation Development and Management
Morning Session I
Moderator: Mr. N. Ansari, Joint Secretary, MWR
Rapporteur: Mr. Durga K.C.
- 9:00 - 9:20 Potential of NGO Networking in Irrigation Management presented by Dr. S.P. Dhungana, NGO Forum
- 9:20 - 9:40 Potential of Creating a Network of NGOs Working in Irrigation Management Following NAF Model presented by Mr. H.R. Baidya, NAF Foundation
- 9:40 - 10:00 Role of Geographic Information System (GIS) in Networking Organizations for Irrigation Management presented by Mr. Indra Sharan K.C., SDP Project, UNDP/NPC
- 10:00 - 10:20 Open Forum and Discussions
- 10:20 - 10:35 Tea Break
- 10:35 - 12:45 Issues on the Role of NGOs in Irrigation Development and Management
Morning Session II
Moderator: Dr. J. Ambler
Rapporteur: Dr. Ganesh Thapa
- 10:35 - 10:50 Issues Presentation presented by Dr. U. Pradhan, IIMI-Nepal
- 10:50 - 11:50 Group Discussions on Issues and Recommendations for Strategies and Activities for the Network

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- 11:50 - 12:05 Presentation of Group I (Chairman: Dr. G. Thapa)
- 12:05 - 12:20 Presentation of Group II (Chairman:Dr. Upendra Gautam)
- 12:20 - 12:45 Open Forum and Discussions
- 12:45 - 2:30 Lunch
- Afternoon Sesson II
- Moderator: Dr. J. Ambler
- Rapporteur: Dr. G. Thapa
- 2:30 - 3:30 Discussions on NGO Network Strategy Mission/Objectives/Goals Activities/Organization
- 3:30 - 4:00 Tea Break
- Afternoon Session II
- Moderator: Dr. J. Ambler
- Rapporteur: Dr. G. Thapa
- 4:00 - 4:45 Formation of NGO Network Working Committee Nomination of Members Setting of Agenda
- 4:45 - 5:00 Closing Ceremonies
- Remarks
- Mr. N. Ansari, MWR
- Dr. Ujjwal Pradhan, Workshop Coordinator, IIMI-Nepal

List of Participants

Mr. Pitamber Acharya
Rural Development Officer
SAPPROS/Foundation
Kathmandu

Dr. John Ambler
Program Officer
55 Lodi Estate
The Ford Foundation
New Delhi

Mr. N. Ansari
Joint Secretary
Ministry of Water Resources
Singha Durbar
Kathmandu

Mr. Binod Aryal
Superintendent Engineer
IMP
Kamaladi
Kathmandu

Ms. Urmila Aryal
Director
Women in Development Program
Glorie Foundation

Mr. Huta Ram Baidya
Nepal Agro-Forestry Foundation
Khumaltar
Lalitpur

Mr. Devendra Bajracharya
National Planning Commission
Singha Durbar
Kathmandu

Mr. Chris Baker
Chief Technical Adviser
ILO/SPWP
Pani Pokhari
Kathmandu

Dr. Binayak Bhadra
National Planning Commission
Singha Durbar
Kathmandu

Mr. Yem Lal Bhandari
Chairman
Chhattis-Mauja

Mr. Bhabeshor Bhattarai
Member
Tallo Kulo, Chherlung, Palpa

Mr. K. Bhattarai
East Consult
Lazimpat
Kathmandu

Dr. Shambhu P. Dhungana
Chairman
NGO-Forum Nepal
P.O. Box 4343
Kathmandu

Mr. Ajay Dixit
Water Nepal
Dhoka Tole
Kathmandu

Dr. Upendra Gautam
CMS
Sanepa
Lalitpur

Mr. R.P. Gupta
ADB TA No. 1476-Nep
Rural Credit Review Study
Nepal Rastra Bank
Baluwatar

Mr. B.B. Gurung
 Technical Adviser
 CARE/Nepal
 Pulchowk
 Lalitpur

Mr. Vijay K. Gurung
 KMTNC
 Jawalakhel
 Lalitpur

Ms. V. Kumari Gurung
 NGO-Forum
 P.O. Box 4343
 Kathmandu

Mr. Zafar Karim
 ICIMOD
 Jawalakhel
 Lalitpur

Mr. Basanta Kayastha
 Training Coordinator
 ILO/SPWP
 WRID
 Pokhara

Mr. Indra Saran KC
 SDP
 UNDP/NPC
 Bakhundole, Pulchowk
 Lalitpur

Dr. Narayan Narsingha Khatri
 Division Chief
 SFDP/ADB/N
 Ram Shah Path
 Kathmandu

Mr. Suresh Lakhey
 National Consultant
 ILO/SPWP
 Pani Pokhari
 Kathmandu

Mr. Paul Lundberg
 Chief Technical Adviser
 Strengthening Decentralized Planning in Nepal
 UNDP
 Bakhundole, Pulchowk, Lalitpur
 Lalitpur

Mr. Avelino Mejia
 CID Specialist
 NIA Consult
 Pani Pokhari
 Kathmandu

Dr. David Molden
 Technical Adviser
 CADI/IMP
 Kamaladi
 Kathmandu

Mr. Om Mulmi
 National Consultant
 ILO/SPWP
 Pani Pokhari

Mr. Rohit Kumar Nepali
 Executive Director
 South Asia Partnership-Nepal
 SSNCC
 P.O. Box 3827
 Lazimpat
 Kathmandu

Mr. Rishi R.S. Neupane
 Chief
 RTB/DOI
 Kamaladi
 Kathmandu

Mr. Tilak Pd. Neupane
 Secretary
 Raj Kulo, Argali

Mr. Rewanta Bdr. Pandey
 Member, Chherlung
 Mr. Mahesh Pant
 Sustainable Livelihood Forum
 Kirtipur
 Kathmandu

Mr. Mark Polge
Gulmi Arghakanchi Project
Mascott Ltd.
Ministry of Local Development
Pulchowk
Lalitpur

Mr. Pramod Poudel
ADB/N
Ram Shah Path
Kathmandu

Mr. B.K. Pradhan
National Planning Commission
Singha Durbar
Kathmandu

Dr. Tilak Rawal
General Manager
Agricultural Development Bank of Nepal
Ram Shah Path
Kathmandu

Mr. Durga Dutta Regmi
Member
Argali Raj Kulo, Palpa

Mr. Bir Bdr. Saru
Chairman
Tallo Kulo
Chherlung

Mr. Chandra Shakya
APTEC Consult
Kumari Pati
Lalitpur

Mr. Binod Sharma
Program Officer
Palpa Development Project
Helvetas
Kupondole
Lalitpur

Mr. S. Sharma
IIDS
Baneshwor
Kathmandu

Dr. Ganesh Shivakoti
IAAS
Rampur
Chitwan

Dr. Ganesh Ram Shrestha
Executive Director
Centre for Rural Technology
P.O. Box 3628
Tripureshwor
Kathmandu

Mr. Mohan Man Shrestha
Deputy Director General
Department of Irrigation
Pani Pokhari
Kathmandu

Mr. Prem Bdr. Shrestha
Mechanical Engineer
Ground Water, ADB/N
Ram Shah Path
Kathmandu

Mr. Ramesh Shrestha
Section Chief
SFDP, ADB/N
Ram Shah Path
Kathmandu

Dr. Ganesh Thapa
Research Specialist
WINROCK
Ram Shah Path
Kathmandu

Mr. Prem Jung Thapa
IIDS
Baneshwor
Kathmandu

Mr. Adarsha M. Tuladhar
SNV/Nepal
Kumari Pati
Lalitpur

Dr. Hari K. Upadhyay
Team Leader
ADB TA No. 1476-Nep
Rural Credit Review Study
Nepal Rastra Bank
Baluwatar
Kathmandu

Mr. Narayan P. Upadhyay
Chairman
Centre for Poverty Alleviation
New Baneshwor
Kathmandu

Mr. S.N. Upadhaya
Executive Director
WECS
Singha Durbar

Mr. Rajesh Upreti
Pithuwa

IIMI-Nepal

Dr. Alfredo Valera
Dr. Ujjwal Pradhan
Mr. T.M.S. Pradhan
Mr. Durga KC
Mr. Matrika Bhattarai

Acronyms and Abbreviations

ADB/N	Agricultural Development Bank of Nepal
BTRT	Begnas Tal Rupa Tal
CDO	Office of Chief District Officer
CSIP	Community Surface Irrigation Program
DOI	Department of Irrigation
DSCWM	Department of Soil Conservation and Water Management
DAs	Development Associates
FMIS	Farmer-Managed Irrigation System
GEOCE	Geotechnical and Civil Engineering Consultants (P) Ltd.
GO	Group Organizer
IDE	International Development Enterprise
IIMI	International Irrigation Management Institute
ILC	Irrigation Line of Credit of the World Bank
ILO/SPWP	International Labour Organization of the United Nations/Special Public Works Programme
INGOs	International Non-Governmental Organizations (non-profit)
NAF	Nepal Agro-Forestry Foundation
NGO	Non-Governmental Organization (non-profit organization)
NIA	National Irrigation Administration of the Philippines
NPC	National Planning Commission
NRMP	Natural Resource Management Project
O&M	Operation and maintenance
PO	User group
RABNP	Rural Area Basic Need Project
RADC	Remote Area Development Committee
SFCP	Small Farmers' Community Project
SFDP	Small Farmers' Development Programme
SNV	Netherlands Development Organization
SSNCC	Social Services National Coordinating Council
UMN	United Mission to Nepal
VDC	Village Development Committee
WECS	Water and Energy Commission Secretariat
WUA	Water Users Association

विषय- सूची

सि. नं	विषय	पेज. नं
१	संस्थागत मार्ग अपनाई गैससहरूसाई ग्रासरूट लेवलमा सामाजिक आर्थिक विकास र गरिबी उन्मुलन गर्ने प्रतिनिधि बनाउने सुरेशचन्द्र लाखे	५
२	गैसस सामुहिक विकास कार्यकलापमा एउटा सुविधा प्रदायक भूमिका क्रिस वेकर	९
३	सिफित्त कृषि क्षेत्रमा गैसस: संस्थागत विकास साधनको अवलोकन उपेन्द्र गौतम	१३
४	सिंचाई व्यवस्थापन कार्यमा ग्रामीण स्तरका गैर सरकारी संस्थाहरूको अनुपप पिताम्बर प्रसाद आचार्य	१७
५	कर्फाडंगमा सिंचाई: गैससको भूमिका देवेन्द्र एस राणा	२१
६	नेपालको सिंचाई प्रणाली विकासमा केयर नेपालको अनुपप बि बि गुरुडो	२५
७	छेर्लुडो तल्लो कुलो सिंचाई प्रणालीको परिचय : वीर बहादुर सारु	२९

८	छेर्लुड० कुलो सिंचाई व्यवस्थापन प्रणालीको छोटकरी परिचय रेवन्त बहादुर पाण्डे,	३३
९	अर्गली राज कुला (जेठी कुला) को संक्षिप्त विवरण श्री दुर्गादत्त रेग्मी	३८
१०	छत्तिस मौजा सिंचाई व्यवस्थापन प्रणालीको छोटकरी परिचय यम लाल भण्डारी	४२
११	पिठुवा सिंचाई व्यवस्थापन प्रणालीको छोटकरी परिचय तयार गर्ने: जयेन्द्र कुमार श्रेष्ठ, कृष्ण बहादुर कुँवर तिलक प्रसाद थमला कृष्ण उप्रेती	४६
१२	सिंचाई क्षेत्रमा गैससको नेटवर्किंग सम्भावना डा शम्भु प्रसाद ढुंगाना	५०
१३	नाफ संस्थाको ढावामा गैर सरकारी संस्थाहरूको सिंचाई व्यवस्था क्षेत्रमा संलग्न हुन सक्ने संभावना हुत्ताराम वैद्य	५४
१४	सिंचाई व्यवस्थापनमा लागेका संस्थाहरूको नेटवर्क स्थापना गर्नेमा भौगोलिक सूचना प्रणाली (जी आई एस) को भूमिका ईन्द्रशरण के सी.	६०
१५	सिंचाई व्यवस्थापनमा एन जी ओ हरूको भूमिकासंग सम्बन्धित केही प्राशागिक विषयहरू डा उज्ज्वल प्रधान	६४

संस्थागत मार्ग अपनाई गैससहरूलाई ग्रासरूट लेभलमा सामाजिक आर्थिक विकास र गरिवी उन्मुलन गर्ने प्रतिनिधि बनाउने सारांश

सुरेशचन्द्र लाले
ILO/SPWP

१ सरकारी कृषक सहभागिता

गैरसरकारी संस्थाहरू मार्फत
उपभोक्ताहरू कृषकहरूसंग
सरकारी निक्कयको सामिप्य एवं
समफादारी बढाई उनीहरूको
वढी सहभागिता जुटाउने।

सिंचाई नियमावली २०४५ को सिलसिलामा फिल्ड निरीक्षण तथा कृषकहरूसंगको भेटवार्ताको आधारमा यो कार्यपत्र तयार पारिएको छ । उक्त नियमावली वास्तवमा सिंचाई विकासमा कृषक समुदायको सहभागिताको अवधारणा र प्रचलनको प्रवर्द्धनलाई लक्षित गरिएको छ । जसको उद्देश्य सिंचाई प्रणालीहरू स्वावलम्बन, दिगो एवं कृषकवर्ग के हितमा कायम हुन सकोस्। कृषकहरूसंगको छलफलमा उनीहरूले सिंचाई प्रणाली एवं अन्य आर्थिक मामिलामा आफुलाई स्वावलम्बन हुने इच्छा व्यक्त गरेका थिए । यस्तो अवस्थामा के कृषकहरूले सरकारको सेवाटोवालाई उपेक्षित गर्ने जमको गर्लान् र ? जवकी, अर्को पट्टि, सरकारी निक्कयहरू सिंचाई विकासमा कृषकको अपेक्षित सहयोग नपाएको धारणा व्यक्त गर्दछन् । यसबाट सरकार र कृषकहरूको समुदाय बीच छलफल र समफदारीको कमी भएको तथ्य प्रष्ट हुन्छ। यस दूरीलाई स्थानीय गैर सरकारी संघ संस्थाहरूको क्रियाकलापबाट कम गर्ने आशा लिन सकिन्छ ।

२ सानोतिनो प्रयास वा सामग्री जुटाएर पनि सिंचाई प्रणालीमा राम्रो सुधारको आशा गर्न सकिन्छ ।

हाल देशभित्र दुइ थरीको गैरसरकारी संस्थाहरू कार्यरत रहेको पाईन्छ। वढी चलन चल्तीमा देखिएको किसिममा सामाजिक संस्थाहरू पर्दछन् जसको आफ्नै प्रकारको कार्यक्रमहरू हुन्छन् । यी संस्थाहरूले मुख्यत विदेशी

सहायतामा भर परेका हुन्छन् । यी संस्थाहरूले सरकारको विकास कार्यक्रममा आंशिक रूपले योगदान पुर्याएको हुन्छन्। एकथरी आफै घोषित व्यवसायिक गैर सरकारी संस्थाहरू छन् । जस्तै सरकारी विकास कार्यमा प्राविधिक सेवा पुर्याउने गर्दछन् देशमा प्रजातन्त्रको पुनर्वाली पछि, देशमा राजनिति उत्प्रेरित गैर सरकारी संस्थाहरूका एउटा नयाँ जमात, सामाजिक संस्थाको नाममा उभेर आएको छ । यस माथी केही अन्तर्राष्ट्रिय गैससहरू पनि देशको सामाजिक आर्थिक विकास कार्यमा सक्रिय भएका छन् । उनीहरूको आफ्नो छुट्टै कार्यक्रमहरू हुन्छन् । तैपनि, सरकारको देशभरी विद्यमान फिल्ड स्तरको निकायहरूवाट नै देशको अधिकांश विकास कार्यहरू संचालन हुन्छन् । तर यस्ता सरकारी निकायहरूवाट प्रतिपादित विकास कार्यक्रमहरू लक्षित जनसमुदायलाई लाभ पुर्याउन प्रभावहीन साबित भएका छन् । जस्तै मुख्य कारणहरू व्यक्तिगत प्रयास एवं उचित पारिश्रमिकको अभाव, गाह्रो र कम लचिलो प्रशासनिक नियम कानूनहरू, तालिम प्राप्त जनशक्तिको कमी इत्यादी हुन्। गैससको कार्यकलापद्वारा यस क्षेत्रमा अलिकतिमात्र सुधार ल्याउन सकेपनि सरकारी निकायहरू र कृषक समुदाय विच आपसी सम्बन्ध र समझदारी बढाउन निकै मद्दत पुग्नेछ ।

३ गैससहरू देशको विकास कार्यसंग मिल्ने र सघाउने हिसावले वनिनु पर्दछ ।

सरकारी निकायको हकमा, जतिमाथीको स्तर हुन्छ उतिनै तालिम प्राप्त जनशक्ति एवं सल्लाहकार हुन्छन्। जवकि फिल्डस्तरमा काम गर्नेहरू नत तालिम प्राप्त हुन्छन् न त काम गर्न सुविधा नै । बजेट खर्च गरेका र वनि बनाईएको विवरणको आधारमा प्रगती भएको नभएको लेखाजोखा हुन्छ । विगत ३५ वर्षको नियोजित विकास कार्यक्रममा, विकासको बहाव सधैँ माथि देखि तल रह्यो र लक्षित जनसमुदायको वास्तविक उन्नतीमा लाग्ने फिल्ड स्तरको निकायहरू अपेक्षित नै रह्यो ।

४ गैसस एउटा अर्थपूर्ण परिभाषा बोकेका हुनु पर्दछ ।

फिल्डस्तरमा विकास कार्यकलापहरू प्रभावकारी ढंगवाट संचालन हेतु वनिएका एउटा गैससमा निम्न उल्लेखित कुराहरू हुनु आवश्यकछ ।

क) स्थानीय स्तरमा सहभागि वन्न काममा विश्वास राख्ने कर्मीहरू भएको हुनु पर्दछ ।

- ख) सम्बन्धित विषयमा तालिम प्राप्त वा अनुभव हुनु पर्दछ ताकि लक्षित जनसमुदायमा प्राविधिक एवं सामाजिक तवरले प्रभाव पार्न सकियोस्।
- ग) सामाजिक मान्यता प्रदान गर्ने।
- घ) एउटा ग्रामीण स्कूल शिक्षकको समानुपातिक हिसावले तलब र अन्य सुविधा दिने।
- ङ) ग्रामीण विकास काममा जुट्ने एउटा समूह सिर्जना गर्ने।
- च) खर्चको उपवेद्यता जुन ग्रामीण समाजलाई मान्य होस्।
- छ) ग्रामीण समाजमा परेको प्रभावको रेखदेख गर्न सक्ने।

५. स्थानीय गैसस : राम्रो प्रभाव पर्न सक्ने।
स्थानीय गैससहरू :

- १) छिटो वृद्धि, कार्यक्रम शुरु गर्ने र संपन्न गर्नेमा पनि छिटै हुने।
- २) सरकारी निकायको काममा भन्दा कम खर्चमा कार्यक्रम संपन्न हुने।
- ३) कृषक समुदायको सहभागिता एवं उनीहरूको श्रोत श्रम परिचालनमा वृद्धि हुने।
- ४) रोजगार बढ्ने।
- ५) चेतना, जागरण र आफ्नोपनको भावनामा वृद्धि।
- ६) लक्षित जनसमुदायसंग राम्रो हेलमेल र उनीहरूको शीप जान उकास्नमा बढी प्रभावकारी।
- ७) ग्रामीण समाजको विकास जुन वातावरण संरक्षणमा मद्दत गर्ने हुन्छ।
- ८) ग्रामीण शिक्षित समुदायलाई शहरतिर उन्मुख हुनबाट रोक्ने हुन्छ।

६ गैससके संस्थागत विकास

देशमा हाल विद्यमान गैससहरू विदेशी सहायतामा भरपने प्रवृत्तिका छन् जस्को आफ्नो कूल बजेटको ८० प्रतिशत यस्ता विदेशी सहायतावाट आएका हुन्छन् । परिणामवस, यस्ता संस्थाहरू सरकारी विकास निकायहरूको समानान्तर संस्थाको रूपमा स्थापित गर्ने प्रवृत्ति लिएका हुन्छन् । उनीहरूको धेरैजसो कार्यकलाप केन्द्रीय र क्षेत्रीय स्तर सम्म मात्र सिमित रहेको हुन्छ । जनसमुदायहरू यस्ता गैससको कार्यक्रमवाट लाभान्वित भएको हुँदा सरकारको सिमित तालिम प्राप्त जनशक्ति एवं श्रोतलाई ध्यानमा राखेर। यस्ता गैससहरूलाई फिल्डस्तरको विकास कार्यमा पनि उन्मुख गराउनु वाञ्छनिय हुनेछ । वास्तवमा गैससहरूको संस्थागत विकास सहि मानेमा यहि फिल्ड स्तरवाट हुनु पर्दछ । तत्पश्चात, जिल्ला र केन्द्रीय समन्वय समितिको रूपमा विकसित भएर आउनु पर्छ । यस प्रकृयावाट एउटा स्वावलम्बी एवं दिगो गैससको स्थापना हुन जाने छ ।

७ गैससहरू कम्पनी ऐन वा संस्था दर्ता ऐन वा सहकारी ऐन अन्तर्गत दर्ता गर्न सकिने प्रावधान छ । वास्तवमा गैससहरूलाई देशमा प्रदत्त कानून अनुरूप स्वायत्त संस्थाहरूको रूपमा दर्जा प्रदान गरेर एउटा निजी कम्पनीको रूपमा वृहत् कार्य गर्न दिनु वाञ्छनिय हुनेछ । हाल भएका गैसस मध्ये कतिपय यस्ता छन् जुन निजी संस्थाको रूपमा संस्था दर्ता ऐन अन्तर्गत दर्ता गरिएका छन् तर उनीहरू बात् संस्थाहरूवाट संचालित छन् । उनीहरूको स्वायत्ततामा पावन्दि छ । सबै गैससहरू वित्तिय संस्थाहरूसंग सम्बन्ध हुने प्रावधान हुनु पर्दछ र उनीहरू आ आफ्नो ढंगले वाञ्छनिय रूपमा कमाउने स्वतन्त्र हुनु पर्दछ । सरकारले गैससहरू विदेशी सहायतावाट बढि प्रभावित हुनवाट जोगाउन यस्ता सहूलियत र सुविधाहरू प्रदान गर्नु पर्दछ ।

८ गैसस फिल्ड कार्यकर्ताहरूलाई कम खर्चमा प्रभावकारी ढंगले तालिम प्रदान गर्न सकिन्छ । गैससलाई केही थपभार नपर्ने गरि, संबन्धित सरकारी निकायले यस्ता प्रारम्भिक तालिम कार्यक्रमको आयोजना गर्न सकिन्छ । जब गैससका कार्यकर्ताहरू एवं अन्य कर्मचारीहरू यस्तो तालिममा भाग लिन्छन्, उनीहरू सरकारी निकाय एवं लक्षित जन समुदायसंग आफ्नो भावि संबन्ध कार्यकलाप वारे स्पष्ट हुने हुँदा, कार्यक्रम प्रभावशाली हुने संभावना बढ्ने हुन्छ ।

गैसस सामूहिक विकास कार्यकलापमा एउटा सुविधाप्रदायक भूमिका

सारांश

क्रिस बेकर वरिष्ठ सल्लाहकार
अन्तर्राष्ट्रिय श्रम संगठन

विकासशील देशहरूमा जनताहरूको लागि पूर्वाधार पुर्‍याउने दिशा जरुरतभन्दा ज्यादा लक्ष लिएर काम गरिरहेका छन् । ती लक्षहरू अनुरूप विकास कार्यहरू कार्यान्वयन गर्न र संचालन एवं मर्मत संपार गर्न जनताहरूको बढ्दो सहभागिता महसूस गरि आफ्नो कार्यक्रममा उनीहरूको सहभागिता जुटाउन प्रयास पनि बढ्दो छन् । तर यी प्रयासहरू सन्तोषजनक रूपबाट अगाडि बढि राखेको देखिदैन र यसको मुख्य कारण सरकारी निकायहरू र उपभोक्ताहरूको आआफ्नो रुचि र धारणा छन्, जुन प्रायसः विपरित नै देखिन्छन् ।

यस कुरालाई विचार गर्दा, एउटा अर्कै कार्यशालाको आवश्यकता महसूस हुन्छ जसमा सरकारको रोल बढीमानेमा एउटा प्रवर्द्धक, सहयोगात्मकको हुनेछ भने उपभोक्ताहरूले पूर्वाधार विकास कामलाई एउटा जनताकै सामूहिक कार्य ठानि आफै अग्रसर हुनु पर्ने हुन्छ । बरु, जनसमुदायलाई प्राविधिक एवं आर्थिक सेवा टेवा पुर्‍याउने काम प्रशस्त हुनु पर्दछ ।

जनसमुदायहरू आफ्नो र आवश्यकता एवं प्राथमिकता रोज्न स्वतन्त्र हुनु पर्दछ । सरकारले ती जरुरतहरू उनीहरूलाई उपलब्ध गराउने दिशामा महत्त अवश्य पुर्‍याउनु पर्दछ । जन समुदायलाई एउटा ग्राहक (CLIENT) को रूपमा हेरिनु पर्दछ र उनीहरूको जरुरत किन्ने कुरामा महत्त पुर्‍याउनु पर्दछ। समुदायक व्यवस्थापन भन्दा सामूहिक नीजिकरण पूर्वाधारहरूको दिगोपन र संचालनको हिसावले अफ बढी उपयोगी ठहर्छ। सरकारी निकाय वा दातृ संस्थाहरूको आआफ्नो रुची एवं प्राथमिकता हुन सक्छ भन्ने लक्षित जनसमुदायको पनि आफ्नै तर भिन्न रुची एवं प्राथमिकता हुन सक्छ तसर्थ सामूहिक कार्यक्रम प्रभावशालि नहुने हुन्छ । यस्तो अवस्थामा गैससहरूको रोल उपयोगी सिद्ध हुन सक्छ।

गैससहृ एउटा सुविधा प्रदारक संस्था । इकाईको रूपमा अनेकौ क्षेत्रमा संलग्न हुन सक्छन् । जस्तै सामूहिक विकास कार्यक्रमको लागि कोष जुटाउने माध्यम भएर स्थानीय श्रमशिव परिचालन गर्ने तौर तरिका अपनाउने, प्राविधिक सेवादेवा पुर्याउने, जनसमुदायमा समानुपातिक मूल्य र फाईदा वितरण गर्ने कार्यमा, अवाञ्छनिय सरकारी हस्तक्षेप रोक्ने कार्यमा, आदि ।

सिंचित कृषि क्षेत्रमा गैससः संस्थागत विकास साधनको अवलोकन सारांश

उपेन्द्र गौतम
CMS/Nepal

नेपालमा त्यस्ता गैसस (यहाँ कृषकहरू जुन आफ्नै प्रयासले बनि सिंचाई प्रणालीहरू संचालन गर्नमा लागेका छन् त्यस्तालाई पनि गैसस भनिएको छ) हरू धेरैसमय अगाडि देखि विद्यमान छन् जुन, सिंचाई प्रणालीहरूको व्यवस्थापनलाई लागेका छन् । नेपालको सिंचित क्षेत्र मध्ये ६० देखि ८० प्रतिशत क्षेत्र यस सिंचाई प्रणालीहरूले ओगटेका छन् जुन कृषक समुदायद्वारा निर्मित एवं संचालित छन् । यस मानेमा, यस सिंचाई प्रणालीहरूको महत्त्व निकै रहेको कुरा प्रष्ट हुन्छ । त्यसैले, उनीहरूको समुचित कदर एवं संवर्द्धन हुनु नितान्त आवश्यक छ ।

श्री ५ को सरकारले हालै तीनवटा यस्ता नियमावलीहरू ल्याएका छन् जस्तै माथी उल्लेखित किसिमका गैससहरूको संरक्षण र संवर्द्धनमा सघाउ पुर्याउने उद्देश्य बोकेका छन् । ती हुन सिंचाई नियमावली २०४९, पानी श्रोत नियमावली र आठौँ पञ्चवर्षिय योजना (२०४९-२०५४) सिंचाई नियमावलीमा विभिन्न सिंचाई प्रणालीहरूको वर्गीकरण तिनीहरूमा कृषक समूहको सहभागिताको मात्रा वारे उल्लेख गरिएको छ भने पानीश्रोत नियमावलीले कृषक समूहको संस्थाले सिंचाई प्रणालीहरूको स्वामित्व कायम राख्ने कानूनी प्रावधान दिएको छ । यस नियममा सरकार र संस्थाहरू बीच पानीको उपभोग वारे सम्झौता गर्ने व्यवस्थापन किटान गरिएको छ । गैससहरूको प्रवन्ध एवं संरक्षण वारे आठौँ पञ्चवर्षिय योजनामा पनि उल्लेखनिय वृद्धाहरू समावेश छन् । साथ साथै सामाजिक कल्याण तथा श्रम मन्त्रालयको एउटा नीतिमा गैससलाई स्वायत्तता प्रदान गर्ने कुरा पनि उल्लेख गरिएको छ ।

यी सब कुराहरू गैसस प्रवर्द्धनको लागि लक्षित भएपनि, कतिपय कुराहरू व्यवहारमा नभिल्लो पनि पाइएका छन् । पहिलो कुरा त, सरकार गैससहरूको अवधारण एवं प्रकारहरूमा नै स्पष्ट हुनु पर्ने देखिन्छ । किनकि गैससको परिभाषा विभिन्न समूह एवं समूह बीचको

विभिन्न व्यक्ति व्यक्तिमा आफ्नै प्रकारको रहेको पाईन्छ । एकथरी र यस्ता गैसस पइ (माथी उल्लेखित कृषक समूहको जस्तो) जुन संस्थामा उपभोक्ताहरु आफै संलग्न रहन्छन्। अर्को थरीको गैसस पेशागत खालको हुन्छन्। जस्को कार्यकलाप उनीहरुलाई सुम्पिएको काम र उदेश्यमा भर पर्दछ । एकतिर सरकारी निकायहरु आफ्नो विकासको कामहरुमा सहभागिता बनाउन एक विशेष प्रकारको गैससको धारणा लिएको देखिन्छ जुनमा आफ्नो प्रभुत्व कायम नै राख्ने मनसाय बोकेको हुन्छ । हुनत सरकारी माध्यमहरु गैससको पक्षमा बोलि रहेका पाईन्छ तर गैससको परिभाषा र उनीहरुवाट अपेक्षित कार्यकलाप विभिन्न निकायहरुको सोचाईमा भिन्नता रहेको पाईन्छ । गैसस सम्बन्धि हाल आएको आठौँ पञ्चवर्षिय योजनामा समेत विरोधाभास दृष्टिकोण रहेको पाईन्छ ।

एकतिर कृषक समुदायको गैसस प्रवर्द्धन गर्नेमा यथेष्ट प्रयास भई राखेको छैन भने अर्कोतिर सिंचाई विभाग, व्यापक कृषक सहभागिताको आशा लिएर नयाँ नीति र कार्यक्रम लिएर अधि बढ्दै छ । कृषक समुदायको संस्थाहरुलाई समक्ष र दिगो बनाउने उदेश्य लिएर माथी उल्लेखित नयाँ नीति नियमावलीहरु त निस्कन्छन् तर सरकारी निकायका व्यक्तिहरुमा तिनीहरुको अनुकरणको दिशामा हुनुपर्ने जिज्ञासा देखिएको छैन ।

सरकारले कृषक समूह मूलक गैससलाई विकास गर्ने कुरामा जोड दिनु पर्दछ अरु गैससहरुको प्रवर्द्धनको हकमा उनीहरुको कार्यक्षमता र प्रभावकारिताको आधारमा गरिनु पर्दछ । गैससहरुको प्रकार एवं अवधारणा बारे सरकार स्पष्ट हुनु पर्दछ। सरकारले गैससहरु सबै आफ्नो मातहत काम गर्नु र आफ्नो प्रभुत्व कायम रहोस् भन्ने सोच्नु हुदैन । कतिपय कुरामा सरकारलाई नयाँ नीति,कार्यक्रमकोलागि माग गर्न सकिन्छ । यसरी एक समझदारीको बाटोमा गैससहरुलाई फष्टाउन दिनु पर्दछ।

सिंचाई व्यवस्थापन कार्यमा ग्रामीणस्तरका गैर सरकारी संस्थाहरूको अनुभव

सारांश

पिताम्बर प्रसाद आचार्य

परिचय :

- १ लम्जुङ० जिल्लाका स्थानीय गैर सरकारी संस्था तथा उपभोक्ता समितीहरूको व्यवस्थापन क्षमता अध्ययन गर्ने सन्दर्भमा अध्ययन टोलीबाट लम्जुङ० जिल्ला भलायखर्क गाउँ विकास समिति समान सामुहिक सिंचाई आयोजनामा गई उक्त सिंचाई आयोजना संचालन गर्ने उपभोक्ता समितिको व्यवस्थापन क्षमता अध्ययन गरिएको थियो।
- २ कूल ४० कृषक परिवार संलग्न भएको मसान सिंचाई आयोजनाले १० हेक्टर जमीनमा सिंचाई सुविधा उपलब्ध गराएको छ। (सो सिंचाई आयोजनामा) लाभान्वित कृषकहरूको सामुहिक प्रयासबाट सन १९६४/ (२०२१) मा यो सिंचाई आयोजना निर्माण गरी १९८७ सम्म प्रत्येक वर्ष स्थानीय कृषकहरूले वर्षको १२-१५ दिन श्रमदान गरी सिंचाई कार्यक्रम संचालन गर्दै आएका रहेछन। साथै बाँध तथा कूलो पक्की बनाई सामुहिक सिंचाई कार्यमा दिगोपन ल्याउन बाह्य निष्कायहरूसंग साधन जुटाउने प्रयासमा लागेको पाइयो। उपभोक्ता समितिको अनुरोधमा सन १९८८ मा सिंचाई सेवा पुर्याउने कर्जा कार्यक्रम परियोजना (Irrigation Line of Credit Project) ले रु ४,००,०००। चारलाख वरावरको आर्थिक साधन उपलब्ध गराई सिंचाई आयोजना पक्की बनाउन मंजूर गरेको रहेछ। यसरी आर्थिक साधनको व्यवस्था गरिएता पनि उक्त परियोजनाले स्थानीय उपभोक्ता समितिको कार्य क्षमतालाई नपत्याएर निर्माण/मर्मतको कार्य भने ठेकेदार मार्फत नै गराइएको पाईयो।
- ३ स्थानीय उपभोक्ता समितिलाई दातृ संस्थाबाट निर्माण मर्मत कार्यमा सहभागी नबनाएको भएता पनि उपभोक्ता समितिका पदाधिकारीहरूले निर्माण

मर्मतको कुनै पनि कार्य गर्न पाएमा भविष्यमा उक्त सिंचाई आयोजना मर्मत संभार गर्न साधनको व्यवस्था हुन सक्ने संभावना देखि ठेकेदारले सिंचाई व्यवस्थापनमा संलग्न उपभोक्ता समितिलाई रु १० हजार वरावरको कार्य पेटी कन्ट्याक्टमा दिएको रहेछ र उपभोक्ता समितिले स्थानीय श्रम परिचालन गरी सुम्पिएको कार्य गर्दा रु ३० हजार बचत भइ सोही रकमबाट सिंचाई आयोजनाको मर्मत संभार कार्य भएको पाइयो । उपभोक्ता कृषकहरू सकृय भइ सामुहिक सिंचाई कार्यमा आफ्नो क्षमता प्रदर्शन गरेको यो एक सान्दर्भिक उदाहरण हो।

- ४ सामुहिक सिंचाई व्यवस्थाको सफल कार्यान्वयनको लागि सक्षम व्यवस्थापन र स्थानीय श्रोत एक अभिन्न अंग हुन र यस्ता कार्यको कार्यक्रममा सामन्जस्यता जनसहभागिताको माध्यमबाट मात्र संभव छ । यस्ता कार्यमा स्थानीय उपभोक्ता समितिलाई सहभागी नगराई खाली बाह्य संस्था वा निकायबाट मात्र कार्य संचालन गरिएको सिंचाई योजनाबाट स्थानीय जनताले आफ्नो जनताले आफ्नो सामुदायिक संपत्ती सम्प्रेर त्यस्को रेखदेख संरक्षण र आपसी विश्वास कायम गर्ने जस्ता कार्यमा अभिरुची दिएको पाइना अतः वर्तमान कार्यशैलीमा बाह्य निकायहरूको प्राविधिक एवं वित्तीय साधन र स्थानीय परम्परागत कार्य शैली समेटेने सिंचाई व्यवस्थापन प्रतिस्थापना हुनु आवश्यक देखियो ।
- ५ हजारौ हजार स्थानीय उपभोक्ता समूहहरूले सामुहिक विश्वास र आदर्शको आधारमा जन सहभागिता जुटाई सामुहिक सिंचाई आयोजनाहरू संचालन गर्दै आएका छन र यस्ता सिंचाई आयोजनाहरूको संख्या १७,००० भन्दा वढी भएको अनुमान छ ।
- ६ स्थानीय आवश्यकताको आधारमा स्वयम प्रतिस्थापित उपभोक्ता समूहहरूको बाह्य संस्था निकायहरूबाट संचालन गरिएको सिंचाई परियोजनाहरूको तुलनामा सिंचाई व्यवस्थापन पानीको वाडफाड तथा मर्मत संभार जस्ता कार्यमा उत्कृष्ठ क्षमता भएको प्रमाणित गरेको छन ।
- ७ गैर सरकारी संस्थाहरूको रूपमा कार्यरत हजारौ स्थानीय संस्थाहरू मध्ये केही संस्था वा उपभोक्ता समितिहरूले समुदायको विश्वास र आदर्शमा सामुहिक सिंचाई आयोजनाहरू संचालन गर्दै आएका छन। यस्ता स्वयम प्रतिस्थापित संस्थाहरूले ग्रामीण क्षेत्रमा सामुदायिक विकास कार्यक्रमहरू सफल व्यवस्थापन, एवं कार्यान्वयन प्रकृयाको अनुसरण गरेको पाईन्छ भने बाह्य निकायको संलग्नबाट प्रतिस्थापित संस्थाहरू बाह्य निकायहरू प्रति निर्भर भई सुजना भएका आधारशिलाहरू मर्मत संभार गर्न समेत अरुमा नै निर्भर रहने परम्परा विकसित भएको पाइएको छ ।

- ८ लम्जुङ० जिल्लामा संचालित ३७ सिंचाई आयोजनाहरूको हालै गरिएको अध्ययनबाट स्थानीय तहका उपभोक्ता समिति गैर सरकारी संस्थाहरू कार्यक्रमको संपादनता पहिचान योजना तर्जुमा कार्यान्वयन, मूल्यांकन तथा संगठन र व्यवस्थापन पक्षमा समेत सक्षम भएको पाईन्छ ।
- ९ अधिकारको सम्बन्ध, जनताको सहभागिता, कार्यक्रम कार्यान्वयन गर्ने स्थानीय तहमा निर्णय गर्ने प्रकृयाको प्रत्येकसंग नै सम्बन्धित हुन्छ । व्यवहारमा हेर्ने हो भने स्थानीय गैर सरकारी संस्थाहरू आफ्नो चाहना आवश्यकताको आधारमा योजना तयार गर्न सक्ने स्थितिमा भएको पाइदैन। अर्थात् बाह्य निकायले तयार गरेको कार्य शैली स्वीकार गर्न बाध्य भएका छन्, जुन कार्य शैली स्थानीय तहमा सुहाउंदो नहुन पनि सक्छ । अतः स्थानीय उपभोक्ता समिति संस्थालाई संचालन गरिने कार्यको संपूर्ण प्रकृत्यामा निर्णायक भूमिका प्रतिस्थापन गराउन सकेमा मात्र, सामुहिक सिंचाई योजनाहरू सफल रूपमा संचालन गराउन सकिने छ ।
- १० स्वयम प्रतिस्थापित संस्था र गैर सरकारी संस्थाको कृयाकलापमा पनि सक्षम र असक्षम जस्ता कार तत्त्वहरूले वढी प्रभावित पारेको हुन्छ । यस्ता संस्थाहरूको सफलताका परिसूचकहरू स्थानीय श्रोत परिचालन, भौतिक आधारसिलाहरूको संरक्षण, परियोजना प्रति आफ्नोपनको विकास, आत्म विश्वासको प्रतिस्थापना र स्थानीय नेतृत्वको विकास हुन भने बाह्य निकायहरूमा निर्भरता, मर्मत कोषको अभाव, बाह्य संस्थाको वढी संलग्नता एवं निर्माण चरणमा हस्तक्षेप र सामुहिक सम्पत्ती प्रति समूह भावनाको अभाव, व्यक्तिवादी नेतृत्व र अभिरुची जस्ता प्रकृत्याहरू असफलताका परिसूचक हुन ।
- ११ स्थानीय संस्थाहरूको विकास स्थानीय जनताहरूको भावना अनुरूप भइ उनीहरूको संस्थाको विकासबाट फाइदा पाउने हुनु पर्दछ । भने बाह्य निकाय संस्थाहरूले पनि आफ्नो साधनबाट कसरी स्थानीय आवश्यकताको परिपूर्ति गर्न भन्ने कुरालाई एक अर्काको परिपुरकका रूपमा मान्नु पर्दछ। वर्तमान विकेन्द्रीकरण नीति तथा कानूनले पनि स्थानीय गैर सरकारी संस्थाहरूलाई विकासको वाहनको रूपमा स्वीकार गरेको पाईन्छ ।
- १२ सामुहिक सिंचाई आयोजनाको प्रतिफल सिंचाई परियोजनाबाट लाभ पाउने समुदायका सक्षम व्यवस्थापनमा निर्भर रहन्छ । सरकारी स्तरबाट कार्यान्वयन भएका सामुहिक सिंचाई कार्यान्वयनमा व्यवस्थापकीय समस्याका कारणले अपेक्षित लाभ लिन सकिएको छैन अतः सामुहिक सिंचाई कार्यक्रम संचालन गर्दा निम्न रणनीति अपनाउनु पर्ने देखिन्छ ।

- क) स्थानीय उपभोक्ता समूह वा संस्थालाई सिंचाई परियोजना संचालन गर्न सक्ने निर्णायक अधिकार हुनु पर्छ ।
- ख) बाह्य साधन र उपभोक्ताहरूको संयुक्त सहभागीताबाट निर्माण भएमा सिंचाई परियोजनाहरू प्रति सहभागी कृषकहरूको आफ्नो सामुहिक सम्पत्ती हो भन्ने भावना सृजना भएको पाईयो । अतः कुनै पनि सिंचाई आयोजनाको निर्माण कार्यमा लाग्ने खर्चमा समानुपाति र एकरूपता हुनु पर्ने देखिन्छ ।
- ड०) विभिन्न समुदायहरूबाट सिंचाई कार्यक्रम संचालन गर्दा आफ-आफ्ना किसिमका कार्य शैली अपनाएकोले सिंचाई व्यवस्थापनलाई सक्षम तथा सबल बनाउन सामुहिक सिंचाई परियोजना संचालन गर्दा अपनाउनु पर्ने संपूर्ण कार्यविधि समावेश भएको कृषकहरूले बुझ्ने म्यानुयल बनाई प्रत्येक सिंचाई उपभोक्ता समितिलाई दिनु पर्ने ।
- च०) वर्तमान आर्थिक नियमले पनि जनसहभागिता जुटाउने कार्य कुण्ठित गरेकोले ग्रामीण स्तरमा रहेका अनौपचारिक संस्था गैर सरकारी संस्था र साधन उपलब्ध गराउने बाह्य संस्थाहरूको बीचमा साम-जस्यता कायम गरी वित्तीय साधन परिचालन गराउन औपचारिक गैर सरकारी संस्थाहरूको प्रवर्द्धन हुनु पर्ने ।

वर्भांड०मा सिंचाई : गैससको भूमिका

देवेन्द्र एस राणा
उदय हिमाल नेटवर्क

यस कार्यक्रममा सरकारी योजनाको सफल कार्यान्वयनमा गैर सरकारी संस्थाहरूको वृद्धो भूमिका र साथै देशका विकासनीति मै सुहाउंदो परिवर्तन ल्याउन यिनीहरूले काम गर्नु पर्ने आवश्यकता वारे चर्चा गरिएको छ ।

वर्भांड० जिल्लामा कृषक समूहले आफ्नै निर्माण गरि संचालनमा ल्याइएको सिंचाई प्रणालीको व्यवस्थापन प्रकृया वर्षौ देखिको मेहनत, अनुभव, स्थानीय तवरले उपलब्ध शीप, श्रम र आपसी समझदारीको आधारमा स्थापित भएको छ । देशका सिंचाईको विकासमा वृद्धि ल्याउन सरकारी निकाय तथा योजनावाट सिंचाई प्रणालीहरू वन्दै गरेको छन यस्तो विकास कार्यको अध्ययनवाट निम्न कुराहरू प्रष्ट देखिन आएको छ ।

- क) यी विकास योजनाहरू लक्षित उपभोक्ताहरूलाई भन्दा बढी योजनाको कर्मचारी एवं दातु संस्थाका व्यक्तिहरूको फाइदावाट प्रेरित देखिन्छ ।
- ख) यी योजनाहरूको लक्षित वर्ग प्रति उत्तरदायित्व देखिदैन ।
- ग) यी योजनाहरूको कार्यान्वयनमा लक्षित जन समुदायको सहभागिता निकै कम पाइएको छ ।

अध्ययनवाट देखिएका यी कुराहरूलाई ध्यानमा राखेर गैर सरकारी संस्थाहरूले सिंचाई व्यवस्थापनको क्षेत्रमा निम्न उल्लेखित रूपले सघाउन सकिने देखिन्छ ।

- १ जनतामा चेतना, जागरुण ल्याउने काम गरेर ।
- २ योजनासंग सम्बन्धित सरकारी कार्यक्रम एवं कर्मचारीहरूको रोल, दातु संस्थाको नीति नियम र कार्यविधि र लक्षित जनसमुदायको आवश्यकता र सहभागिता बीच मध्यस्थको काम गरेर ।

- ३ कार्यक्रम प्रभावशाली र अपेक्षित ढंगबाट सम्पादन गर्न कारक तत्वको रूपमा काम गरेर
- ४ जनसमुदायलाई बान्धित अधिकारी दिलाउने काममा सघाउ पुर्याएर
- ५ यस क्षेत्रसँग सम्बन्धित विभिन्न संघ र संस्थाहरूसँग नेटवर्क स्थापना गरि उपयुक्त अनुभव आदान प्रदान गरेर
- ६ जनसमुदायको वस्तुस्थिति र खास आवश्यकताको ठीक ठीक पहिचान गरेर र त्यसको तरफदारी गर्ने काम गरेर ।

वास्तवमा भन्ने हो भने, गैरसरकारी संस्थाहरूले आफ्नो कार्यक्षेत्र र प्रयास स्थानीय जनसमुदायमा मात्र सिमित नराखेर राष्ट्रिय स्तरमा नीतिगत कुरामा समेत आवश्यक सुधार ल्याउन प्रभावशाली भूमिका खेल्नु पर्दछ र खेल्नु जरुरी छ । किनकि देशको विकास कार्यक्रम प्रभावकारी एवं फलदायी बनाउन विद्यमान विकास नीति र कार्यान्वयन शैली कै सुधारको ठूलो खाँचो छ ।

नेपालको सिंचाई प्रणालीको विकासमा केयर नेपालको अनुभव

सारांश

वि वि गुरुंग
केयर नेपाल

नेपालमा किसानवर्गद्वारा संचालित हजारौं सिंचाई प्रणालीहरू छन् । कतिपय यस्ता सिंचाई प्रणाली त शताब्दिऔं पुराना छन् । सिंचाई विभागले ठूलो खालको सिंचाई योजना बनाउन जिम्मा लिएको छ । यसले स-साना सिंचाईहरू विकास गर्न आफ्नो श्रोत र साधनको कमीले घ्याएको हुदैन । किसानले संचालित सिंचाई प्रणालीहरूले छाकेको कृषिभूमि वास्तवमा सिंचाई विभागले संचालन गरेका सिंचाई प्रणालीको तुलनामा धेरै हुन आउंछ । यस अर्थमा देशमा खाद्यान्न वृद्धि गर्ने दिशामा, यस्ता किसान संचालित सिंचाई प्रणालीहरूको विकासको निकै ठूलो योगदान हुन आउंछ। त्यसैले विभिन्न अन्तर्राष्ट्रिय एवं स्थानीय गैर सरकारी संस्थाहरू, सरकारी निकायहरू एवं जन समूहहरूको यस्तो स-साना किसान संचालित सिंचाई प्रणालीहरूको विकास गर्ने दिशामा सेवा र टेवाको विशेष महत्त्व रहन्छ।

सन् १९८३ देखि केयर नेपाल साना र मझौला खालका सिंचाई प्रणालीहरूको विकासमा संलग्न रहेको छ । यस संस्थाले विभिन्न सरकारी निकायहरूसँग देशको विभिन्न ठाउँहरूमा सिंचाई विकासको काम गरेको छ। यस कार्यक्रममा यस्ता विकास कार्यक्रम कार्यान्वयन गर्ने सन्दर्भमा सिकेका पाठहरू, विभिन्न निकायहरूसँग सहकार्य गर्दा देखा परेका समस्याहरू प्रस्तुत गरिएको छ ।

यसरी अन्तर्राष्ट्रिय र स्थानीय गैर सरकारी संस्थाहरू, सरकारी निकायहरू एवं विभिन्न समूहको संयुक्त प्रयासमा देशको सिंचाई विकास गर्ने क्रममा, यहाँ उल्लेखित अनुभवहरूको जानकारी भविष्यको लागि उपयोगी नै होला भन्ने आशा छ।

• छेलुंड० तल्लो कुलो सिंचाई प्रणालीको परिचय

तयार गर्ने श्री वीर वहादुर शारु
छेलुंड० तल्लो कुलो

१ निर्माण अवस्था

संवत् १९८९ सालमा ठूलो कुलोको निर्माण भई गाउँमा पानी आई सकेपछि उक्त कुलोबाट छेलुंड० माथिल्लो गाउँका कृषकहरूले पनि सिंचाईको लागि पानी पाउने आशा गरेका थिए । तर ठूलो कुलोको पानी नपुग्ने भए पछि माथिल्लो गाउँका जम्दार श्री प्रताप सिंह शारु र लेफ्टेन हस्तवीरको नेतृत्वमा कुलो खन्ने योजना भएको थियो। ठूलो कुलो निर्माण गरेका आग्रीहरूले नै यस कुलाको लागि रु ५५०० पत्रपन्न सयमा ठेक्का लिई कुलो खनेका थिए ।

सो निर्माण कार्य १९८९ मा शुरू भएको थियो । विभिन्न आर्थिक, भौगोलिक, सामाजिक, र प्रशासनिक मुद्दा मामिलाहरूको कठिनाईको निर्माणको सामना गर्दै १९९४ मा सानो गोरेटोको रूपमा कुलोको निर्माण कार्य भएको हो।

गाउँमा पानी ल्याई सकेपछि पानी विभाजन र वितरण कुलो संचालन र मर्मत संभारको लागि आवश्यक नीति नियमको निर्धारण गरियो ।

कुलो निर्माण गर्दा खर्च भएको कुल लगानी रु ५५०० लाई ५५ ले भागमा विभाजन गरियो जस अनुसार जुन व्यक्तिले रु १०० खर्च गरेको थियो उसको रु १०० बराबर १ शेयर कायम गरियो । एक शेयर वा रु १०० बराबर एक ईन्च जस अनुसार कुलाको कुलपानीलाई ५५ मा भाग लगाईयो । प्रति ईन्च बराबर एक वुठि औलाको नाप अनुसार खाँचो काटी पानी विभाजन गरियो। एक शेयर बराबर १ श्रम दिने नीति निर्धारण गरियो ।

लामो कुलाको संचालन र मर्मत संभारको लागि जनबलका आवश्यकता पर्ने भएको र सबैलाई सिंचाई प्रणालीमा समावेश गर्ने उद्देश्यले शेयर विक्रि गरी नयाँ मोही संस्था बढाउन मिल्ने नीति स्थापना गरियो । यसै अनुरूप क्रमिक रूपमा पानी हिस्सा वा शेयरको मूल्य वृद्धि भई हाल १ शेयर पानीको रु १०००० (दशहजार) मा विक्रि वितरण भएको छ ।

सिंचाई व्यवस्थाको लागि कुलो समिति

सिंचाई व्यवस्था मिलाउन, श्रम श्रोत र साधन जुटाउन र फेँ फगडा समाधानको निमित्त तत्कालीन कुलो निर्माणमा सकृय रूपबाट नेतृत्व गर्नु भएका जम्दार प्रताप सिंह शाह (मुखिया) र लेफ्टेन हस्तवीर (जिम्वाललाई) आवश्यक सिंचाई व्यवस्था मिलाउन जिम्मेवार अधिकार दिईयो ।

कुलाको मर्मत सुधारको साथै विस्तारै सिंचाई क्षेत्रको पनि विस्तार भयो। २०२६ साल तिर उनै मुखिया र जिम्वाललाई सघाउने उद्देश्य सात वारको सात जना थरीको गठन गरियो।

संपूर्ण कुलोलाई सात क्षेत्रमा विभाजन गरिएको छ। जस अनुसार सात वटै थरी अन्तर्गत एक एक बाईको सरसफाई गर्ने काम पनि यिनै सात थरीले गराउदछन्। सो सफाई कार्य एकै दिनमा गर्ने नियम पनि शुरु गरियो । सो कार्यलाई बाँध सफा गर्ने पनि भनिन्छ ।

यसले समाचार आदान प्रदान गर्ने, श्रमश्रोत र साधन जुटाउने तोकिएको समयमा काम संपन्न गर्ने आदि काम गर्दछन् ।

२०३२ साल पछि जिम्वाल प्रथा हट्यो । जिम्वाल काम गर्नको लागि समितिमा सचिवको पद स्थापित गरियो । हाला लेखाजोखाको काम सचिवले नै हेर्ने गर्दछ ।

२०३४ सालमा कुलोको मुहान देखि १.५ कि मि तल गाईघाट भन्ने ठाउँमा पैरो गई कुलो संचालनमा निकै जटिल समस्या पर्यो । त्यसपछि विकल्पको खोजिमा संपूर्ण उपभोक्ताहरू वसी सर सल्लाह गर्दा पैरो गएको कुलाको भागलाई मर्मत गर्न नसक्ने भएपछि यसै कुलो संगसंगै रहेको तप्लेक पोखरीया कुलोसंग सम्पौता गरी उक्त तप्लेक पोखरीया कुलोलाई सुधार गरी कुलाको क्षमता बढाई मुहान देखि २.५ कि मि तल सम्म तप्लेक पोखरीयाको कुलोबाट नै ल्याउने र त्यस भन्दा तल तर्फ पुरानै कुलोलाई कायम राख्ने निर्णय छेर्लुङका किसानहरूले गरे । किक्की तप्लेक पोखरीयाको हिउदे पानीको श्रोत पनि राम्रो थियो ।

यसै विषयलाई लिएर संयुक्त रूपमा दुवै कुलाका मोहीहरू र तत्कालीन गाउँ पंचायतका प्रतिनिधिहरूको रोहवरमा बैठक बस्यो र ठूलो प्रयास पछि तल्के पोखरीयाका मोहीहरूलाई कुलो संचालनमा भवितव्य बाहेक अन्य कुरामा छुट दिने र वर्षामा तल्केमा ८ ईन्च, पोखरीयामा १२ ईन्च र छेर्लुङ तर्फ २० ईन्च पानी दिई कुलोलाई ४० भागमा विभाजन गर्ने गरी सम्पौता गरियो । तर हिउदमा पानीको श्रोत कम भएकोले एक मुष्ट रूपमा पालो मिलाई पानी उपभोग गर्ने निधो गरियो।

२०३६/०३७ सालमा तत्कालिन जिल्ला पंचायतबाट रु ९५ हजार सहयोग र ६२ हजार रुपैया वरावको भ्रमबाट छेल्नुभन्दा देखि पश्चिम तर्फ अर्तुडु गाउँलाई सिंचाई सुविधा पुर्याउने उद्देश्यले सो योजना लागू गरियो । उक्त योजना अर्तुडु सम्म विस्तार गर्नको लागि धेरै वाद विवाद उत्पन्न भएको थियो । विस्तार कार्य पूरा भएपछि पानी विभाजनमा फेरी समस्या बढा भयो। अर्तुडुगा तर्फबाट राजनैतिक एवं प्रशासनिक सहयोगमा पानी विभाजन गर्ने कदम चालियो । तर छेल्नुभन्दा ५० औं वर्षसम्म रगत, पसिना, श्रम र संपत्ती खर्च गरेर ल्याएको कुलाको पानी विभाजन र पुरानो सिंचाई क्षेत्रलाई समेत ध्यानमा राखी अर्तुडुगा क्षेत्रलाई पानी विभाजन कसरी गर्ने वा स्वाधिनत्व दिने सहभागी बनाउने कि नबनाउने सम्बन्धमा छेल्नुभन्दा सोच्नु परेको थियो ।

अर्तुडुगा र छेल्नुभन्दाको मोही बसी आपसमा छलफल गरी ५५ लाई ५९ मा वृद्धि गरी ४ पानी अर्तुडुगमा दिने र १६ खेतलाई मर्मत र संभारको लागि लिने सहमतीबाट सम्झौता भयो। सो सम्झौता अनुसार अर्तुडुगाबाट एक सदस्यलाई कुलो समितिमा समावेश गरिएको छ ।

हाल आएर यस कुलाको लम्बाई ७ कि मि वाट १० कि मि हुन आएको छ ।

सिंचाई व्यवस्था

धान वालीको लागि लगातार रूपमा प्रत्येक साँचाहरूमा पानी विभाजन गर्ने काम समितिले गर्दछ। तर हिउँदमा भने पानीको श्रोत कम हुने हुँदा एकमुष्ट पालो मिलाई पानी दिने व्यवस्था छ।

कुलो संचालन

नियमित रूपमा श्रावण देखि कार्तिक सम्म २ जना पालेलाई पारिश्रमिक दिई राख्ने र हिउँदमा सात वाईका सदस्यहरूले आफ्नो क्षेत्र अन्तर्गतका उपभोक्ताहरूलाई शेयर अनुसार खटाई कुलो संचालन गर्ने गरिन्छ । दैनिक कुलाको रेखदेखको लागि पालो खटाईन्छ ।

तर पैरो गएमा, पालेको खबर अनुसार मुखियाले फारा वा महाफारा (अध्यक्ष) बोलाई फाराली लगी, कुलो मर्मत गरी, कुलो संचालन गरिने व्यवस्था छ। तर ८-१० जनाले पूरा गर्न सक्ने काम भएमा खेतलाई काम गराउने व्यवस्था छ ।

कुलो संचालन

नियमित रूपमा श्रावण देखि कार्तिक सम्म २ जना पालेलाई पारिश्रमिक दिई राख्ने र हिउँदेमा सात वार्डका सदस्यहरूले आफ्नो क्षेत्र अन्तर्गतका उपभोक्ताहरूलाई शेयर अनुसार खटाई कुलो संचालन गर्ने गरिन्छ । दैनिक कुलाको रेखदेखको लागि पालो खटाईन्छ ।

तर पैरो गएमा, पालेको खबर अनुसार मुखियाले फारा वा महाफारा (अध्यक्ष) बोलाई फाराली लगी, कुलो मर्मत गरी, कुलो संचालन गरिने व्यवस्था छ तर ८-१० जनाले पूरा गर्न सक्ने काम भएमा खेताला पठाई काम गराउने व्यवस्था छ ।

मर्मत संभार

नियमित रूपमा प्रत्येक वर्षको जेष्ठ महिनामा र आवश्यक अनुसार समय समयमा मर्मत संभारको काम हुन्छ । कुलोको अवस्था र श्रोतको अवस्था हेरी संभव भए पक्की र संभव नभए ढुंगो माटोद्वारा कुलो मर्मतको काम पनि गर्ने गरिन्छ ।

वैठक

प्रत्येक वर्षको जेष्ठ र कार्तिकमा आम वैठक वस्दछ । उक्त वैठकमा समिति पुनर्गठन, हिसाबको लेखाजोखा, नियम थपघट गर्नुपर्ने भए थपघट, पारिश्रमिकको निर्धारण, कुलो सरसफाईको योजना र मिति तोक्ने काम हुन्छ। यस बाहेक पनि आवश्यकको बेला वैठक वस्ने व्यवस्था छ ।

समितिको पारिश्रमिक

अध्यक्षले काम गरे वापत एक खेताला छुट पाउँछ । सचिव र समितिका सदस्यहरूलाई रु ३० शेयरको लाग्ने खेताला वरावरको छुट दिने व्यवस्था छ ।

२ (क) सिंचाई व्यवस्थापन सम्बन्धी विभिन्न ठाउँबाट स्थलगत भ्रमण र तालिम

२०३९/१०४० सालमा अमेरिकाको कर्नेल विश्वविद्यालयमा अध्ययनरत अनुसन्धानकर्ता अमेरिकनहरू श्री बव योडर तथा श्री एड मार्टिनले यस सिंचाई प्रणालीको अध्ययन गर्नु भएको थियो । यस प्रणालीबाट प्रभावित भई विभिन्न ठाउँबाट कृषकहरू, प्राविधिक जनप्रतिनिधिहरू, सिंचाई योजना तथा कृषि कार्यक्रमको व्यवस्थापकहरूको टोलीलाई स्थलगत भ्रमण तालिम गराउनमा मद्दत पुर्याउनु भएको थियो । सो तालिमबाट एक आपसमा अनुभवको आदान प्रदान गर्ने प्रविधि र पानी विक्री वितरण गर्ने जस्ता नीति नियमहरू विस्तार गर्न मद्दत प-याएको छ ।

यसको लगत्तै २०४३ सालमा अमेरिकाको कर्नेल विश्व विद्यालयमा अध्ययनरत श्री उज्वल प्रधानले पनि यस प्रणालीको अनुसन्धान गर्नु भयो। वहाले पनि यस सिंचाई व्यवस्थापन प्रणालीलाई वहांको अनुसन्धानको उपलब्धिबाट राष्ट्रिय र अन्तर्राष्ट्रियमा परिचय गराउन मद्दत पुर्याइको छ ।

छेलुंड० कुलो सिंचाई व्यवस्थापन प्रणालीको छोटकरी परिचय

तयार गर्ने: श्री रेवन्त बहादुर पाण्डे
उपभोक्ता सदस्य
२०४९।६।१४ काठमाडौं

निर्माण अवस्था

१९८५ सालम बराड०दी खोलावाट बाध बाधी गोरेटोको रूपमा स्थानीयसाधन श्रोत र शीपको प्रयोग विभिन्न भौगोलिक, सामाजिक तथा आर्थिक समस्याहरूको सामना गर्दै ४ वर्ष पछि ७ कि मि लामो कुलाको निर्माण गरी गाउँमा पानी ल्याउन सफल भएकोहो। गाउँका २ जना समाजसेवीहरूको सकृयता र प्रतिनिधित्वमा यस सिंचाई प्रणालीको निर्माण भएको हो।

कुलो निर्माणको लागि त्यति बेला प्राविधिक कै रूपमा कहलिएका आग्री पर्वत जिल्लाको दमखानी गाउँवाट आएका थिए। ती आग्रीहरू समाजवाट पिछडिएका जनजाती समुह विश्वकर्मा जातमा पर्दछन् र उनीहरूलाईरू ५,०००। मा ठेक्का दिई निर्माण भएको हो।

आग्रीहरू बडा पहरा काटन, सुरुड० खोलन र सर्भेक्षण गर्न विशेष दक्ष तथा अनुभवी थिए।

व्यवस्थापन :

र पसिना बगाएर, श्रम संपत्ती खर्च गरेर थोरै पानी गाउँमा आई पुग्यो र उक्त पानीलाई सदुपयोग गर्ने कुरामा गाउँमा बादविवाद र भै भगडा हुन थाल्यो र तत्कालै पानी विभाजन कसरी गर्ने, कुलाको संभार र संचालनको व्यवस्था कसरी मिलाउने भन्ने कुरामा बसी वैठकवाट नेतृत्वको छनौट भयो।

पानी विभाजन कै आधारमा गर्ने, कुलाको संभार र संचालन कसरी गर्ने पानी वितरण कसरी गर्ने भन्ने विषयमा छलफल गरी नियमावली तयार पारियो।

पानी विभाजन

लगानीको आधारमा पानीविभाजन गरियो । कूल लगानी रु ५,००० लाई ५० भागमा विभाजन गरियो । जस मुताबिक रु १०० खर्च गर्ने व्यक्तिले १ शेयर पानी पाउने व्यवस्था भयो। रु १०० बराबर १ शेयर पानी, १ शेयर बराबर १ इन्च पानी दिने व्यवस्था गरियो। १ शेयरपानी बराबर एक जना श्रम कूलाको मर्मत संधार कार्यमा दिनु पर्ने नियम तयार पारी शुरुवात गरियो तत्कालको कुलो संचालन गर्नको लागि एक जना मुखिया र एक जना जिम्वालको नेतृत्वमा कूलाको सफाई, मर्मत संधार, कुलो संचालन, पानी विभाजन र वितरण मिलाउने व्यवस्था गरियो ।

पानी विभाजनको संरचना

काठको सांचो बनाइ हातको वुढी औलालाई एक ईन्च पानी कूलाको पुरा पानीलाई ५० इन्चमा विभाजित गरियो । विस्तारै कूलाको सुधार हुदै गयो र सिंचाई पनि विस्तार भयो। स्वभाविक रूपमा व्यवस्थापनको कार्य क्षेत्र पनि विस्तार भयो । २०३४ सालमा १३ ईन्च (१३००) को पानी विक्रि गरी कूलाको मर्मत कार्यमा खर्च गरियो र सिंचाई क्षेत्र विस्तार गरियो रु ५०००। वाट रु ६,३००। शेयर र ५० ईन्चवाट ६३ ईन्च पानीमा वृद्धि गरियो । त्यसको लगतै पछि २० मुरी भन्ने कूलाको पानी पिउनको लागि लिएकोले एक ईन्च, पानी दिई हाल ६४ ईन्च वा शेयरमा वृद्धि गरिएको छ ।

२०२२ साल तिर मुखिया र जिम्वाललाई सिंचाई व्यवस्था मिलाउनमा सरल होस् भन्ने हेतुले सातवारका ७ जना गरी, मुखिया १, जिम्वाल १ सचिव १ जम्मा १० जनाको कुलो समिति गठन गरियो।

२०३१/२०३२ सालमा श्री ५ को सरकारको मालपाते कार्यालय माफत मालपोत उठाउन शुरु गरे पछि मुखियाली र जिम्वाल प्रथा हट्यो ।

पारिश्रमिक र माफीको व्यवस्था

- (क) मुखियालाई (अध्यक्ष) रु १२५। मासिक र १ खेताला छुट ।
- (ख) जिम्वाललाई रु ३०० शेयर बराबर लाग्ने ३ खेताला छुट ।
- (ग) सचिवलाई काम गरे बापत १/४ पारिश्रमिक खेताला छुट ।

(घ) थरी (सदस्यहरू) ले रु २५। शेयर बराबरको काम गरे बापत प्रति व्यक्तिले पाउने पारिश्रमिक १/४ खेताला छुट पाउने व्यवस्था छ ।

प्रत्येक वर्षको माघ ६ गते आमभेला हुन्छ जसमा सचिव र ७ जना थरीको पुर्नगठनक हुन्छ। प्रत्येक पदाधिकारीहरूको कार्यावधि १ वर्षको हुने प्रावधान भएता पनि परिस्थिती अनकूल पूरा नै समितिको पदाधिकारीहरूलाई कायम राख्ने परिपाटी पनि रहेको छ ।

कुलो संचालन

धान रोपी सकेपछि श्रावण देखि कार्तिक सम्म २ जना पाले रहन्छन् । हिउँदमा मंसीर देखि आषाढ सम्म १ जना पाले रहन्छ । तर पालेको व्यवस्था हुन नसके आफ्नो वारमा पठाउने गरिन्छ।

पाले दिनहुँ नियमित रूपमा गाउँ देखि कुलाको मुहान सम्म जानु पर्दछ र कुलाको रेखदेख गर्ने, सामान्य चुहे भत्केको मर्मत गर्ने र यदि पालेले नसक्ने काम भए मुखियालाई खबर गर्ने र मुखियाले खबर अनुसार १०/१२ जना व्यक्तिले पूरा गर्न सक्ने काम भए खेतालाको रूपमा पठाउने गर्छ । त्यस भन्दा बढी व्यक्तिहरूको आवश्यकता भएमा मुखियाले फारा बोलाउने गर्दछ । फारा अनुसार १ शेयरको एक जनाको दरले खेताला जानु पर्दछ। नगएमा गयल जरिवाना तिर्नु पर्दछ । फाराको लेखा जोखा वर्षमा दुई पटक हुन्छ। वर्षा परीको कार्तिकमा र हिउँद परिको जेष्ठ महिनामा हुन्छ ।

अध्यक्षको काम कर्तव्य र अधिकार

- कुलो पैरा गएमा पालेको खबर अनुसार फारा बोलाउने र उपस्थित फरालीलाई काममा लगाउने ।
- पानीको विभाजन र वितरण व्यवस्था, वर्षामा लगातार रूपमा, र हिउँदमा एकमुष्ट पालो मिलाई व्यवस्था मिलाउने ।
- नियमित वा आकस्मिक बैठक बोलाउने ।
- बैठक संचालन गर्ने ।
- समितिका सदस्यहरूलाई आवश्यक निर्देशन दिने।
- कुलो पानी सम्बन्धि भै फगडाको अन्तिम निर्णय दिने ।

- पानीको विभाजन र वितरण व्यवस्था, वर्षामा लगातार रूपमा, र हिउँदमा एकमुष्ट पालो मिलाई व्यवस्था मिलाउने ।
- नियमित वा आकस्मिक बैठक बोलाउने ।
- बैठक संचालन गर्ने ।
- समितिका सदस्यहरूलाई आवश्यक निर्देशन दिने।
- कुलो पानी सम्बन्धि फेँ फगडाको अन्तिम निर्णय दिने ।

सचिवको काम कर्तव्य र अधिकार

- कुलाको लेखाजोखा राख्ने ।
- बैठकमा लेखा जोखा प्रस्तुत गर्ने ।
- अध्यक्षको निर्देशन अनुसार सूचना पठाउने ।
- कागज पत्र सुरक्षित राख्ने ।
- बैठकमा गरेका निर्णयको माईन्यूट राख्ने ।

समितिको काम कर्तव्य र अधिकार :

- आफ्नो अन्तर्गत रहेका मोहीहरूमा समाचारको आदान प्रदान गराउने ।
- तोकेको समय भित्र गयल जरिवाना असुली गर्ने र सचिवलाई बुझाउने ।
- आफ्नो अन्तर्गतका उपभोक्ताहरूलाई पालो खटाउने ।
- वडा सफा गराउने समय समयमा आफ्नो अन्तर्गतका उपभोक्ताहरू उठाई एकै दिन संपूर्ण कुलो सफा गराउने ।

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(क) छेलुंडो ठूलो सिंचाई व्यवस्थापन सम्बन्धी विभिन्न ठाउँबाट स्थलगत प्रमण तथा तालिम :

२०३९२ ०४० सालमा अमेरिकाको कर्नेल विश्व विद्यालयमा अध्ययनरत अनुसन्धान कार्यकर्ता अमेरिकन श्री वव योडर तथा श्री एड मार्टिनले यस सिंचाई प्रणालीको अध्ययन गर्नु पर्ई उहाँहरू यस प्रणालीबाट प्रभावित भई २०४१ सालमा रसुवा नुवाकोटका कृषक लगायत अन्य कार्यलयका कार्यलय प्रमुखहरू, गाउँ तथा जिल्लाका जनप्रतिनिधिहरू र कृषकहरूको समुहलाई स्थलगत प्रमण तथा तालिमको काम शुरु गराउनु भएको थियो ।

यस पछि लगत्तै स्याङ्जा जिल्ला गल्याङ्गो सिंचाई प्रणाली अन्तर्गतका कृषक समुदायहरूलाई पनि स्थलगत प्रमण गराई यस प्रणाली वीच छलफल गराई अनुभव आदान प्रदान गर्ने घालनी गराउनु पर्ई थप प्रेरणा दिनु भएको थियो ।

यस्तै किसिमको कार्यक्रम अमेरिकाको कर्नेल विश्व विद्यालयमा अध्ययनरत श्री उज्वल प्रधानले यस प्रणालीमा अनुसन्धान कार्य गर्नु भएको थियो । वहाँको अनुसन्धान अवधिमा पनि ०४४।२।१३ मा पर्वत जिल्लाको फलेवासका कृषक र यस प्रणालीका कृषक वीच सिंचाई सम्बन्धी र सामुदायिक पानी मिल सम्बन्धी अनुभवको आदान प्रदान गराई दिनु भएको, साथै राष्ट्रिय अन्तर्राष्ट्रिय क्षेत्रमा यस प्रणालीलाई परिचय गराई दिनुमा ठूलो मद्दत पुर्याइ दिनु भएको छ।

अर्गली राज कुला को संक्षिप्त विवरण

श्री दुर्गादत्त रेग्मी
अर्गली राज कुलो उ स
तिल प्रसाद न्यौपाने
अर्गली राज कुलो, सचिव

१ ऐतिहासिक पृष्ठभूमि

- (क) विक्रम संवत् १६०४ देखि १६३० सम्म पाल्पामा राजा श्रीमणी मुकुन्द सेनको राज्य रहेको थियो र उनी धर्मात्मा राजा थिए भन्ने ऐतिहासिक आधार रहेको छ । त्यसै बेला अर्गली गा वि स वार्ड नं ९ क्षेत्रमा श्रीकृष्ण गण्डकीवाट प्राप्त ऋषिकेश भगवानको मूर्ति स्थापना गरी सो को दैनिक पूजा व्यवस्थाको लागि अर्गलीमा खेत विराई तत्कालीन जन सहयोग साथै राज सहयोग समेतवाट यस कुलो निर्माण भएको हुनाले यसको नाम राज कुलो रहन गएको हो । राज कुलो (जेठी कुलो निर्माण भई ४० मुरी गुठी खेतमा सिंचाई भएपछि कुलो निर्माण र व्यवस्थापनको साथै फाट, चारसय फाट, तीनसय फाट, उपल्लोसय फाट, तल्लोसय फाट, रवीदास फाट, समेत आवाद गरी शुरु देखि नै (माटो मुरीको) आधारमा मुहानले र पुच्छर समेतले एकैपटक समान हिस्सा पानी पाउने व्यवस्था मिलाइएको थियो। यस्तो व्यवस्था मिलाउन काठको सौचो बनाई माटो मुरीलाई औलाको हिसावमा परिणत गरी पानीको बाडफाट मिलाउने गरेको छ । यसवाट पानी वितरणमा कसैले कसैलाई शोषण गर्न नसक्ने र नमिल्ने आधार सिर्जना गरेको छ।

यस कुलाको व्यवस्थापन संबन्धी कार्य गर्नको लागि कुलोको मोहीहरूको आम सभावाट एउटा ५ सदस्यीय कार्यकारिणी समिति गठन गरि कुलाको संपूर्ण क्रम गराउने जिम्मा परंपरा देखि भई आएकोमा हाल उक्त कार्यकारिणी समिति यथावत राखी सो समितिलाई निर्देशन दिने र अन्य व्यवस्थापन प्रकृया मिलाउन सो भन्दा वढी अधिकार प्राप्त सल्लाहकार समितिको गठन भएको छ । जसमा निम्न पदहरूको व्यवस्था गरिएको छ ।

कार्यकारिणी समिति

१	मुखिया	१	पारिश्रमिक पाउने
२	बहिदार	१	पारिश्रमिक पाउने
३	पालो खटाउने	१	पारिश्रमिक पाउने
४	पालो खटाउने	१	(तीनसय चारसय फाँट) पारिश्रमिक पाउने (रविदास फाँट)
५	पानी जाँच गर्ने	१	पारिश्रमिक पाउने
	<hr/> जम्मा :	५	

सल्लाहकार

१	चारसय फाँट	१	फाँट
२	तीनसय फाँट	१	फाँट
३	खुटिलाप फाँट	१	फाँट
४	रविदास फाँट	१	फाँट
५	रविदास फाँट	१	फाँट
	<hr/>	५	

(ब) पानी विभाजन प्रकृया

पिपलपाते भन्ने ठाउँ देखि मुनि बुर्दिसम्म दुई खेतमा बराबरको पानी दिई खुटिलाप फाँटलाई १२० मुरी पानी दिने र मूल साँपोवाट रविदास फाँट तर्फ १००० १००० मुरी पानीको हिसाव राखि हाल पक्क सौचो बनाइएको छ।

- (ग) प्रत्येक वर्ष जेठ १ गते कुलाका मोहीहरुको आमसभा वसी भैरहेको नीति नियमलाई थपघट गर्ने र नयाँ कार्यकारी प्रतिनिधि छान्ने, वार्षिक आय व्ययको लेखाजोखा गर्ने नयाँ निर्माणको पहिचान गरी आन्तरिक श्रोत तथा बाह्य श्रोत बाट कुलो मर्मत गरिने व्यवस्था छ।
- (घ) परंपरा देखिनै पानीको बाँड फाँडको हक प्राप्त गरेका फाँटका खेतको माटो मुरी ३० को १ खेताला खुटिलाम तर्फ र माटो मुरी ४० को १ खेताला तीनसय, चारसय र रविदास तर्फ कायम भएकोले कुलो सुधार सफाई गर्ने कार्य गर्दा जति जनश्रम लागेपनि समानुपाति श्रम लाग्ने हुँदा कुनै मतमतान्तर र विवाद समेत हुँदैन। दैवि दुर्घटनावस कुलो धेरै क्षतिग्रस्त भएको अवस्थामा आम फारा गरी कुलो मर्मत समेत गरिने व्यवस्था छ।
- (ङ०) यसरी कुलो सफाई कार्य समाप्त भएपछि श्रावण १ गते देखि कार्तिक १५ गते सम्म पालो खटाएर व्यक्तिले खटाए अनुसार कुलाका मोहीबाट २ जना पालो जाने व्यवस्था छ। साथै कुलोमा गर्नु पर्ने कार्य पनि जाँच्नेलाई खबर गरी उक्त व्यक्तिलाई बहिर्दार र मुखिया समेतलाई खबर गरी कुलामा गर्नु पर्ने कार्य गराउने व्यवस्था छ।

२ (क) सिंचाई व्यवस्थापन संवन्धी विभिन्न ठाउँबाट स्थलगत भ्रमण तथा तालिम

यस राज कुला (जेठी कुला) लाई राष्ट्रिय अन्तराष्ट्रिय क्षेत्रमा परिचय गराउनेमा यस अर्गलीमा अनुसन्धान गर्ने लक्ष लिई आउनु भएका अमेरिकन विद्वान श्री वव योडर र श्री एड मार्टिन धन्यवादका पात्र हुनु हुन्छ। वहाँहरुले कुलालाई नमूनाको रूपमा परिचय गराई थप सुफाव समेत प्रदान गर्नु भएको छ।

(ख) यो कुलो निरिक्षण गर्नको लागि अन्य धेरै जिल्लाका कृषक टोली निम्न संस्था माफत यहाँको कुलाका व्यवस्थापन तथा पानीको बाँडफाँड प्रक्रियालाई विशेष महत्त्व राखी हेर्न र सिक्ने गरेको छन्।

अर्गलीमा आउनेहरुको ग्रुप १८ जना जतिको थियो। छेलुंग र अर्गलीमा गरी २८ राष्ट्रको टोली आएको थियो।

- २ (ख) सिंचाईको साथसाथै राजकुलो व्यवस्थापन समितिद्वारा अन्य सामाजिक काम गरेको सम्बन्धमा ।

यस राज कुलाको व्यवस्थापन समिति सिंचाई व्यवस्थापनमा मात्र सिमित रहेको छ ।

- ३ संबन्धित सिंचाई व्यवस्थापनका पदाधिकारीहरू बाहिर गई तालिम लिने र दिने गरेको

अन्तर्राष्ट्रिय सिंचाई व्यवस्थापन संस्था र कृषि तथा पशु विज्ञान अध्ययन संस्थाको संयुक्त कार्यक्रमबाट नेपालमा सिंचाई व्यवस्थापन बारे कार्यशाला गोष्ठी २०४३ सालमा चितवन भरतपुरमा यसै सिंचाई प्रणालीका मुखिया दोलख बहादुर राणा र उपभोक्ता बलराम गैरेले भाग लिनु भएको थियो ।

- ४ गैर सरकारी संस्था स्थापना गर्ने संभावना

कुनैपनि संस्थाको कार्य, सरकारी निकाय माफत मात्र चल्ने प्रकृया भएमा त्यसको गती ढिलो हुन्छ । त्यसैले मानिसहरू स्वतन्त्र संस्था वा संगठन खोली विभिन्न कार्यहरू निरन्तर रूपमा गरी प्रशस्त विकास गरेको पाईन्छ । तसर्थ गैर सरकारी संस्था माफत महत्वपूर्ण काम गर्न सकिन्छ । सो हुन सक्ने अधिक संभावना हुन्छ । जस्तै: गाउँमा रहेका एउटा सामान्य किसानको अनुभव एउटा दक्ष प्राविधिकको भन्दा पनि बढी उपयोगी हुन सक्ने हुन्छ । तसर्थ सो अनुभवलाई संस्थागत रूपमा कार्यान्वयन गरी सकारात्मक रूप दिनको लागि माध्यमको रूपमा सरकारी संस्था भन्दा गैर सरकारी संस्थाहरूको बढी आवश्यकता हुन्छ । जसबाट ठूला ठूला रचनात्मक कार्यहरू गैर सरकारी संस्था माफत हुन सक्छन् । उदाहरणको लागि अर्गली राज कुलाकै निर्माणको प्रकृत्यामा पहारामा घैडुवा काट्ने काम अन्य विभिन्न जातीका र समाजबाट पिछडिएका जनजातीका विश्वकर्माबाट संपन्न भएका छन् जुन कार्य विभिन्न प्राविधिक फौट अनुकरणीय छ ।

- ५ किसानको अनुभव र प्रविधिको विस्तार

यस राजकुलो सिंचाई प्रणालीको सयौ वर्षको लामो अनुभवलाई संगाली उचित प्रयोग र प्रचार प्रसारको व्यवस्था र आफना भएको अनुभवलाई बाहिर विस्तार गर्ने खालको व्यवस्था हुन सकेमा निश्चय नै हाम्रो व्यवहारिक अप्ठ्यास र अनुभवलाई देशको विभिन्न मार्गमा पु-याई सिंचाई प्रणालीमा विस्तार गर्न सकिने कुरामा विश्वास राख्दछौं ।

५ किसानको अनुभव र प्रविधिको विस्तार

यस राजकुलो सिंचाई प्रणालीको सयौं वर्षको लामो अनुभवलाई संगाली उचित प्रयोग र प्रचार प्रसारको व्यवस्था र आफना भएको अनुभवलाई बाहिर विस्तार गर्ने खालको व्यवस्था हुन सकेमा निश्चय नै हाम्रो व्यवहारिक अभ्यास र अनुभवलाई देशको विभिन्न मार्गमा पु-याई सिंचाई प्रणालीमा विस्तार गर्न सकिने कुरामा विश्वास राख्दछौं।

किनकी केही वर्ष यता विभिन्न जिल्लाका सिंचाई प्रणालीबाट किसान, प्राविधिक, व्यवस्थापक र विभिन्न तहका प्रबन्धकहरूको समूह यस प्रणालीको व्यवस्थापन पक्षको अनुभव र प्रविधिलाई चाखपूर्ण तरिकबाट हेर्ने र सिक्ने गरी रहेका छन्।

६ गैरसरकारी संस्थाको विकासको लागि उचित नीति नियमावली तयार पार्ने सुझाव

गैर सरकारी संस्था स्थापना गर्दा सरकार पक्षबाट लचिलो नीतिको आवश्यकता हुन्छ। त्यसको विधान र कार्य विधि स्वतन्त्र रूपमा हुनु पर्दछ। आवश्यकता अनुसार सरकारले निर्माण कार्यमा प्राविधिक सहयोग साथै आर्थिक सहयोगको व्यवस्था गर्नु पर्दछ। सामान्य रूपमा त्यस संस्थाले गरेको कार्यको रूपरेखा हेरी सल्लाह र सुझाव दिनु पर्दछ। जस्वाट गैर सरकारी संस्थाहरू मौलाउन सक्दछन् र उनीहरूबाट देश विकासमा ठूलो योगदान भइ सरकारले बोक्ने बोफै संस्थाले बोक्न सक्छन् र देश विकासको गति निरन्तर अघि बढ्न सक्छ।

तसर्थ गैर सरकारी संस्था स्थापनाको आवश्यकता देखिन्छ। यस्ता खालका स्थानीय किसानहरूलाई गैर सरकारी संस्था खोल्न वा स्थापना गर्न प्रोत्साहित गर्न आवश्यक छ। त्यसको लागि उचित नीति नियम समेत तयार पार्न जरुरी देखिन्छ।

अगती राज कुलाका अध्ययन प्रमणसा आउन टोसीहरेको तथ्यांक

मिति	विज्ञा वा रेकर्को नाम	आयोजनाको नाम	कर्मीकारी	संख्या	सूचक	संख्या	उद्देश्य
२०४४/१३		बल तथा बकि आयोग आई आई एम आई	सिर्वाइ विवेकन समाज बाहरी इन्जिनियरि कृषि विम फिस्ट सिसिस्टेन्ट आई आई एम आई इन्ड अफिस नेपाल फिस्ट अपरेसन सिर्वाइ विवेकन इन्जिनियरिंग कृषि विम	१	समिति	११	सांख्यिक मिल्कोषापना र हवालको संगठन रूपमा नहरको हवालको परिचालन गर्ने तरि उपयोग गर्ने मिति नियम तर्जुमा र लागू गर्ने तरि
२०४४/१३	सन्धुपाचोक	बल तथा बकि आयोग आई आई एम आई बाहरी इन्जिनियरिंग सी इन कन्सल्टिंग	कृषिविम फिस्ट अिसिस्टेन्ट	१८	समिति	१४	कृषि पनिमसप्या आई एम अफिस रूपमा समाधान गर्ने तरि
२०४४/१०/८	सन्धुपाचोक	बाहरी इन्जिनियरिंग सी इन कन्सल्टिंग	कृषिविम फिस्ट अिसिस्टेन्ट	७	समिति	१७	समितिको गठन, काम अर्जव्य र अधिकार विभाजन गर्ने तरि
२०४४/१०/८	सन्धुपाचोक	बाहरी इन्जिनियरिंग सी इन कन्सल्टिंग	कृषि विम फिस्ट अिसिस्टेन्ट सुपरवाइजर	१३	समिति	१९	समितिको गठन, काम अर्जव्य र अधिकार विभाजन गर्ने तरि
२०४९	सन्धुपाचोक	बल तथा बकि आयोग एकबन रिर्वाइ ग्रावेक्ट	सिर्वाइको इन्जिनियरिंग सिर्वाइ इन्जिनियरिंग कृषि विम फिस्ट अिसिस्टेन्ट	४	समिति	१०	समितिको गठन, काम अर्जव्य र अधिकार विभाजन गर्ने तरि

अंगीठी राज कुशाळें अद्ययन प्रमणभा आजनेंटीसीहरके तटरयांक

मिति	विडना नं. वेडकी नाम	आयनवळको आय	करबादी	सक्या	व्हाक	संख्या	अन्ना	उद्देश
२०४४/१५		अन तथा बकि आयोग आई आई एम आई	सिबाई सिबायरा मयल बादी इन्जिनियरि कृषि विम फिफ्ट असिस्टेन्ट आई आई एम आई हेड अफिस मयास फिफ्ट अपरेशन सिबाई विशेषक इन्जिनियरिंग कृषि विम	१	संपत्ति	१	१४	आयुषिक पिलकोव्यापना र लयावळको संपत्ति रूपमा अहरको संकलनकोवळी परिचयन गर्ने तरि रूपयोग गर्ने नेति नियम तर्जुना र लागू गर्ने तरिअक
२०४४/१६		अन तथा बकि आयोग आई आई एम आई हाइड्रो इन्जिनियरिंग की एन कन्सल्टिंग	सिबाई सिबायरा कृषि विम इन्जिनियरिंग फिफ्ट असिस्टेन्ट	१८	संपत्ति	१८	१४	कुनै पनिपयसमा आई प्यार् संपत्ति रूपमा संपादान गर्ने तरिअक संपत्तिको गठन, काम करिव्य र अधिकार विभाजन गर्ने तरिअक र लागू गर्ने
२०४४/१७		अन तथा बकि आयोग आई आई एम आई	सिबाई इन्जिनियरिंग डेन फारमर	१२	संपत्ति	१२	१३	संपत्तिको गठन, काम करिव्य र अधिकार विभाजन गर्ने तरिअक र लागू गर्ने
२०४४/१८		अन तथा बकि आयोग आई आई एम आई	इन्जिनियरिंग इरोनोमिस्ट ट्रेनिडो केअरिन्टर	३	संपत्ति	३	१३	संपत्तिको गठन, काम करिव्य र अधिकार विभाजन गर्ने तरिअक र लागू गर्ने
०४७		अन तथा बकि आयोग आई आई एम आई	इन्जिनियरिंग इरोनोमिस्ट ट्रेनिडो केअरिन्टर	४	संपत्ति	४	१४	संपत्तिको गठन, काम करिव्य र अधिकार विभाजन गर्ने तरिअक र लागू गर्ने
०४८		अन तथा बकि आयोग आई आई एम आई	इन्जिनियरिंग इरोनोमिस्ट ट्रेनिडो कृषि विम, फिफ्ट असिस्टेन्ट	४	संपत्ति	४	१४	संपत्तिको गठन, काम करिव्य र अधिकार विभाजन गर्ने तरिअक र लागू गर्ने
०४७		सिबाई सेक्टर आयोजना	इन्जिनियरिंग	३	संपत्ति संपत्ति उपयोजना	३	१४	संपत्तिको गठन, काम करिव्य र अधिकार विभाजन गर्ने तरिअक र लागू गर्ने

नेट, यसपन्थ्य अगाडि ०४३।८।१९ या १४ राष्ट्रबाट आयुक्त टोपीहरके रेकड नपएले ।

डिप्टिडो र अंगीपना र ग्रुप नद आयुक्त भियो ।
अंगीपना आजनेंटीहरके ग्रुप १८ अना जतिको भियो ।

छत्तिस मौजा सिंचाई व्यवस्थापन प्रणालीको छोटकरी परिचय

तयार गर्ने : श्री एम लाल भण्डारी
सभापति

१ परिचय:

रूपन्देही जिल्लाको उत्तर पूर्व वुटवल नगरपालिका देखि दक्षिण पूर्वमा पर्ने शंकर नगर, आनन्दवन, करैया र मकहर गा वि स अन्तर्गतका ५४ मौजाहरूमा करिव १० हजार (दशहजार) विगाह जमीनको निम्ति सिंचाई सुविधा उपलब्ध गराई आएको छ। हाल आएर ३६ मौजाबाट ५४ मौजामा सिंचाई सुविधाको विस्तार भएको छ। किसानहरूको आफ्नै श्रम, श्रोतबाट तिनाउँ नदीको कन्धा ठुंगाबाट बाँध बाँधी ल्याएकोमा २०२२ र ०२३ सालमा भारत सरकारले त्यसै नदीबाट नहरको निर्माण गर्ने भएपछि १६ र ३६ मौजाको संयुक्त बाँध बनाई पानीको हिस्सा बमोजिम श्रम दिने व्यवस्था निर्धारित गरिएको हो।

सरदार मणि आदि (आचार्य दिक्षित) ले उहिलेका शाशकबाट १,६०८ विगाह जमीन भूमिदान (दातव्य) प्राप्त गरेपछि २०११ साल देखि उक्त जमीनको आवादी गर्न शुरु गरे।

यस सिंचाई प्रणाली अन्तर्गतका कृषकहरूको निम्ति उचित पानीको उपभोग, हक हितको संरक्षण, न्यायोचित पानी वितरण प्रणाली अपनाई वाली उत्पादन क्षमतामा वृद्धि गर्ने, उन्नत खेती गर्ने आदि उद्देश्य राखी १३ सदस्यीय एक कार्यकारिणी समितिको गठन गरिएको छ। उक्त समितिमा सभापति, उपसभापति, सचिव ९ जना क्षेत्रीय सदस्यहरू र १ जना मनोनित सदस्य रहन्छन्। कार्यकारिणी समिति बाहेक २ जना मेठ मुख्तियार र २ जना चौकिदार कर्मचारीको रूपमा रहन्छन्। बाँकी ५४ मौजामा एक एक जना मुख्तियार र चौकिदार हुन्छन्।

२ कार्यकारिणी समितिका पदाधिकारीहरूले काम गरे वापत लिने पारिश्रमिक र भत्ताको सुविधा

सभापतिले वर्षको ४० जना खेतालाले पाउने रकम वरावर पारिश्रमिक पाउँछ ।

उप सभापतिले २० जना खेताला वरावरको रकम पाउँछ ।

- सदस्य सचिवलाई ३५ जना खेताला वरावरको रकम दिइन्छ

- उपरोक्त माथी उल्लेख भएको छुट वाहेक ४ विगाह (आफ्नो जमीन) सम्मलाई कुलाही मिनाहा दिने व्यवस्था छ

- क्षेत्रीय सदस्यलाई पनि ४ विगाह सम्मको नीजि खेतलाई कुलाही मिनाहा हुन्छ ।

- चौकिकदार पेठ मुख्तियारहरूले पाउने तलव साधारण सभाले निर्णय गरे अनुसार दिइन्छ । हाल मुख्तियारले रु १,०००। र चौकिकदारले रु ८५०। प्रति महिना तलव पाउँछन् ।

३ आम सभा

- छत्तिस मौजा सिंचाई व्यवस्थापन प्रणालीमा सवैभन्दा माथिल्लो निक्कय आम सभा हुन्छ

- आस सभाको गण पुरक संख्या चौवल कुलाराको ५१ प्रतिशत हुनु पर्छ

- २५ विगाह खेत हुने मौजा वा व्यक्तिले एक खेताला दैनिक दिनु पर्छ सोभन्दा थोरै जमीन हुने व्यक्तिले यसको अनुपातमा श्रम जुटाउने व्यवस्था छ ।

५४ मौजावाट छनौट भई आएका चौवल कुलारा प्रतिनिधिको समुहलाई आमसभा भनिन्छ ।

मौजाहरुवाट आएका प्रतिनिधिको नाम संकलन कार्य तत्कालीन कार्य कारिणी समितिले गर्ने व्यवस्था छ ।

४ साधारण सभा :

५४ मौजावाट छनौट भई वा निर्वाचित भई आएका मुख्तियारहरु वा नीजले लिखित रूपमा अख्तियार दिई पठाएका व्यक्ति र कार्यकारिणी समितिका संपूर्ण सदस्यहरुको भेलालाई साधारण सभा भनिन्छ ।

साधारण सभाले माघको पहिलो सातामै क्रममा ५१ प्रतिशत को बहुमतले उपपोकताहरु मध्येवाट कार्य क्षमता भएका उपयुक्त व्यक्तिहरुको पाँच सदस्यीय निर्वाचन उप समिति गठन गर्दछ ।

यस निर्वाचन उप समितिमा साधारण सभा वा कार्यकारीणी समितिका पदाधिकारीहरु वस्न पाउने छैनन् ।

संकटको अवस्था बाहेक आमसभा सामान्यतया वर्षमा १ पटक मात्र हुन्छ ।

कार्यकारिणी समिति र साधारण सभाका सदस्यहरुले सभापति, उप सभापति र सदस्य सचिव पदको निमित्त आफ्नो मत दिन पाउने व्यवस्था छ ।

विधान बमोजिम उपपोकताहरु मध्येवाट उम्मेदवार हुन पाउने छन्।

क्षेत्र विभाजन

३६ कुला पानीको संपूर्ण क्षेत्रलाई ९ क्षेत्रमा विभाजन गरिएको छ।

तोकिएको ९ क्षेत्रका क्षेत्रीय सदस्यको उम्मेदवारीमा सम्बन्धित क्षेत्रवाट छानिएर आएका मौजाका मुख्तियारहरु मात्र हुन सक्ने छन्।

हरेक क्षेत्रका क्षेत्रीय सदस्यलाई निर्वाचनको लागि संबन्धित क्षेत्रका आम सभामा प्रतिनिधित्व गर्ने मतदाताहरूले मात्र मत दिन पाउने व्यवस्था छ।

५ आम सभा

३६ कुलो समितिले आम सभा भन्दा एक महिना पहिले नै मौजाहरूमा आम सभाको लागि मिति निश्चित गरी नियमपूर्वक उक्त मौजाहरूका मुख्तियारलाई कार्यकारिणी समितिले सूचना दिईन्छ।

सूचना प्राप्त भएको मितिले ५ दिन भित्रमा मौजाका संपूर्ण उपभोक्ताहरूलाई मुख्तियारले सूचना गर्नु पर्ने व्यवस्था छ।

मुख्तियार र प्रतिनिधिको निर्वाचन गरी सो को प्रमाण सहित ३६ कुलो पानी समितिमा माघको दोश्रो साता भित्रमा गाउँ मुख्तियार पठाउनु पर्ने छ।

६ सभापतिको काम कर्तव्य र अधिकार

आम सभा साधारण सभा र कार्यकारिणीको बैठक बोलाउन लगाउने।

३६ मौजा अन्तर्गतको कुलाहरू, कन्या लुंगामा परी आउने कुला पानीको फे फगडा वा अनियमितता सम्बन्धमा मौजा मुख्तियारहरू र क्षेत्रीय सदस्यहरू र मेठ मुख्तियारको माध्यमबाट समस्या समाधान गर्न लगाउने।

समस्या समाधान हुन नसकेको खण्डमा सभापतिले नै न्यायोचित समाधान गर्ने।

सभापतिको अविश्वासको प्रस्ताव, लेखापरिक्षण निर्वाचन सम्बन्धमा बाहेक अन्य सभा र बैठकको अध्यक्षता गर्ने।

कार्यकारिणी समितिको बैठक बस्दा विभिन्न विषयमा उठ्ने छलफलको निर्णय पक्ष विपक्ष मतमा समान भएमा निर्णायक मत दिने।

- तपाहा (नहर) तथा कुलोहरूको सरसफाई कार्य र पानी वितरणमा कर्मचारी तथा प्रतिनिधिबाट सम सामयिक तथा तदारुकताका साथ न्यायोचित कार्य भए नभएको रेखदेख गर्ने र गर्न लगाउने ।
 - सचिव, कोषाध्यक्ष, मेठ मुख्तियार र चौकिदारहरूले आफ्नो आफ्नो काम कर्तव्य पुरा गरे नगरेको रेखदेख गर्ने र यदि अनियमितता भएको देखिएमा सुधार गर्नको लागि सुफाव र सल्लाहले मात्र पुग्ने भएमा समस्यालाई कार्यकारिणी बैठकमा राखी त्यसको निर्णय अनुसार कारवाही गर्ने ।
 - धान, गहुँ र मकैवालीको लागि सिंचाई आवश्यक हुने विशेष महिनाहरूमा नहर संचालन गर्ने सिलसिलामा आवश्यकता अनुसार कार्यालय खोल्ने, र पैपरी आउने समस्या समाधान गर्ने ।
- 4 ७ उप सभापतिको कर्तव्य र अधिकार
- सभापति विरुद्धको अविश्वास प्रस्ताव र नीजलाई कारवाही गर्नको लागि बसेको बैठक वा सभामा सभापतित्व गर्ने ।
- ८ (क) सिंचाई व्यवस्थापन सम्बन्धी विभिन्न ठाउँबाट स्थलगत भ्रमण तथा तालिम :
- २०४७ सालमा महाकाली सिंचाई योजनाका नर्सरी सभितिका अध्यक्षहरू र संबन्धित कर्मचारीहरू, परामर्श दातृ इन्जिनियर, कृषि अधिकृत, कोर्डिनेटर, जे टी, जे टी ए र ए ओ गरी ३२ जनाको समूह भ्रमण आएका थिए ।
 - २०४८ सालमा सिंचाई विभाग र आई आई एम आई को संयुक्त आयोजनामा बाणगंगा सिंचाई योजनाका १२ जना कृषक समूह र कर्मचारीहरू पनि तालिम र स्थलगत भ्रमणमा आउनु भएको थियो ।
 - २०४९ सालमा आपटेक कन्सल्टवाट आयोजित भ्रमणमा बंगलादेशबाट आएको इन्जिनियरहरूको टोली ।
 - २०४९ सालमा काठमाडौंवाट इन्जिनियरहरूको टोली ।
 - २०४९ सालमा अमेरिकन इन्जिनियर टोली ।

२०४८ सालमा हाडेटार सिंचाई प्रणालीबाट कृषक तथा प्राविधिकहरूको टोली।

(ख) सिंचाईको साथसाथै समितिको माध्यमबाट भएको अन्य कामको जानकारी

२०४४ सालमा श्री ५ महाराजाधिराज सरकारको क्षेत्रीय प्रमणको बेलामा प्राप्त रकम रु ४ लाखबाट (२०४८ सालमा) बाध निर्माणमा खर्च भएको।

२०४६/०४८ मा आफ्नै श्रोतबाट अन्दाजी २ लाखको लागतमा २ कोठा र एक बैठक हल भएको छनिस कुला समितिको अफिस भवन निर्माण गरिएको छ।

९ संबन्धित सिंचाई प्रणालीका पदाधिकारीहरू बाहिर गई सिंचाई व्यवस्थापनामा तालिम लिने र दिने गरेको

२०४३ सालमा आई आई एम आई तथा कृषि तथा पशु विज्ञान अध्ययन संस्थानको संयुक्त तत्वावधानमा पितवनमा भएको नेपालमा सिंचाई व्यवस्थापन कार्यशाला गोष्ठी मा समितिका सभापति र सचिवले भाग लिनु भएको थियो।

२०४८ को आश्विन महिना भएको गैर सरकारी संस्थाहरूको केन्द्रिय भेलामा पनि समितिका सभापति र सचिवले भाग लिनु भएको थियो।

१० गैर सरकारी संस्था बनाउने संभावना

बर्षौं देखि विभिन्न समस्याहरूलाई समाधान गर्दै सिंचाई व्यवस्थापनमा परिपक्वता आई सकेको छ। तर यस अनुभव र अभ्यासलाई प्रभावशाली ढंगबाट देशको अन्य जिल्लाका (श्री ५ को सरकारबाट संचालित सिंचाई प्रणालीहरू र किसानबाट संचालित) एवं आयोजनाहरूको सिंचाई प्रणालीहरूमा विस्तार गर्नको लागि एउटा संस्थाको रूपमा विकास भएमात्र संभव देखिन्छ।

- आजसम्म विभिन्न सरकारी, गैर सरकारी संघ संस्था र सिंचाई कार्यक्रममा संलग्न भएका प्राविधिक, प्रशासन, व्यवस्थापन र अनुसन्धान गर्ने व्यक्तिहरूलाई यस समितिका पदाधिकारीहरू माफत धेरै जानकारीहरू तालिमको माध्यमबाट भई सकेको हुनाले हाम्रो समितिले संस्थागत विकास गर्न सक्ने संभावना प्रशस्त रहेको छ।

११ किसानहरूको अनुभव र प्रविधिको विस्तार

- पानी विभाजन र वितरण, मर्मत संपार र संचालनमा स्थानीय श्रोतको परिचालन व्यवस्थामा समस्या र तिनको समाधान, व्यावहारिक रूपमा लागू हुन सक्ने स्थानीय श्रोत र साधनबाट तयार हुने संरचनाको बारेमा सल्लाह दिन सकिने।

- धेरै लगानीबाट भरपर्दो बलियो संरचनाको निर्माण गर्न सक्ने जस्ता अनुभव र अभ्यास बारे जानकारी गराउन सकिने।

- लेखा जोखा र अनुशासित रूपमा पानीको उपयोग गर्ने नीति निर्धारण प्रकृया र लागू गर्ने तरिकको अनुभवको सल्लाह दिन सकिने।

१२ गैर सरकारी संस्थाको विकासको लागि उचित नीति नियमावली तयार पार्न सुझाव

- खुला र उद्धार बालको नीतिको निर्धारण हुनु आवश्यक छ। संस्था दर्ताको लागि सरल नीति प्रकृया र जिल्ला प्रशासनबाट हुने दुख र फन्फटबाट मुक्त हुने किसिमको विधान हुन आवश्यक देखिन्छ।

- गैर सरकारी संस्था संचालन गर्नको लागि आवश्यक प्राविधिक सहयोग र आर्थिक प्रोत्साहन स्वरूप ऋण उपलब्ध हुने व्यवस्था हुन जरूरी छ।

- संस्थालाई संचालनको लागि आवश्यक पर्ने साधन श्रोतको उपलब्ध भएमा गैर सरकारी संस्था विकास गरी आफ्नो छुट्टामा उभिन सक्ने छन्। लेखाजोखा राख्न आवश्यक तालिमका व्यवस्था हुनुपर्ने देखिन्छ।

पिठुवा सिंचाई व्यवस्थापन प्रणालीको छोटकरी परिचय

तयार गर्ने : जयेन्द्र कुमार श्रेष्ठ, अध्यक्ष
कृष्णबहादुर कुँवर, सदस्य
तिलक प्रसाद धमला, सदस्य
कृष्ण उप्रेती, सदस्य

श्री ५ को सरकारको लघु सिंचाई योजना अन्तर्गत २०२५ सालमा कायर खोलाको मुहानबाट नहरको बाँध निर्माण भएको हो । २०२९ सालमा पिठुवाका जन प्रतिनिधिहरूको अनुरोधमा श्री ५ को सरकारबाट केही शाखाहरूको निर्माण गरियो। सो नहरले ३० देखि ३५ विघा जमीनमा सिंचाई सुविधा पुर्याएको थियो । २०३९ सालमा केही शाखाहरूको विस्तार भयो र करिब १५० विघा जति जमीनमा सिंचाई भयो । २०३९ सालमा १७ शाखाहरूको निर्माण पूरा भयो ।

२०३९ साल सम्म जिस्का लाठी उस्का पैस भन्ने सिद्धान्तबाट नहर संचालित थियो । सोही सालमा यस नहरको शाखा नं ८ मा सुधार गर्नको लागि एउटा शाखा व्यवस्थापन समितिको गठन भयो। तत्पश्चात क्रमशः सबै शाखाहरूमा शाखा समिति गठन गरियो । शाखा समितहरूको समन्वय, मूल नहरको व्यवस्था, भर्षत संपारको लागि सरकारी सहयोग जुटाउने उदेश्यले स्थानीय गाउँ विकास समितिको अध्यक्ष पदेन अध्यक्ष रहने गरी आम मोहिहरूबाट उपाध्यक्ष र सचिव छनौट गरी मूल सुव्यवस्था समिति गठन गरिएको छ । सबै शाखाका अध्यक्ष मूल समितिको पदेन सदस्य रहन्छन्। वृद्धिजिवी वर्गबाट ३ जना मनोनित सदस्य राख्ने प्रावधान छ । समितिका पदाधिकारीहरूको कार्य अवधि २ वर्षको हुन्छ ।

मूल समिति संगठन तालिका मूल समिति

अध्यक्ष	१
उपाध्यक्ष	१
सचिव	१
सदस्य	१७
मनोनित सदस्य	३

जम्मा : २३

शाखा समितिहरू

शाखा समितिको काम कर्तव्य

अन्तर्गतका किसानहरूलाई समान रूपमा पानी वितरण गर्ने ।

मर्मत सभार गर्ने र गराउने, अनुचित व्यवहार गर्ने व्यक्तिहरूलाई दण्ड जरिवाना गर्ने।

शाखाका समस्याहरू मूल समितिमा प्रस्तुत गर्ने ।

मूल समितिको निर्देशिकाको पालना गर्ने ।

धान रोपी सकेपछि तालिका बनाई पालो अनुसार पानी वितरण गर्ने ।

आफ्नो शाखा अन्तर्गतको सिंचाई हुने क्षेत्रफलको आंकडा संकलन गरी मूल समितिमा पानी माग गर्नको लागि दर्ता गराउने ।

मूल समितिको काम कर्तव्य

- शाखा हरू बीच समन्वय कायम गर्ने ।
- मूल नहरको मर्मत सुधारको लागि स्थानीय र बाह्य श्रोत जुटाउने ।
आर्थिक श्रोत जुटाउन र जन श्रमदान परिचालन गराउने ।
- श्री ५ को सरकार वा गैर सरकारी संघ संस्थाबाट सहयोग जुटाउने ।
- नहरमा उपलब्ध पानीको अनुपातमा पानी विभाजन र वितरणको व्यवस्था मिलाउने।
मूल नहरमा तोडफोड वा हानी नोकशानी भएको खण्डमा सो सम्बन्धी छानवीन गरी समस्याको समाधान गर्ने ।
- शाखाहरूबाट हुन नसक्ने भै फगडाहरूको समस्याको समाधान गर्ने ।

- विधान अनुसारको काम कर्तव्य र कारवाही गर्ने ।
- सिंचाई व्यवस्थापनमा विभिन्न ठाउँबाट स्थलगत भ्रमण तथा तालिममा सहभागी

सिंचाई सम्बन्धी विभिन्न सरकारी, गैर सरकारी संघ संस्था र कृषकहरु भ्रमण आउने गर्दछन्। भ्रमणमा आउनुको मुख्य तात्पर्य व्यवस्थापनद्वारा संचालित पानी वितरणमा कुनै किसिमको शोषण नरहेको र सिंचाईलाई आफ्नै संपत्तीको रूपमा प्रयोग गर्ने गरेका छन् थोरै पानीबाट पनि आलोपालो गरी सिंचाईको राम्रो प्रबन्ध मिलाईएको छ । शाखा विस्तार गर्दा आफुले अर्काको जग्गाबाट पानी ल्याइन्छ भने आफुले पनि अरु किसानहरुलाई शाखा खोल्न बाटो दिनु पर्दछ भन्ने सिद्धान्तको आधारमा संपूर्ण क्षेत्रमा शाखा विस्तार हुन सकेको हो ।

पानी चोरीलाई संपत्ती चोरी भन्दा ठूलो रूपमा हेरिन्छ । यिनै कारणबाट यस्को व्यवस्थापन पक्षको आकर्षण भै आगन्तुकहरुको यस ठाउँमा भ्रमण शुरु भएको हुन सक्दछ।

हालसम्म आएको विभिन्न राष्ट्रिय, अन्तर्राष्ट्रिय समूहहरुको भ्रमण यस प्रकार छ।

- (क) अन्तर्राष्ट्रिय सिंचाई व्यवस्थापन संस्थाको प्रतिनिधि डा. प्रचण्ड प्रधानज्यूको प्रतिनिधित्वमा आएको भ्रमण टोली ।
- (ख) अन्तर्राष्ट्रिय सिंचाई व्यवस्थापन संस्थाको प्रतिनिधी डा. प्रचण्ड प्रधानज्यूको प्रतिनिधित्वमा आएको भूटानका सिंचाई तथा कृषि विभाग कार्यालयका प्रतिनिधि टोली ।
- (ग) डा. प्रचण्ड प्रधानज्यूको प्रतिनिधित्वमा भ्रमणमा आएको श्रीलंकाको टोली।
- (घ) नेदरल्याण्डको विश्व विद्यालयबाट यहाँ धेसीसको लागि अनुसन्धान कार्य गर्न आउनु भएका नेपाली तथा विदेशी विचारथी ।
- (ङ०) सिरसिया दुधौरा सिंचाई प्रणालीका किसानहरुको २ पटक भ्रमण तथा तालिम।
- (च) हाडेटार सिंचाई योजनाका किसानहरु ।

- (छ) रुपन्देही छत्तिस मौजाका कृषक प्रतिनिधिहरू ।
- (ज) पाल्पा अर्गलीका कृषक प्रतिनिधिहरू ।
- (फ) अन्तर्राष्ट्रिय सिंचाई व्यवस्थापन संस्थाको र सिंचाई विभागको संयुक्त सहयोगमा कपिलवस्तु बाणगंगा प्रणालीका कृषक प्रतिनिधिहरूबाट भ्रमण ।
- (ग) एसोसियशन अर्गनाइजर टोलीहरू ।
- (ट) आपटेक कन्सल्टद्वारा आयोजित भ्रमण कार्यक्रम अन्तर्गत बंगलादेशका सिंचाई इन्जिनियरहरू ।
- (ठ) ओभरसियर टोलीहरू ।
- (ड) जिल्ला सिंचाई योजनाका प्रमुख इन्जिनियर टोलीहरू ।
- (ढ) नेदरल्याण्डको विश्व विद्यालयमा पढ्ने विद्यार्थी श्री त्रिलोक्य मान सिंह प्रधानको सिंचाई व्यवस्थापन प्रणालीमा अनुसन्धान भै रहेको ।

माथी उल्लेखित टोलीहरूले व्यवस्थापन पक्षमा छलफल र प्रणाली निरिक्षण गर्नु भएको थियो। यसको अवधि १ देखि ७ दिन सम्म रहेको थियो । यस बाहेक अन्तर्राष्ट्रिय सहयोग संस्थाहरूका प्रतिनिधिहरूको पटक पटक निरिक्षण भएको छ । यस किसिमको भ्रमण तथा तालिमको शुरुवात २०३७ साल भन्दा पहिँ भएको थियो।

३ सम्बन्धित सिंचाई व्यवस्थापनका पदाधिकारीहरू बाहिर गएर तालिम दिने र लिन गरेको

- (क) अन्तर्राष्ट्रिय सिंचाई व्यवस्थापन संस्था र कृषि तथा पशु विज्ञान अध्ययन संस्थानको संयुक्त कार्यक्रमबाट नेपालमा सिंचाई व्यवस्थापन वारे कार्यशाला गोष्ठी २०४३ साल चितवन भरतपुरमा मूल समितिका अध्यक्षले भाग लिनु भएको थियो ।
- (ख) सिंचाई विभाग तथा अन्तर्राष्ट्रिय सिंचाई व्यवस्थापन अध्ययन संस्थाको संयुक्त तत्वावधानमा सिंचाई व्यवस्थापनमा सरकारी संस्थाको सहभागिता र व्यवस्थापन विषयक राष्ट्रिय कार्यशाला गोष्ठीमा (वैशाख १७- १८, २०४९ काठमाडौं) मूल समितिका अध्यक्षले भाग लिनु भएको।

४ गैर सरकारी संस्था स्थापना गर्ने संभावना

- (क) २०३१ देखि २०४९ सालसम्म १८ वर्ष यस संस्थाले नहर संचालन गर्दै आएकोले सिंचाई प्रणाली प्रति जिम्मेवारी बढ्नु स्वभाविक हो। पानी वितरण प्रणालीमा निष्पक्ष तथा समय अनुकूल काम गरिने हुंदा यो व्यवस्थापन प्रभावशाली भएको हो। किसानहरूमा अनुशासन, संगठीत रूपमा कार्य संचालन गर्ने किसिमको कार्य क्षमताको विकास भएको छ ।
- (ख) तसर्थ हाम्रो सिंचाई प्रणालीलाई पाइलोट प्रोजेक्टको रूपमा गैर सरकारी संस्था स्थापना गर्न सक्ने संभावना रहेको कुरामा विश्वस्त हुन सकिन्छ । गैर सरकारी संस्थाको लक्ष्य अनुरूप संस्थागत विकास गर्नको लागि समितिका सदस्यहरूलाई उचित तालिम र सहयोग उपलब्ध भएको खण्डमा नमूनाको रूपमा विकास हुन सक्ने कुरामा आशावादी छौं ।

५ किसानको अनुभव र प्रविधीको विस्तार

यस नहर संचालनको अनुभवलाई संगाली प्रसार गरी समुचित लाभ उठाउन यस संस्थाका सदस्यहरूलाई चाहिने तालिमको व्यवस्था भई दिएमा यस संस्थाबाट सिंचाई व्यवस्थापन तथा वाली प्रणालीमा सुधार ल्याउनको साथै अन्यत्रका किसानहरूको समस्याको समाधानमा समेत ठूलो टेवा पुग्न सक्ने देखिन्छ । हाम्रो यस संस्थाको नवौं व्यवहारिक अभ्यास र अनुभवको विकास गर्न अन्तर्राष्ट्रिय सिंचाई व्यवस्थापन संस्था (आई आई एम आई) ले एक केन्द्र स्थापना गरि दिएको खण्डमा हाम्रो सिंचाई व्यवस्थापन समितिको संस्थागत विकास हुने थियो ।

६ गैर सरकारी संस्थाको विकासको लागि उचित नीति नियमावली तयार पार्ने सुझाव

गैर सरकारी संस्था संचालनका लागि ऐन तथा नीति नियमावली बनाउंदा ध्यान दिनु पर्ने कुराहरु :

- संस्थाहरुको पारस्परिक सहयोगद्वारा स्वतन्त्र रूपवाट आफ्नो आफ्नो स्थानीय परिस्थिती अनुसार जनताको जनईन्छा अनुकूल संस्थाको उन्नती गर्न पाउने खालको संविधान हुन आवश्यक छ ।
- संस्था संस्थामा प्रतिस्पर्धा हुन सक्ने प्रावधान हुनु पर्दछ ।
- हाल कुनै न कुनै रूपवाट संस्थाको रूपमा कार्य गर्दै आएका समितिको व्यावहारिक अनुभवलाई समावेश गरी नीति तर्जुमा हुनु पर्दछ ।
- प्राविधिक पक्षले व्यवस्थापन पक्षमा बढि से बढी सघाउ पुर्याउने हिसावले नीति नियम तयार हुनु पर्ने देखिन्छ ।

**मूल समितिको रजिष्टरबाट उतार गरिएको
जग्गाको क्षेत्रफल**

क्र सं	शाखा नं	परिवार संख्या	२०४९ को धानवाली क्षेत्रफल (विघामा)	समितिको रजिष्टरमा दर्ता भएको जग्गाको क्षेत्रफल (विघामा)
१	१	५१	२५ १७ ९	३० ९ ३१५
२	२	२९४	९० ५ १०	१९२ १२ ५१५
३	२ (क)	४८	२५ १८ १	२९ ८ ११५
४	३	५६	३२ १३ ४१५	४३ ४ ६१५
५	४	५४	२८ १५ २२	२९ १३ १०
६	५	३५	२५ २ १८	३९ ६ १७
७	६	५५	३५ १४ ०	३९ १६ १६
८	७	१८	११ १५ ४	१३ २ ८१५
९	८	१०७	७५ ९ १०१५	९७ ९ ४१५
१०	९	४८	५२ ० ४	६० ५ १०
११	१०	७८	६५ ८ १	७८ १० १७
१२	११	८९	५५ १ १९१५	६४ ८ १११५
१३	१२	४३	२६ १७ १	३९ ८ ३
१४	१३	७५	४७ १० ६१५	४९ १३ ३
१५	१४	४१	२८ ० ४	३० १० ०१५
१६	१५	४९	३५ ४ ३१५	६० १२ १४१५
१७	१६	२६	५८ ११ १२	८३ ३ ४
जम्मा	११६७	११६७	७१५ ४ १०	८३ ३ ४

नोट: यो जना गुरु गदाका कूल कमाण्ड क्षेत्रफल १३०० हे सिवाइ विभागका आकडा अनुसार।

सिंचाई क्षेत्रमा गैससको नेटवर्किंग संभावना सारांश

डा. शम्भु प्रसाद तुंगाना

नेपालमा गैर सरकारी संस्थाहरूको महत्त्व र प्रभुत्व बढ्नुमा यसको राम्रो व्यवस्थापन, प्रशासनिक फमेला र ढिलाईबाट मुक्त रहनु, स्थानीय समस्याको राम्रो पहिचान र ग्रामीण सहभागिताको परिचालन गरी स्थानीय स्तरमा राम्रो काम गर्न सक्नु नै हो । अब यस क्षेत्रले ग्रामीण स्तरमा सेवा प्रदान गर्ने र गरिवी उन्मूलन गर्न सक्ने क्षमता पनि देखाउन थालेको छ ।

गैर सरकारी संस्थाहरूको संख्यात्मक वृद्धि हुनुको साथै नेटवर्किंगको आवश्यकता पनि महशूस हुन थालेको छ । एन जी ओ फोरमको नेटवर्किंगको उद्देश्य एक अर्काको अनुभवको आदान प्रदान गर्ने, कार्यक्रममा दोहोरोपन हटाउने, कार्यक्रममा प्रभावकारिता ल्याउने, जनतामा जागरूकता बढाउने जस्ता कार्यको लागि सूचनाको प्रवाहद्वारा विकासका लागि राम्रो वातावरणको सृजना गर्नु रहेको छ । नेटवर्किंगका प्रभावकारी व्यवस्थाका लागि एन जी ओ फोरमले प्रकाशन, जिल्सा फारम, योजना बढ वैठकहरू र श्रोत केन्द्रहरू (जिल्ला र केन्द्र स्तरमा) को स्थापना गर्ने जस्ता कार्यक्रमहरूबाट शुरुवात गरेको छ । सिंचाई क्षेत्रमा हालसम्म धेरै कम गैर सरकारी संस्थाहरू कार्यरत छन् र नेटवर्कको थालनी भएको छैन । नेपालमा किसानहरूद्वारा नै सिंचाई प्रणालीको विकास एवं व्यवस्थापन भै आएको लामो इतिहास छ । यस मानेमा हाम्रो सिंचाई विकास एवं व्यवस्थापनको प्रयासमा कृषक समुदायको यस लामो अनुभव निश्चय पनि मुल्यवान हुन आउंछ । एकातिर किसान समुदायहरूको सिंचाई व्यवस्थापनको यस्तो लामो अनुभव सरकारी स्तरबाट निर्मित सिंचाई प्रणाली एवं उपभोक्ता टोलीको विकासमा मद्दत पुर्याउन सकिन्छ भने अर्कोतिर यस्ता किसान उपभोक्ता समूहलाई समय सापेक्षिक सक्षम र दिगो बनाउन सरकारी एवं वृद्धिजिवीहरूको प्रयासको खाँचो छ । सिंचाई प्रणालीहरूको व्यवस्थापन, संचालन, मर्मत सभार एवं श्रोत परिचालन आदि कृषक, उपभोक्ताको समूहको संस्थागत विकासबाट मात्र संभव हुने देखि यस्ता समूहको कार्यकलापको लागि चाहिने स्वाभिम्व, उत्तरदायित्व, स्वायत्तता आदिसंग सम्बन्धित प्रावधानहरू कानूनले बाध्नु पर्ने आवश्यकता छ । किसान उपभोक्ता समूहलाई पनि सकृय गैर सरकारी संस्थाको रूपमा विकास गरिनु पर्दछ । तत्पश्चात गैससको एउटा नेटवर्क बनेको खण्डमा एक अर्काको अनुभव र समस्या समाधानका उपायहरूको आदान प्रदानबाट लाभान्वित हुन सकिन्छ ।

नाफ संस्थाको ढावामा गैर सरकारी संस्थाहरूको सिंचाई व्यवस्था क्षेत्रमा संलग्न हुने सक्ने संभावना

हुताराम वैद्य
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परिचय :

यो कार्यक्रम नेपाल एग्रो फरेष्ट्रि फाउन्डेसनलाई नाफ भनिएको छ । यो कृषकहरूको कृषि वनलाई सघाउ पुर्‍याउन बनेको एउटा गैर सरकारी, नाफा आर्जन नगर्ने, विज्ञान र प्रविधी प्रेरित संस्था हो । यो संस्थाले खास गरि विकासको प्रभावमा आउन नसकेका जनताहरूलाई उनीहरूकै सामुहिक प्रयासमा माथी उठाउने र कृषि वनमा चासो लिने समूहहरूका आपसमा संपर्क बढाउने काम गर्ने लक्ष्य राखेको छ ।

कृषि वन के हो ?

विगतका वर्षहरूमा नासिएको वनलाई पुर्नस्थापना गर्न वनमा विरुवा रोप्दा लाईन लाईन लगाएर रोप्न र बिचको खाली ठाउँमा करीव १० वर्ष सम्म अन्न वा नगदेवाली लगाउने र यस पछि ती रैतीहरूलाई अन्य सार्ने जस्ता वन विकास प्रविधीलाई कृषि वन प्रणाली भनिएको हो । हाम्रो देशमा सयौं वर्ष देखि आफ्नो जग्गामा बडहर, कुटमिरो, खनीयो ईत्यादी अनेक डाले घाँस लगाएर हाम्रा कृषि ह्राउ आउने प्रशस्त घाँस खान पाउने, र गर्हा वारीमा अन्न उत्पादन गर्ने व्यवस्था थियो । यो हाम्रो आफ्नै किसिमको कृषि वन प्रणाली हो। यो व्यवस्थालाई वैज्ञानिक उपाय र प्रविधी जुटाउन नसकेकोले, कोषा फल्ने बोट विरुवा रुखहरू नलगाउनाले, डाले घाँसका विरुवा स्याहार गर्ने तरिका थाहा नहुनाले हाम्रो यो कृषिवन प्रणाली फष्टाउन सकेन ।

नाफको स्थापना

यहि कुराको समाधान खोज्न " नाफ " को स्थापना गरिएको हो । यो संस्थासंग सामुदायिक विकास कार्यक्रमको साथ साथै कृषि वन व्यवस्थाको क्षेत्रमा १५ वर्षको अनुभव छ । बाँध बाहुनीपाटी परिवार कल्याण योजना, स्थानीय जनता र अमेरिकी गैर सरकारी संस्था वल्डनेवर्सको तृपक्षिय समझदारी, सहयोग, सिन्धुपाल्चोक जिल्लाका

ईन्द्यावती नदी छेडु वाहुनी पाटी वजार नजिकको पिछ्छाडिएको साफी समुदायमा सन १९४८ मा ईपिल डाले घाँसको प्रचार प्रसार शुरु गरिएको थियो । ३ जनावाट थालिएको यस विरुवा रोप्ने काम सन १९८९ सम्ममा ९० प्रतिशत गाउँलेहरूलाई अनुसरण गरे । विरुवा संख्या ६०,००० को लगभग पुग्यो । शुरुमा सन १९८३मा १३ प्रतिशत परिवारलाई वर्ष दिन खान पुग्ने थियो भने १९८९ मा ७३ प्रतिशत हुन आयो । पशु विक्रीबाट गाउँमा वार्षिक आम्दानी रु १५,००० मात्र भएकोमा अब रु ३,८३,००० भयो । पहिले सरदर एक वाली भित्र्याउने गरेकाहरूले अब २।४१ वाली भित्र्याउन थाले । यहाँको संगठनात्मक विकास प्रकृयाको प्रभाव बढ्दै गएको देखेर रामेछाप जिल्लाको तामाकोशी सेवा समिति, नन फर्मल एडुकेशन सर्भिस, सेम दि बिल्डिन, रेड बर्ना, एक्शन एड ईत्यादी संस्थाहरूले तालिमको माग गरे। वाहुनी पाटीमा यस्ता तालिमहरू गर्न ठाउँ नपएको, विवी योजना र वर्ल्ड नेवरले नभ्याउने अवस्था पर्न आएकोले, काभ्रेपलान्चोकको हिगुवा पाटी नर्सरीमा केन्द्रित गरिन थालियो ।

यसरी अरु सामाजिक र गैर सरकारी संस्थाहरूसँग संपर्क बढ्दै गएता पनि विवि प्रोजेक्टसँग संबद्ध सबैलाई अमेरिका तिरबाट एशिया तर्फ १९८३ देखि बढ्दै आएको एपिललाई ध्वस्त पार्न सक्ने किरा सिलिंग नेपालमा पनि आउने संभावना भएकोले चिन्तित पारेको थियो । यस्तो अवस्थाको सामना गर्न स्थानीय जातका डाले घाँसहरू, अरु बाहिरबाट ल्याईएका डाले घाँसका जातहरू र सिलिड० नलाग्ने एपिलका जातहरूको अनुसन्धान, त्यसको प्रचार प्रसार र सामुहिक तालिमहरू रामेछाप, धादिंग र अन्य ठाउँमा रहेका सम्पन्न संस्थाहरूका सदस्य किसानहरूमा पुर्याउन १८८८ मा एग्रो एडमाएजर सर्भिसको स्थापना गरिएको थियो । यो सेवालाई अरु दरिलो पार्न १९९१ मा उपरोक्त संस्थाहरूसँग सम्बन्ध व्यक्तिहरू र डाले घाँसमा विशेष काम गरेका व्यक्तिहरू भएको नेपाल एग्रो फरेष्ट्रि फाउन्डेसन (नाफ) को स्थापना र दर्ता भयो। यसरी शुरु देखि सामुहिक विकास, डाले घाँसको विकास र प्रचार अनुसन्धान र तालिममा संबन्ध सबैको एउटा समूह बन्यो ।

नाफको संचालन

यो संस्थाको संचालन कार्यकारी निर्देशकबाट हुन्छ । लाभान्वित हुने जन समूह नै मुख्य हुन्छ । तिनीहरूसँग मिलेर नै कामहरू हुन्छन्, जस्तै :

- १) अनुसन्धान समूहले कृषकहरूको समस्या हल गर्न उनीहरूको खेतबारीमा उनीहरूलाई नै सहभागी बनाएर काम गरिन्छ । जसको ठाउँमा अनुसन्धान हुन्छ उसले यस विषयको प्रचार प्रसार पनि गरी दिनु पर्दछ ।

२) तालिम प्रायः किसानले किसानलाई गर्ने हुन्छ । सबै तालिम व्यवहारिक हुन्छन्। आवश्यक परेमा मात्र विशेष व्यक्तिहरू बोलाईन्छ । तालिम लिन आउने व्यक्तिबाट प्रति दिन रु २०० शुल्क लिईन्छ र तालिम शुल्क, सामान र खाने वस्ने व्यवस्था यसैबाट हुन्छ ।

३) प्रचार प्रसार पनि किसानहरू मार्फत नै गरिन्छ । यस्ता किसानहरू संपर्क संस्थाहरूबाट पठाइएका हुन्छन्। ती संपर्क संस्थाहरूले ५-१५ जवानको किसान समूह बनाएको हुनु पर्छ । तिनीहरू मध्ये एक जना अगुवा छानेर पठाउनु पर्दछ, जस्तै तालिम पाएपछि आफ्नो क्षेत्रमा गएर अरु १४ जवानलाई प्रचार प्रसारको तालिम र कार्यपत्रको व्यवस्था गराउनु पर्ने हुन्छ । यिनीहरू स्वयम सेवक हुन्छन्।

नाफका कर्मचारीहरूले बराबर तालिम पाईसकेका किसानहरूको स्थलगत निरीक्षण गरी कार्य क्षमता वढाउने व्यवस्था छ । यसको अतिरिक्त प्रशासकहरू, नीति निर्माताहरू, संघ संस्थाका प्रमुख वा प्रतिनिधिहरूलाई एक दिन प्रमण कार्यक्रम पनि गरिने गरेको छ। जस्तै गर्दा संपर्क कार्यक्रमको विस्तार हुने गरेको छ ।

अहिले नाफले ६ वटा सामाजिक संघ संस्थाहरूसंग काम गरेको छ । १६ सामुदायिक नर्सरीहरू र २८ वटा घरेलु नर्सरीहरूलाई सेवा पुर्याएको छ । कृषि मंत्रालय र वन मंत्रालयमा संपर्क वढ्दै आएको छ । आपसी सहयोग पनि वढ्दै आएको छ ।

नाफलाई अहिले फोर्ड फाउन्डेसनले आर्थिक सहयोग पुर्याएको छ । वर्ल्ड नेवरले अफिस संचालनको सुविधा र वीवी प्रोजेक्टले तालिम सुविधा दिएको छ ।

सिंचाई व्यवस्थापनमा गैर सरकारी संस्थाहरू

नाफको संचालन विधि, लक्ष्य र उद्देश्य माथी उल्लेख गरिएको छ । हालैमा आएर नाफले संपर्क समूह वा संस्थाहरू बनाए जस्तै नेपाल एन जी ओ फेडरेशन एन जी ओ फोरम र साप नेपालले पनि यस्तै संपर्क समूहहरू बनाउने तर्फ काम गर्न थालेका छन् ।

यी चारवटै गैर सरकारी संस्थाहरूले संघ संस्थाहरूको संपर्कद्वारा स्थानीय विकासको काम संचालन गर्ने :

- १ जनमुखी : तलवाट उठेको समान स्तरमा सहभागिता शब्दहरू लगाएर लाभान्वित समूह वा लक्षित समूहसंग काम गर्नुपर्ने ।
- २ एकले अर्कोसंग संपर्क राखन नयाँ व्यवस्था हुनु पर्ने आवश्यकता देखाएक छन् ।
- ३ फोरम र फाउन्डेशनले विदेशी सहयताको आवश्यकता देखाएनन ।

यो गोष्ठीको परिपत्रहरूमा गैर सरकारी संघ संस्थाहरूको कार्यक्षमता बारे राम्रो कुरा भनिएको छ र साथै अनुसन्धान, तालिम र प्रचार प्रसार आदान प्रदानको व्यवस्थाको आवश्यकता बारे उल्लेख भएको छ । यस कुराको लाभो अनुभव नाफसंग छ र यसबारे माथी उल्लेख भइसकेको छ । तर यस गोष्ठीको उद्देश्य ३ मा सरकारी र अन्य निजी संघवाट बनाएका सिंचाई योजनाहरूलाई गैर सरकारी संस्थाहरूवाट संचालन गराउने भन्ने संकेत दिइएको छ । यस्तो कार्यक्रम लक्षित समूहमुखी हुँदैन, सहभागीताको आधारमा यस्तो हुँदैन, यो माथीवाट लादिएको कार्यक्रम हुन्छ र यो नाफ को कार्य संचालनको ढाँचामा भिन्न आउदैन ।

यसैगरी उद्देश्य ४ मा गैर सरकारी संस्थाहरूले एजेन्सी र कन्सलटेन्टहरूको आवश्यकता पुर्याउन सक्छ सकिदैन भन्ने जान्न खोजिएको छ । सिंचाई व्यवस्था राम्रो पार्ने दिशामा यो उल्टो पर्ने आउछ । सिंचाई व्यवस्था सुधार गर्न सहयोग गर्ने किसानहरूको आवश्यकता यस्ता एजेन्सीहरू र कन्सलटेन्टहरूले टेवा पुर्याउन सक्छ सक्दैन भन्ने प्रश्न आउनु पर्ने हो । यस विषयमा नाफको कटु अनुभव भएको कुरा व्यक्त गरिएको छ ।

सिंचाईमा विज्ञान र प्रविधिको खाँचो छ यस्मा किसानहरूवाट यस्तो व्यवस्था परिचालन गर्नु भन्दा पहिले सिक्नु पर्ने र थाहा पाउनु पर्ने कुराहरू छन । हतार मान्नु हुँदैन ।

सुझावहरू

- १ के संस्था बनाउन खोजिएको हो त्यसको स्पष्ट परिभाषा दिनु । नगरिएमा कृषि वनको परिभाषामा अलमलिए जस्तै अलमलिन्छ ।
- २ कृषकहरूको समस्या समाधान मुखी एउटा अनुसन्धान, तालिम र प्रचार प्रसार केन्द्रको आवश्यकता छ जसमा किसानहरूले नै काम गरेका हुन्छन् ।
- ३ यस्तो गर्न (२ को) उनीहरूलाई शुरु देखिनै सवैकुरामा सहभागी बनाउनु पर्दछ उनीहरूको भनाईलाई कवर गर्नु पर्दछ ।
- ४ गैर सरकारी संघ संस्थाहरूलाई सरकारी कार्यालयहरूसंग शुरु देखिनै संबन्ध गास्ने मनोवृत्तिमा लगाउनु पर्दछ । किनभने पछि गएर राष्ट्रिय विकास प्रयासमा यिनीहरू पनि सम्मिलित हुनु पर्दछ ।
- ५ लक्ष र उदेश्यको निधो गर्नु पर्दछ । स्थितिको जानकारीबाट आधार शुरु गर्नु पर्दछ र यो आधारमा स्थिति प्रगतीका सूचक हुन्छन् । योजना अघि बढाउन यो नभइ हुदैन ।
- ६ अनुगमन र निर्देशनहरूको टिपोट राख्नु (रेकर्ड राख्नु) पर्दछ ।
- ७ तालिम दिने व्यक्तिहरू र योजनाका कर्मचारीहरूले सहभागिता भनेको के हो (र संलग्न भनेको के हो) स्पष्ट थाहा पाएको र काममा प्रयोग गरेको हुनुपर्दछ ।
- ८ किसानहरूका अरु आवश्यकताहरू पनि हुन्छन् । योजनालाए टेवा पुग्ने भएमा यस्तोमा सहयोग पुर्याउन पर्दछ र
- ९ दातु संस्था, सल्लाहकारहरू, व्यवस्थापकहरू र लक्षित समूहका व्यक्तिहरूको शीप, विचार, भावनामा समन्वय हुनु पर्दछ । यसको निमित्त अनौपचारिक हेलमेलहरू प्रशस्त हुनु पर्दछ ।

नाफ १५ वर्षको पुरानो संस्था नभएता पनि यस्मा काम गर्ने सवै व्यक्तिहरूको सहयोग र विचारको आदान प्रदानबाट नाफ खडा गरिएको हो । यसैले यस्तो जनसहभागिताको आधारमा काम गर्ने वा गराउन खोज्ने संस्थाहरूले फेरी १५ वर्ष वित्ताएर अलमलिनु पर्ने छैन ।

सिंचाई व्यवस्थापनमा लागेका संस्थाहरूको नेटवर्क स्थापना गर्नमा भौगोलिक सूचना प्रणाली (जी. आई. एस.) को भूमिका

सारांस

इन्द्र शरण के सी
UNDP/NPC

हाल हाप्रो सूचना प्रणालीहरू व्यवस्थित ढंगबाट भैराखेका छैन । रिकर्ड राख्ने कामहरू पुरानै ढंगमा सिमित रहेका छन् । कुनै सूचनाहरू जरुरतमन्द व्यक्ति वा संस्थासम्म पुग्ने एउटा सजिलो वातावरण पनि सृजना भएको छैन । यस मानेमा, भौगोलिक सूचना प्रणाली (जी आई एस) एउटा अत्यन्त उपयोगी साधन हुन सक्छ। सिंचाई व्यवस्थापनको प्रयासमा यस्को विशेष उपयोगिता रहने विश्वास लिन सकिन्छ।

यस प्रणालीको मद्दतले सिंचाई प्रणालीहरूको भौतिक बनोट र त्यस सम्बन्धी व्यवस्थापन मात्र होईन अन्य सेवा वा वातावरण सम्बन्धी व्यवस्थापनको कार्यहरू प्रभावकारी ढंगले गर्न सकिने हुन्छ । रिमोट सेन्सिंग (Remote Sensing), एरिडेएल फोटो ग्राफि (Aerial Photography), ग्राउन्ड र हाउसहोल्ड सर्भेहरू, इन्जिनिएरिंग डिजाइन, डाटा, सेन्सस् सर्भे (Census Survey) र नक्शाहरू नै यस जी. आई. एस. का डाटा स्रोतहरू हुने गर्दछन् ।

जी. आई. एस. ले सूचनाहरू आदान प्रदान गर्ने काममा निकै ठूलो मद्दत पुर्याउन सक्छ किनकि यस्मा एउटा साफा डाटाबेस बनाउन सकिन्छ । विभिन्न उद्देश्य लिएका व्यक्ति, समूह आदिको प्रयासहरू र सहि उपाय केलाउनमा यो प्रणाली अत्यन्त समक्ष हुनेछ । सिंचाई व्यवस्थापन कार्य बहुपक्षिय प्रयासबाट मात्रै सहि तरीकाले हुने हुँदा जी. आई. एस. एउटा राम्रो, उपयोगी उपकरण हुन आउँछ ।

सिंचाई व्यवस्थापनमा गैससहरूको भूमिकासंग सम्बन्धित केही प्रशांगिक विषयहरू

उज्ज्वल प्रधान

सिंचाई एवं अन्य विषयसंग सम्बन्धितहरू एवं विद्यमान नेटवर्कको भूमिका बारे छलफल हेतु निम्न लिखित विषयहरू प्रस्तुत गरिएका छन्।

१ एन.जी.ओ.हरूको स्वभाव र किसिम

एन जी ओ भन्नाले के बुझिन्छ ? के कति प्रकारका छन् ? उदाहरण नाफा कमाउने उद्देश्य लिएका संस्थाहरू, नाफा नकमाउने उद्देश्य लिएका संस्थाहरू, प्रासर्ट संस्थाहरू, दान उद्धार संस्थाहरू, या त्यस्ता संस्थाहरू जसको उद्देश्य स्ट्रक्चरमा हेरफेर ल्याउनु हुन्छ, आदि।

ती संस्थाहरूले अंगिकृत गरिएका विभिन्न काम गर्ने क्षेत्रहरू, स्ट्रक्चरहरू एवं श्रोत परिचालन गर्ने तौरतरिका मध्यनजर राखेर ती संस्थाहरू कै विचमा वा सरकारी निकायहरूसंगको आपसी कार्यविधिमा कस्तो किसिमको एन जी ओ को के कस्तो फाइदा वेफाइदा वा कमजोरी सशक्तता हुन्छ, हुन सक्दछ?

उनीहरूको आफ्ना उद्देश्य पूर्तिमा के कस्ता विद्यमान नीति एवं संस्थागत व्यवस्थाहरूले सघाउ वा व्यवधान पुर्याइएका छन्।

कस्तो खालको एन जी ओ हरू सिंचाई व्यवस्थापन प्रयासमा सघाउन उपयुक्त हुन्छन्? र सिंचाई व्यवस्थापन तथा विकासको कुन क्षेत्रहरूमा ?

कानून तथा नीतिहरू

विद्यमान कानून तथा नीतिहरूवाट कस्ता एन जी ओ हरूको प्रवर्द्धन भई राखेका छन्?

के त्पस्ता प्रावधानहरूले नवीन प्रवर्द्धक (इंजेभेटिम) एन. जी. ओ. को उत्थानमा बाधा हाली राखेको त छैन ।

कुनै खास एन. जी. ओ. को स्वायत्तता कुनै खास कानूनले सुरक्षित राखेको छ ? कस्तो खालको एन जी ओ हरुको विश्वासनियतामा कसरी ढुक हुन सकिन्छ?

प्राकृतिक श्रोत व्यवस्थापन एवं जनसमुदाय विकास गर्ने लक्ष राखेका एन जी ओ हरुको विकासको निमित्त के कस्ता नया कानूनी प्रावधानहरू वा विद्यमान कानूनमा के कस्तो शंसोधनको जरूरी हुन्छ ?

श्रोत परिचालन (भित्र एवं बाहिरवाट)

आफुलाई चाहिने श्रोत परिचालन वा कोष संकलनको निमित्त विभिन्न एन. जी. ओ. हरुले के कस्ता प्रकृया/ विधिहरू अपनाई रहेका छन् ?

यस्ता श्रोत परिचालन विधिहरूको आधारमा, कस्तो प्रकारको एन जी ओ हरु सिंचाई व्यवस्थापनको संस्थागत विकासको काममा उपयुक्त हुन्छन् ।

स्थानीय एन. जी. ओ. वाट देश भित्रको श्रोतहरू परिचालन गर्ने दिशामा कर प्रणाली एवं कर इन्सेन्टीभमा के कस्तो सुधार गर्नु पर्छ ।

श्रोत परिचालन गर्ने विधिहरूमा तल उल्लेख गरिएका तरीकावाट के कस्ता फाइदा वा बेफाइदा हुन सक्छन् र ?

- क) कर घटाउने इन्सेन्टीभ (नेपाल दातु संस्थाहरूमा कर घटाउने व्यवस्था)
- ख) दातु संस्थावाट उपदान र ऋण सहयोग
- ग) वित्तिय संस्था बैकवाट ऋण सहयोग
- घ) सरकारी रकमको व्यवस्था

माथीको वृद्धाहरु एन.जी.ओ.को दिगो भविष्य, उद्देश्य प्राप्त एवं स्वायत्तता कायम रहने आदि दृष्टिकोणबाट हेरिनु पर्दछ ।

सिंचाई व्यवस्थापनमा एन.जी.ओ.हरुको भूमिका

सिंचाई व्यवस्थापनको विभिन्न कार्याकलापमा सरकारी संस्थाहरु एवं विशेष प्रकारको एन.जी.ओ.हरुको के कस्ता आफ्नै प्रकारको तुलनात्मक फाइदाहरु हुन सक्दछन् ।

सरकारको संयुक्त व्यवस्थापन र टर्न ओभर नीति अनुरूप काम गर्न एन जी ओ हरुले के कस्ता कार्यकलापहरुमा मद्दत गर्न सक्दछन् ?

के कस्ता एन. जी. ओ. हरु अरु एन. जी. ओ. हरुको दाजोमा (सिंचाई व्यवस्थापन कार्यको लागि) तुलनात्मक तवरले बढी उपयोगी हुन्छन् ।

कुनै एक एन जी ओ ले (कस्ता खालको कितान गर्नु होस) तल उल्लेखित क्षेत्रमा के कस्तो विशेष भूमिका खेल्न सक्दछ ।

- निर्माण
- मर्मत संपार
- संचालन
- किसानहरुको संस्थागत विकास
- निर्माण, संचालन एवं मर्मत संपारमा किसानहरुलाई तालिमहरु
- सरकारी कर्मचारीहरु, सिंचाई व्यवस्थापन विषय पढ्ने क्याम्पसका विद्यार्थीहरु, किसानको प्रतिक्रिया र किसान जन समुदाय मूलक विकास संग सम्बन्धित तालिमहरु

किसानमूलक एन.जी.ओ.हरु

के किसान मूलक एन.जी.ओ.हरुको आवश्यकता छ ? यदि छ भने त्यस्ता एन जी ओ हरुलाई कसरी प्रवर्द्धन गर्न सकिन्छ । हाल कस्ता कानूनहरुको प्रावधान छन वा नयां कानूनहरुको दरकार पर्दछन् ।

कस्ता विद्यमान संस्थागत परिपाटीमा यस्ता एन. जी. ओ. हरुलाई वढावा दिन सकिन्छ

शुरुको अवस्थामा, यस्ता एन. जी. ओ. लाई कस्तो काम र कोषको प्रावधानले दिगो राख्न सकिन्छ ?

यदि कुनै सिंचाई योजनाहरु बनि रहेका छन भने त्यहाँका किसानहरुलाई तालिम दिएर

- सिंचाई विकास तथा व्यवस्थापन संग सम्बन्धित नीति र कानून वारे सुझाव दिएर

- किसानको व्यवस्थापन क्षमता वढाउने काम

- व्यवस्थापन क्षेत्रमा सरकार वा किसानवर्गको आफ्नो पक्षको हकहित वारे प्रष्ट्याउने काम

- जनसमुदायहरु बिच एवं जनसमुदाय र सरकारी बीचको फेँ भगडा समाधान गर्नेमा सघाउ पुर्याउने काम ।

किसानलाई उपयुक्त हुने प्राविधिकहरुको प्रयासमा सघाउ पुर्याउने काम

- जल उपभोग संस्थाहरु बनाउनमा सघाउ पुर्याउने काम

- सिंचाई व्यवस्थापनको अनुसन्धान कार्यमा संयुक्त कार्यकलाप

नेटवर्क र आपसी सम्बन्ध विकास(Coalition Building)

सिंचाई व्यवस्थापन एवं विकासको लागि के यस्ता एन जी ओ नेटवर्कको आवश्यकता पर्दछ ? पर्दछ भने, किन ?

सरकार वा दातृ संस्थाबाट नियन्त्रित नहुने गरी के यस्तो नेटवर्कलाई प्रवर्द्धन गर्न सकिन्छ ? अथवा के यस्तो आफ्नो स्वायत्तता कायम राख्न सक्दछ ?

अन्तर्राष्ट्रिय एन जी ओ हरूले यस्तो नेटवर्कको प्रवर्द्धनमा कसरी सघाउन सकिन्छ ?

सरकार र वित्तिय संस्थाहरुले कसरी मद्दत पुर्याउन सकिन्छ ?

के कस्तो कानूनी र संस्थागत ढाँचाहरुको प्रावधानले यसलाई दिगो बनाउन सकिन्छ ?

के सरकारी निकायहरु, दातृसंस्थाहरु र वित्तिय संस्थाहरुलाई नेटवर्क बनाउन सकिन्छ ?

के सरकारी निकायहरु, दातृसंस्थाहरु र वित्तिय संस्थाहरुलाई नेटवर्क भित्र समावेश गर्नु आवश्यक छ ? यदि छ भने, किन ? उनीहरुको यस्ता के देन हुन सक्दछ ?

नेटवर्कमा कस्ता एन जी ओ हरूको प्रतिनिधित्व वाञ्छनीय हुन्छ ?

कस्ता प्रकृया र कार्यविधिहरु नेटवर्क प्रवर्द्धनमा सान्दर्भिक होला ? पविष्यको कार्यक्रम र कार्यविधि पहिल्याउन के एउटा Ad hoc नेटवर्क सिंग्र बनाउन सकिएला ?

नेटवर्क कार्यक्षेत्र के हुनु पर्दछ र यस्तो सरकारी निकायसंग कस्तो सम्बन्ध हुनुपर्दछ ?

तलका कुन विषयमा नेटवर्कले सघाउन जरूरी पर्ला ? यदि पर्दछ भने, कसरी ?

- क) सूचना आदान प्रदान
- ख) सघाउने काम र संयुक्त कार्य गर्ने
- ग) विदेशी दातु संस्थासंग सम्पर्कता गर्ने
- घ) क्लेष (फण्ड) निष्काशनको एउटा माध्यम बन्ने
- ङ०) सरकारसंगको वार्तामा अग्रणी भूमिका खेल्ने
- च) जनसमुदायमा सिचाई व्यवस्थापन सम्बन्धी चेतना तथा जागर विकास गर्ने।
- छ) किसान र सरकारी निकायहरूको आकांक्षा र आवश्यकताहरू
- ज) जल उपभोक्ता र स्थानीय जनसमुदायहरूलाई वली अधिकार प्रदान गर्ने।