Role of NGOs in Irrigation Development and Management in Nepal


Organized by the International Irrigation Management Institute (IIMI) and the Agricultural Development Bank of Nepal (ADB/N)

With support from the International Labour Organization, Special Public Works Program, Nepal (ILO/SPWP/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
Acknowledgement

IIMI-Nepal is thankful to ILO/Nepal SPWP for providing the necessary funds for holding this pioneer workshop on the role of NGOs in Irrigation Management and Development. The moral and financial support extended by Mr. Chris Baker, Senior Advisor, ILO/SPWP Nepal, is acknowledged. IIMI-Nepal deems it a privilege to have collaborated with the Agricultural Development Bank/Nepal in organizing this workshop. The support provided by Dr. Tilak Rawal, General Manager of ADB/N, and Mr. Ramesh Shrestha of the Surface Irrigation Section of the bank, is gratefully acknowledged. Dr. Rawal is also acknowledged for delivering the welcome address.

Dr. Binayak Bhadra, member of National Planning Commission, is also acknowledged for his support of the workshop and graciously delivering the speech as the chief guest of honour. We are grateful to him for writing the foreword to this proceedings.

The assistance of Mr. Chandra Shakya in translation and editing the Nepali portion is hereby acknowledged. The assistance of IIMI-Nepal administrative staff in preparing the materials for the workshop is also noted.

The assistance of Ms. Doreen Sakya of SPINS International (P) Ltd., is also acknowledged for the layout and cover design and printing.

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, Chhattis 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. Lakhey

Introduction

Nepal is a landlocked hilly country scarcely populated from the mountainous region of the Himalaya to the Ganges 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 framework 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 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.
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:

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

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

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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?
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

Key:

- Eng: Engineer (from the District Irrigation Office, MIT or Regional Directorate)
- Con: Consulting firm
- Or: Overseer from the District Irrigation Office or Regional Directorate
- A.B.C.D: Class of Registered Contractor
- AO: Association Organizer (from the District Irrigation Office or NGO)
- Dep: Depends on type and size of irrigation projects
Figure 2: SPWP Participatory Process

Key
- FRS Rep: Farmers’ Representative
- MIT: Mobile Irrigation Team
- OV: Overseer (from the District Irrigation Office or Regional Directorate)
- Eng: Engineer (from the District Irrigation Office, MIT or Regional Directorate)
- AO: Association Organizer (from the District Irrigation Office or NGO)
- RIA: Rainwater Infiltration Association
- WJMC: Water Usage Management Committee (of the RIA)
- NGO: Non-Government Organization
- DPO: District Forest and Soil Conservation Office
- DADO: District Agricultural Development Office
- Future Technical Assistance Requirement Institute for Construction Management.
NGOs in Irrigated Agriculture: A Review of Institutional Instruments

U. Gautam

Premise

NGOs 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.


This year HMG/N has already come out with three institutional instruments 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.

President, Consolidated Management Services Nepal (P) Ltd.
In the Eighth Plan, 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 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/organized 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 wate 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.

References

In this paper, NGOs refer to those socio-economic organizations of farmers who have been working together for a considerable period of time to manage water resources to sustain irrigated agricultural system. Also refer to, Nepal : Partners of Irrigation, a film of video Department of Irrigation and World Bank, produced by Consolidated Management Services Ltd., June, 1992.


Perception of Bureaucracy on the Role of NGOs in Irrigation Programs

R.S.S. Neupane

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...
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-data, 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 NGOs is very costly and unsustainable. Programs like canal operation and maintenance which takes a 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. Upadhyay

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 pumps. 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 NGOs/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 NGOs 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 NGOs 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 Gober 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.

Inspite 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 affect 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.
References


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

R. Shrestha

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 HMGN 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 (SDFP) 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 SDFPs 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.
- 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.
• 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 spoilt—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
Role of NGOs in IDM


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. Acharya

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/day 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.

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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. Bhojodar 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 district\(^2\) 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.

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\(^2\) *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>
<thead>
<tr>
<th>S.N.</th>
<th>Activities</th>
<th>Capability in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Planning and project identification</td>
<td>81.91%</td>
</tr>
<tr>
<td>2</td>
<td>Implementation of project</td>
<td>87.37%</td>
</tr>
</tbody>
</table>

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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 Bhumichowk 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.
- 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.
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 total ............ days commencing from the date ............ to ............ 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

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<th>Date of Loan Received</th>
<th>Purpose of Loan</th>
<th>Interest Rate</th>
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4. Interest Payment particular

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Irrigation in Bajhang: The Role of NGOs

D.S. Rana

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 "kuloss" (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 "kulachays" (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). Kulachays 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 "kulachay" 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 flatish 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 kulachays 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 kulachay will exchange written agreements which state the exact responsibility and authority of the kulachay 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 "jibow" 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 jibow. 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 are 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, not 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 hastly 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 organisations 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.

**References**


**Acknowledgements**

I am indebted to the following people for their contribution towards greatly improving this paper: Dr. Jayanta Bandyopadhyay, Dr. Joanna Pfaff-Czarnecka and Mahesh Pant. But of course, I alone am responsible for the contents of this paper.
CARE/Nepal's Experience in Developing Irrigation Systems in Nepal

B.B. Gurung

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 up to 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 up to 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 tend 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 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:

1. 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.

2. 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.

3. 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.
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 to 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 sophisti-
cated 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.
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. Saru

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 Timwal/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 Taplejukhariya 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, Khara or Mahakhara is summoned. As per rule of Khara, 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 Sindupalchowk 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 an 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. Pandey

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 were 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 increased of Rs.6300.

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

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1 Member, Chherlung Thulo Kulo Committee.
record keeping and dispatching notices according to the chairman's instructions is done by the secretary.

Passing massages 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. Regmi

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 Chhattis-Mauja

Y.L. Bhandari

Brief Introduction of Chhattis-Mauja Irrigation System

This irrigation system irrigates some 10,000 bighas of land under 54 Maujas of four village development committees; Shankamagar, 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 mulhtiyars) 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, Chhattis-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, JTJTs 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 Tinai 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. Upreti

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 Management 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 "Involve of Government Organisation in Irrigation Management and Management" national workshop jointly organised by Department of Irrigation and Institute of International Irrigation Management 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. Dhungana\(^1\)

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.

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\(^1\) 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 offering 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.

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.

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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. Baidya

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.
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), mutmoire (Litsea polyantha) koiralo (Bauhinia variegate), kabro, khanayu, nevaro (all ficus sp.) and grasses like amilo (Thysanolaena maxima) Chitrasy 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 vegetable 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 on 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 Bahnit-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 OIs, NGOs and INGOs. Interested institutions requested training and technical support programs. Linkages were thus established with NGOs like Tamakosi Seva Samiti of Ramechap, Non-formal Education Service Centre, Dhadhing, Save the Children Federation, Redd Barna, UMN, Action Aid and others. This training
facility site has shifted to Heguwapati nursery in Kavre Palanchowk district about half an hour drive from Panchkhal on the same road to Bahundanda.

Table 1
Progress of the Majhi Village 198-1989

<table>
<thead>
<tr>
<th>Item</th>
<th>Year</th>
<th>Year</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leucaena adopters %</td>
<td>83</td>
<td>86</td>
<td>89</td>
</tr>
<tr>
<td>Livestock increase %</td>
<td>3</td>
<td>85</td>
<td>90</td>
</tr>
<tr>
<td>Livestock improved 5%</td>
<td>40</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Animal sale Rs.</td>
<td>15,000</td>
<td>195,600</td>
<td>383,000</td>
</tr>
<tr>
<td>Cropping intensity</td>
<td>100</td>
<td>54</td>
<td>241</td>
</tr>
<tr>
<td>Food one year family %</td>
<td>13</td>
<td>50</td>
<td>73</td>
</tr>
<tr>
<td>Per capita food/day</td>
<td>-</td>
<td>402Gr.</td>
<td>518Gr.</td>
</tr>
<tr>
<td>Population growth %</td>
<td>3.5</td>
<td>1.9</td>
<td></td>
</tr>
</tbody>
</table>

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 devasting 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, Ramechap 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 Heguwapani 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:

- **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.

- **NGO-Forum** stated its Strategy Planning Session (25 Oct 1991) objective as an attempt to develop a communication network of NGOs.

- **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:

- focused on grassroot POs/NGOs using words like "people centered" "bottom up" and "equal partnership".

- 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 MAN

FORESTRY 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

1. Community not organised

2. Community form small non-related groups, usually POs

3. NGO intervention as a linkage

4. Linkage NGO organises a PO network and a clearing house. Could merge itself into the total community organisation.
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

RESEARCH

NAF Training Site

TRAINING

EXTENSION

Trainee Trainees

Group nominated farmers attend 5 - 7 days of intensive TOT sessions in group (s) of 15 - 18

The best person nominated by each group to receive TOT to be their trainer

At least two demonstrator farmers per group to be selected by the end of 2nd year

Home Nursery training session (s) for group (s) of 5 - 15 interested farmers at village sites

Interested members enlist for agro-forestry concept trials and to join Home Nursery training

Volunteer(s) conduct several agro-forestry awareness building session(s) in their villages/communities

COMMUNITIES / VILLAGES /POs nominate volunteer(s) to receive basic awareness building trainings for agroforestry extension
ANNEX No. 5

TECHNICAL DIFFERENCE BETWEEN "INVOLVEMENT" and "PARTICIPATION"

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. May appear in the middle of a project or form the start as an appendix (Road Clearing)</td>
<td>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)</td>
</tr>
<tr>
<td>2. Easy to start. Investment of time and money may fade away once non-local support phases out</td>
<td>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</td>
</tr>
<tr>
<td>3. Objective may not be clear to associates.</td>
<td>objective must be made clear to each of the associates.</td>
</tr>
<tr>
<td>4. People will work as told. It is therefore top-down and authoritarian.</td>
<td>Will work as a team to fulfill stated objective. It is bottom-up and democratic.</td>
</tr>
<tr>
<td>5. Insensitive towards results. May not develop ownership feeling.</td>
<td>Pride of ownership and the joy of accomplishment.</td>
</tr>
<tr>
<td>6. Book-keeping is not clear</td>
<td>Book-keeping is clear at all times.</td>
</tr>
<tr>
<td>7. May not be cost effective.</td>
<td>Cost effective in most cases.</td>
</tr>
</tbody>
</table>
Role of Geographic Information System (GIS) in Networking Organizations for Irrigation Management

I.S. KC

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/NPC.
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 fall 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. Pradhan

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 benefited 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 or 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 approach. 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 Rupandehi 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 (ADBN)
9:40-9:45  Lighting of Ceremonial Lamp by Guest of Honor,
Dr. Binayak Bhardra, Member, National Planning Commission
9:45-10:00  Keynote Address by Dr. Binayak Bhardra
            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
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/ADB/N

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
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 Uperti, 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
11:50 - 12:05  Presentation of Group I (Chairman: Dr. G. Thapa)
12:05 - 12:20  Presentation of Group II (Chairman: Dr. Upeendra Gautam)
12:20 - 12:45  Open Forum and Discussions
12:45 - 2:30  Lunch
   Afternoon Session 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, IIIMI-Nepal
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Mr. T.M.S. Pradhan
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Mr. Matrika Bhattarai
## Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ADB/N</td>
<td>Agricultural Development Bank of Nepal</td>
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<td>BTRT</td>
<td>Begnas Tal Rupa Tal</td>
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<td>CDO</td>
<td>Office of Chief District Officer</td>
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<td>CSIP</td>
<td>Community Surface Irrigation Program</td>
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<td>DOI</td>
<td>Department of Irrigation</td>
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<td>DSCWM</td>
<td>Department of Soil Conservation and Water Management</td>
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<td>DAs</td>
<td>Development Associates</td>
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<td>FMIS</td>
<td>Farmer-Managed Irrigation System</td>
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<td>GEOCE</td>
<td>Geotechnical and Civil Engineering Consultants (P) Ltd.</td>
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<td>GO</td>
<td>Group Organizer</td>
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<td>IDE</td>
<td>International Development Enterprise</td>
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<td>IIMI</td>
<td>International Irrigation Management Institute</td>
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<td>ILC</td>
<td>Irrigation Line of Credit of the World Bank</td>
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<tr>
<td>ILO/SPWP</td>
<td>International Labour Organization of the United Nations/Special Public Works Programme</td>
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<td>INGOs</td>
<td>International Non-Governmental Organizations (non-profit)</td>
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<td>NAF</td>
<td>Nepal Agro-Forestry Foundation</td>
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<td>NGO</td>
<td>Non-Governmental Organization (non-profit organization)</td>
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<td>NIA</td>
<td>National Irrigation Administration of the Philippines</td>
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<td>NPC</td>
<td>National Planning Commission</td>
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<td>NRMP</td>
<td>Natural Resource Management Project</td>
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<tr>
<td>O&amp;M</td>
<td>Operation and maintenance</td>
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<td>PO</td>
<td>User group</td>
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<td>RABNP</td>
<td>Rural Area Basic Need Project</td>
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<td>RADC</td>
<td>Remote Area Development Committee</td>
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<td>SFCP</td>
<td>Small Farmers’ Community Project</td>
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<td>SFRP</td>
<td>Small Farmers’ Development Programme</td>
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<tr>
<td>SNV</td>
<td>Netherlands Development Organization</td>
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<tr>
<td>SSNCC</td>
<td>Social Services National Coordinating Council</td>
</tr>
<tr>
<td>UMN</td>
<td>United Mission to Nepal</td>
</tr>
<tr>
<td>VDC</td>
<td>Village Development Committee</td>
</tr>
<tr>
<td>WECIS</td>
<td>Water and Energy Commission Secretariat</td>
</tr>
<tr>
<td>WUA</td>
<td>Water Users Association</td>
</tr>
<tr>
<td>सिद्धि</td>
<td>विषय</td>
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<tr>
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<td>संस्थागत मार्ग अन्वेषण गैस सहयोगसहित प्रासंगिक नवीनता सामाजिक आर्थिक विकास र गरिमा उन्नयन गर्ने प्रतिनिधि व्यवस्थापन सुरक्षान्तर गर्ने</td>
</tr>
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<td>गैस सामुहिक विकास कार्यक्रमापना पृष्ठभूमि सुविधा प्रस्तारक पुस्तिका किसा वेबसाइट</td>
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<td>३</td>
<td>सिर्फित तीर्थ हेतु गैससाधन संस्थागत विकास साधनको अवस्थापन ज्ञाने गोलम</td>
</tr>
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<td>४</td>
<td>सिंचाई व्यवस्थापन कार्यमा प्राप्ती नेपाली स्तरका नौर सरकारी संस्थाहरूको अनुमान गिताम्वर प्रसाद आचार्य</td>
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<td>जनकाल्गमा सिंचाई गैससँग पुस्तिका वेबसाइट एच राणा</td>
</tr>
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<td>नेपालको सिंचाई प्रणाली विकाससमा बेड्दर नेपालको अनुभव नि नि गुरुभाउ</td>
</tr>
<tr>
<td>७</td>
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</tr>
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८ क्षेत्रीय कूलों सिंचाई व्यवस्थापन प्रणाली के खेतकरी परिचय रेजेंट वहादुर पाणेके

९ आर्थिक राज कूला (लेखी कूला) के सहिष्णुत निर्वरण श्री बुधदत्त रायभी

१० छत्रसागर शोध सिंचाई व्यवस्थापन प्रणाली के खेतकरी परिचय यम नाल पणजारी

११ पिलुबा सिंचाई व्यवस्थापन प्रणाली के खेतकरी परिचय तापर गोरेः जनेव वृहद नेपाल, कृष्ण वहादूर कुंदर सिंचाई प्रसाद धामपा कृष्ण उपेन्द्र

१२ सिंचाई क्षेत्रमागलसके नेटवरकेंद्र सम्पादना श्रा बम्पु प्रसाद बुंगाना

१३ नाय संस्थाके बाजार गैर सरकारी संस्थाहके सिंचाई व्यवस्था क्षेत्रमाग संग्राह हुन सहने संभाजना हुलाराम जैल

१४ सिंचाई व्यवस्थापनमा लागू संस्थाहको नेटवर्क स्थापना गर्नी घोषीयकृत सुखा प्रणाली (जी आई एस) को पुष्पिक ई-निर्माण के श्री

१५ सिंचाई व्यवस्थापनमा एन जी ओ हस्तिक नीमकहरू सम्पादित केसी प्रासादिक विश्वास हुँ उपजन प्रधान
संस्थागत मार्ग अपनाई गैससहरुलाई प्रासंगिक लेखलमा सामाजिक आर्थिक विकास र गरिवी उन्मुलन गर्ने प्रतिनिधि बनाउने सारांश

सुरेश गोपाल अब्जे
ILO/SPWP

१ सरकारी कृष्ण सहभागिता

गैरसरकारी संस्थाहरू माफिक
उपरोक्तकालकृष्णसम्मांग
सरकारी निकायको सामग्री एवं
समफाबारी बाटै उनीहरूको
बाहिरी सहभागिता जुटाउने।

सिंचाई निर्माणको २०७४ मा सिलिसियम फिर्न्ड निर्माण तथा कृष्णसम्मांगको सिलिसियमको अभावबाट त्यो कार्यक्रम लागू पारिएको थियो। उक्त निर्माणका निर्माणका सिलिसियम कृष्ण सम्मांग को सहभागिताको अव्यवस्थापन र अवशेषको प्रवहितिको निष्ठुर गरिएको थियो। जसले उल्लेख गैससहरुलाई स्थानान्तरित, वियोजन एवं कृष्णसम्मांगको हितबाट कायम हुन सक्ने। कृष्णसम्मांगको छलफलमा उनीहरूले सिंचाई प्रणाली एवं अन्य आर्थिक प्रणालीको आफन्सको स्थानान्तरित हुने देखि व्यक्ति गर्ने थियो। उल्लेखनीय प्रणालीको कृष्णसम्मांगको स्थानान्तरित, वियोजन एवं अन्य आर्थिक प्रणालीको आफन्सको स्थानान्तरित हुने देखि व्यक्ति गर्ने थियो। उल्लेखनीय प्रणालीको कृष्णसम्मांगको स्थानान्तरित, वियोजन एवं अन्य आर्थिक प्रणालीको आफन्सको स्थानान्तरित हुने देखि व्यक्ति गर्ने थियो।

२ सानोनिहरू प्रयास बा सामग्री जुटाउने पनि सिंचाई प्रणालीमा रायो।

सुधारको आशा गर्ने सकिन्छ।

हाल लेखिने कुन्तू थिएको गैरसरकारी संस्थाहरू कार्यरत रहेको पार्टियोमा बाहिरी चलन हुदू निर्माणको सामाजिक संस्थाहरू पर्दछन् जसले आफन्सको प्राप्तकर्ता निर्धरित हुन्छ। यी संस्थाहरूमा पुन: निर्धरित निर्धरित।
हायकालम पर परेका हुँहन्। यी संस्थाहरू तथा सरकारको विकास कार्यक्रममा आर्थिक कृषि शैक्षणिक बिक्री र गर्वित व्यवसायिक गैर सरकारी संस्थाहरू छन्। गैर सरकारी विकास कार्यक्रम सार्वजनिक सेवा पुर्याउने गर्वित व्यवसायीक र राजनीतिक उन्महात्म गैर सरकारी संस्थाहरूका एउटा नया गतिशील, सामाजिक संस्थाहरू परिवर्तन जनाउँ। यस माध्यमले कडि अन्तर्राष्ट्रिय गैरसहफ राष्ट्र बोको सामाजिक आर्थिक विकास कार्यक्रम संबंधमा पान्छ।

तैयान, सरकारको देशपरी विभागमा फिनल्ड स्तरको निकायहरूको नेपालला अधिकाङ्क्षा विकास कार्यक्रम संचालन हुन्छ। तर यसले सरकारी निकायहरूको प्रतिपालित विकास कार्यक्रममा लयित जनसमुदायलाई साहित्यिक एवं सांस्कृतिक सशक्तिकरण पुर्याउने छ। जसले मुख्य आयार्थ, व्यक्तिगत प्रयास, र वित्तीय पारिवर्तनका आयार्थ, गर्दछ।

गैरसहफ देशको विकास कार्यक्रम भिलै र सघाउँ नियान्त्रितै बिनु परिवर्तन ।

सरकारी निकायको हकमा, गैरसहफको स्तर हुँदै जहाँ नै विभाग प्राप्त जनसंचय एवं सामाजिक आयार्थ नै जनसभा र जनसमुदायलाई सोही। क्षेत्रको निकायहरूको नियम भएको नछ। जसले गरेको र जीन विकासको नियमानुसार नियम भएको नछ। जसले नियम भएको नछ। जसले गरेको र जीन विकासको नियम भएको नछ। जसले गरेको र जीन विकासको नियम भएको नछ।

गैरसहफ एउटा अर्पणकृत नियान्त्रित विकास कार्यक्रम भएको हुनु परिवर्तन ।

फिनल्ड स्तरको विकास कार्यक्रममा प्राप्त क्षेत्र छ, जहाँ नै गैरसहफ एउटा नियान्त्रित नियम भएको हुनु अवधारणा ।

क) स्थानीय स्तरमा सहभागी वन वाणी कामर विकास र बफएको हुनु परिवर्तन।
ब) सम्प्रभुत विषयमा तालिका प्राप्त या अनुमान नु हुनु पर्याप्त तार्किक लक्षित जनसमुदायमा प्रविधिक एवं सामाजिक तयारी प्रभाव पार्न सक्षम्यो!

c) सामाजिक मान्यता प्रदान गर्न।

d) एउटा प्रामाण्य स्वतंत्र शिक्षकको समानुपातिक हिसाबको तपार्न र अन्य सुझाव दिने।

e) प्रामाण्य विकास काममा जुन एउटा समूह सहितर्ना गर्न।

f) तर्थको उपचयमा जुन ग्रामीण समाजलाई पालन्य होस्।

g) प्रामाण्य समाजमा परेको प्रभावको रेखाकार गर्न सक्ने।

4) स्थानीय गैसस: राश्रेत्र प्रभाव पर्ने सक्ने।

स्थानीय गैससहाय:

1) छिटो बुझने, कार्यक्रम गुरु गर्न र समन्न गर्नेछ राष्ट्रिय छिट्र्ने।

2) सरकारी निकायको काम बन्दा कम तर्थक कार्यक्रम समन्न हुन।

3) कृपक समुदायको सहयोगको प्राप्त र उनीहरुको आत्म मनुष्यालाई बुझे हुन।

4) रेजस्म बुझन।

5) बेलन, नागरण र आफ्नोपन्नको भावनामा बुझि।

6) लक्षित जनसमुदायको राष्ट्र हेलमेल र उनीहरुको शीर्ष जान उकाशमा बढी प्रभावकारी।

7) प्रामाण्य समाजको विकास जुन जातावरण सर्प्लायमा मुड्ल गर्नु हुन्छ।

8) प्रामाण्य शिक्षित समुदायलाई गर्न्छ र उनीहरु हुन्चाउ रोकने हुन्छ।
গৈসসহ কূল কেঁতের উপকারিতা হয়ে উঠেছে গৈসসহ কূল কেঁতের উপকারিতা হয়ে ৫০% প্রতিষ্ঠা যাত্রা কমে। সারাদিন সম্পাদন করা হয়। গৈসসহ কূল কেঁতের উপকারিতা হয়ে উঠেছে গৈসসহ কূল কেঁতের উপকারিতা হয়ে উঠেছে ৫০% প্রতিষ্ঠা যাত্রা কমে নির্ভুলতার কারণে।

নির্ভুলতার কারণে নির্ভুলতার কারণে সম্প্রদায় সম্প্রদায় সম্প্রদায় কূল কেঁতের উপকারিতা হয়ে উঠেছে ৫০% প্রতিষ্ঠা যাত্রা কমে নির্ভুলতার কারণে।

নির্ভুলতার কারণে নির্ভুলতার কারণে সম্প্রদায় সম্প্রদায় কূল কেঁতের উপকারিতা হয়ে উঠেছে ৫০% প্রতিষ্ঠা যাত্রা কমে নির্ভুলতার কারণে।

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गैसस सामूहिक विकास कार्यकलापमा एउटा सुविदाप्रदारक भूमिका

सारांश
किस बेकर वरिष्ठ सल्मादकर
अन्तरराष्ट्रिय थेर संगठन

विकासमील वेस्टह्या जनताहरूको साथि पुर्वाधार पुर्याउने दिशा जहारतथ्यमा व्यापा तनसा लिएर राम कार्यरत्नका छन्। ती महाश्रम नुसार विकास कार्यक धारावर्यान गर्न र संचालन एवं पर्याटन संग्रह गर्न जनताहरूको ज्ञानो सहभागिता पहसुस गरे आफ्नो कार्यकर्महरूमा उनीहरूको सहभागिता जटाउन प्रयास पाँगे जवाबको छन्। तर यी प्रयासहरू संघर्षक रुपमा आगाडि बजराखको वेबसाइट र यसको मुख्य कारण वर्तमानि निकायहरू र उपभोक्ताहरूको आफ्नो धुङ्ख र धारणा छन्, जुन प्रयास: विरूपक नै वेशिन्छन्।

यस कुरालाई विचार गर्न, एउटा अक्षर कार्यकारीको आवश्यकता महणुस हुन्छ जहारा सरकारको रोल कहीमानेआ एउटा प्राथमिक, सहयोगात्मकको हुनेको भने उपभोक्ताहरूलाई पुर्वाधार विकास कार्यकलाप एउटा जनताको सामूहिक कार्य धुङ्ख राष्ट्रीय अप्रास हुन पनि हुन्छ। बतै, जनसमुदायलाई प्राथमिक एवं अधिक सेवा देखि पुर्याउने काम प्रकार हुन पर्नेछ।

जनसमुदायहरू आफ्नो र आवश्यकता एवं प्राथमिकता रोजन स्वतन्त्र हुन पर्नेछ। सरकारलाई ती जहारतथा उनीहरूलाई उपलब्ध गराउने दिशाया बहुत अवसर पुर्याउनु पर्नेछ। जन समुदायलाई एउटा प्राथमिक (CLIENT) को रुपमा हेलिनु पर्नेछ र उनीहरूको जहारा किनेल। कुराला महत्त्व पूर्याउनु पर्नेछ। समुदायक व्यवस्थापन भन्ना सामूहिक नीतिकरण पुर्वाधारहरूको विषयकर र संचालनको हितपर्याय जसलाई नेपाल्र अग्र उपयोगी ठहरी सरकारी निकाय बाटै संयुक्ताधिकारी आफ्नो धुङ्ख एवं प्राथमिकता हुन सक्छ। भने लक्ष्य र एवं प्राथमिकता हुन सक्छ। तार्किक सामूहिक कार्यकर्म प्राप्तिका निहाल हुन्छ। यसलाई अवसरमा गैससहरूको रोल उपयोगी सिद्ध हुन सक्छ।
गैससहच्छ एउटा सुविधा प्रबाकाल संस्था। इकाईहरू परियोजनालाई पालन संगठनको लागि केही जुटाउने माध्यम पार्थकिय अधिपति परिचालन गरेका सैर लागि उपनामहरू, प्राधिक सेवाले पुर्याउने, जनसमुक्त विनाशकारक पृष्ठ र फाइवा वितरण गरेका कार्यरत, अव्वललाई सरकारी वस्तुक्षेप रोचने कार्यरत, ओब्लिक।
सिंचित कृषि क्षेत्रमा गैससः संस्थागत
विकास साधनको अवलोकन

उपेन्द्र गौतम
CMS/Nepal

नेपालमा त्यस्ता गैसस (यसै कृषि क्षेत्रमा जुन आफ्नै प्रयासले बिि सिंचाई प्रणालीहरु
संचालन गर्ना लागेका छ छन् त्यस्तालाई पानी गैसस भनिएको छ) हल्छ धैरैसमय अगाडि
बेदिव विभागमा छन् जुन निर्मित यस सिंचाई प्रणालीहरुको व्यवस्थापनमा लागेका छ छन्। नेपालको
सिंचित क्षेत्र मध्ये ६० वेशि ८० प्रतिशत क्षेत्र यस सिंचाई प्रणालीहरुलाई ओगट्या छ छन्
जुन कृषि समुदायमा निर्मित एवं संचालित छ छन्। यस मानेमा, यस सिंचाई
प्रणालीहरुको महत्त्व निके रहेको छूँ म्यूट प्राथम छ। त्यसैले, उपीहरुको समुनित क्षेत्र
एवं संच्छेन्द्र हि नितास्त आवश्यक छ।

श्री ५ को सरकारले हालेतीन यस्ता नियमभा्हरु ल्याएको छ छन, जसले मादी उलेखित
किसिमाका गैससहरुले सरकार र संस्थानलाई समाधान पुरा दिनै, छन्। यही
हुन सिंचाई नियमावली २०४९, पानी भेट नियमावली र आउली फसलबाटिया योजना (२०४९-
२०५४) सिंचाई नियमावलीमा विविध सिंचाई प्रणालीहरुको वर्गीकरण लिनेकीहरुको
कृषि समूहको संस्थाले सिंचाई प्रणालीहरुको स्थापना कायम राख्ने अनुमति ग्रहण
विविध हुन गरिएको छ। यस नियममा सरकार र संस्थान जीव नापीको उपयोग बने
सम्म गरिएको गामो वयस्तारामा विद्यालय गामेरको छ। गैससहरुको प्रवास एवं रस्ताडण बारे
आउली फसलबाटिया योजनामा पानी समुनितको चुराहरुसारे सम्पर्क छ। साथ राय अभावीको र व्यवहार
लक्ष्य बन्द बार्बाटीको एउटा नितिमा गैसलाई स्वायत्तता प्रदान गरिन्छ, कुरा पायी उलेख
गरिएको छ।

श्री ६ त्यस्ता गैसस प्रबाहितको स्थापना लागि लक्षण भएको, नियमीय गैसस्थित व्यवहारमा नीतिले
पानी पाइएका छन्। यसै कुरा त, सरकार गैससहरुको अवधारण एवं प्रकारहरुका नै
राष्ट्र हि पाने देखि छ। किन गैससहरु परिभाषा विविध समुूह एवं समूह जीवको
विविध व्यक्ति व्यक्तिमा आफ्ने प्रकारको रहेको पाई-सँग। एकैदिनी र यस्ता गैसस पढ (मात्र उल्लेखित कृपया समस्तको जस्तो) जुन संस्थामा उपमोक्ताहरु आफ्नै सेवन रहेका अक्षरीय स्तर कार्यक्रमका उनीहरुका सुधारके वर्ग र उन्नेत्र सर्वै रहेका। एकैदिनी सरकार निकायहरु आफ्नो विकासको कारणहरु सहभागिता बनाउने एक विशेष प्रकारको गैससको गठन गर्ने त्यसको देखिएको जुनमा आफ्नो प्रभुत्व काम पै राख्ने मनसाय दोके बुझ्न। हुनालाई सरकार कामनाहरु गैससको पक्षमा जोखिम रहेका पाई-सँग तर गैससको परिपाता हरू निष्कास्त तर सरकारको निकायका व्यक्तिहरुसँग समेट विद्याधारी कार्यक्रमको रहेको पाई-सँग।

एकैदिनी कृपया समुच्चायको गैसस प्रचारण गर्नेको योजना प्रयास पढ राखेको छ रे। उल्लेखित सिंचाई बिस्फोट, अध्यात्म कृपया सहभागिताको आफ्नो नातिर तर कार्यक्रम लिएर अधिक बढेको छ। कृपया समुच्चायको संस्थाहरुलाई समज र भिडो बनाउने उद्देश्य लिएर बाधी उल्लेखित नयाँ नीति नियन्त्रणकीहरू तर निर्मितका सरकारी निकायका व्यक्तिहरुसँग विज्ञापन ज्ञानात विज्ञापन देखिएको छ रे।

सरकारले कृपया समूह युगलको गैससलाई विकास गर्ने कुरामा जोड दिनु पर्दछ आफ्नो प्रवासको काम उनीहरुको कार्यक्रम र प्रभावितको आधारमा गरिनु पर्दछ। गैससलाई प्रकार एवं अवधारणा बारे सरकार सुप्रसाद हुनु पर्दछ सरकारले गैससलाई संय साँगको मात्रहरुको काम गरेनुहोस् पनि सोचु नुहुँछ। किस प्रकारु गैससलाई नयाँ नीति कार्यक्रमको बारे गर्न सकिन्छ। यस्तीहरू एक समक्षातीहरूले वाटोजना गैससलाई फाल्ट उन दिनु पर्दछ।
सिंचाई व्यवस्थापन कार्यमा
ग्रामीणस्तरका गैर सरकारी
संस्थाहरूको अनुभव

सारांश

पिताम्बर प्रसाद आचार्य

परिचय:

1. लम्बूडो जिल्लाका स्थानीय गैर सरकारी संस्था तथा उपमैक समितिहरूको व्यवस्थापन क्षमता अध्ययन गर्न सन्दर्भमा अध्ययन टोलीबाट लम्बूडो जिल्ला पताखाबाट गाउँ विभाग समिति समायोजन र जीवन धुमर समिति आयोजनामा गई उक्त सिंचाई आयोजना संचालन गर्न उपमैक समितिहरूको व्यवस्थापन क्षमता अध्ययन परियोजना परिणामी प्रभाव दिइएको थियो।

2. कुल ४० कृषिक परियोजना संग्रह पएको मतान सिंचाई आयोजनाले र ठूलो हेक्टर जमीनमा सिंचाई सुविधा उपलब्ध गराएको छ। (सी सिंचाई आयोजनामा) लाभनिक कृषकहरूको साथिक प्रयासमा सन १९५७/२०३० भएको सिंचाई आयोजना निर्माण गरी १९८३ सम्म प्रत्येक वर्ष स्थानीय कृषिकहरूले वर्कको १२-१६ दिन ब्याज गरी सिंचाई कार्यक्रम संचालन गर्न आएका रहेका थिए। सैनिक तथा गैर सैनिक पटकी बनाउँ साथिक सिंचाई कार्यमा विभाग लाभ्य निवेशहरूले सञाचार जुटाउँने प्रयासमा सागरले पाइयो। उपमैक समितिहरूको साथिक अनुरोधमा सन १९६८ भएको सिंचाई सेवा पुरस्कृत पटकी कार्यक्रम परियोजना (Irrigation Line of Credit Project) ले दे ४,००,००० रु. कार्यान्वयन नर्सरीको आयोजन उपलब्ध गराई सिंचाई आयोजना पटकी बनाउन पौडुर गर्नेका रहेका हुन्। यसको आयोजनहरूको व्यवस्था गरिएका पाइन उक्त परियोजनाले स्थानीय उपमैक समितिहरूको कार्य क्षमताहरूलाई उत्पादन निर्माण अथवा परिवर्तनको कार्य पनि खेलिएको माफिक नै गराईएको पाइयो।

3. स्थानीय उपमैक समितिहरूको लाई संस्थानामा सिंचाई निर्माण महत्त्वको निर्माण नवनागरको बृहत पाइन उपमैक समितिहरूको व्यवस्थापन र वार्षिक नियमावली निर्माण

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परिवहन कुल पार्स निर्णय गर्न चाहिँ भएको भविष्यमा अउसिएको आयोजना गर्न संभव गर्न सङ्गठनको व्यवस्था चुन सक्ने संपर्क बीच ठेकेदारी विचार व्यवस्थप्रणाली मेला उपयोगको समस्तिकार देखि कर्नेको अन्तर्गत र उपयोगको समाप्ति तथा व्यापार व्यवस्था लागि सनातन गर्न भएको सामाजिक संगठनको सामूहिक संगठन र सामाजिक विकासको लागि संस्थान व्यवस्थापन र सामाजिक विकासको लागि संस्थान व्यवस्थापन र सामाजिक विकासको लागि संस्थान व्यवस्थापन र सामाजिक विकासको लागि संस्थान व्यवस्थापन र सामाजिक विकासको लागि संस्थान व्यवस्थापन र सामाजिक विकासको लागि संस्थान व्यवस्थापन र सामाजिक विकासको लागि सङ्गठनको व्यवस्था चुन सक्ने सङ्गठ.
নন্দু  জিনিসাই সংযোগসিদ্ধ ৩৭ সিঁহাই আয়োজনাহ্নকে হয়ে গরিএকো অধ্যয়নাত্ম স্থায়ী তাহক উপরেকা সমিক্ষ গয়র সরকারী সংস্থাহ কার্যক্রমকে সংক্ষেপাত্ম পোনাড যোগহ ত্ত্বনা কার্যমুখন পৃথ্বীক নীতা সংগঠন র ব্যবস্থাপন পৃথ্বায় সম্পর্ক পূর্ণীক পাইলোক।

অধ্যতনের সম্ভাবনা, জন্মকে সহারাহিতা, কার্যক্রম কার্যমুখন গনে স্থায়ী তাহক নির্মাণ গেরে প্রক্রেতোতো প্রক্রেতোতে সম্ভাবনা হুন নুন। ব্যবহার কেনে খনে গনে কার্যক্রম নীতি স্থায়ী তাহক দুর্গাদের নদুন পান প্রক্রেত। জন্ম স্থায়ী উপরেকা সমিক্ষ সংস্থাহ সংক্ষেপে কার্যক্রমে রূপান্তর নির্মাণের ফলাফল প্রতিষ্ঠাপন গরাউন রক্ষা কৃতী কথায় গনে সত্য সফল হুনায় সংক্ষেপে গরাউন লাভে খন।

তথ্য প্রতিষ্ঠাপিত সংস্থা র গয়র সরকারী সংস্থাহকে স্থায়ীর্মুখন পান বিশ্বাস র উন্নয়ন জন্ম কয় তত্ত্বহুলে কাটি প্রভাবিত গরের হুন নুন। এই সংস্থাহ কেনে সরকারী পরিপূরক হস্তস্থায়ী শোনি পরিচালনা, বৈশিষ্ট্য আধ্যকারণত করা সংরক্ষণ, পরিযোজনা প্রতি ভাবনাপন বিশ্বাস, আধ্য বিশ্ববিদ্যালয়ে প্রতিষ্ঠাপনা ষ স্থায়ী নেকুত্তলকে বিকাশ হুন খনে হুব্য নিকটবর্তী নিবিষ্ত পরিচালনা, পরিপূরক কথায় অভাব, ব্যবহার সংস্থাহ কাটি সংরক্ষণ এবং নির্মাণ বর্তমান হস্তস্থায় ও সামুলিক সম্পত্তী প্রতি সম্পূর্ণ জানানের উপাচ্য, ব্যবহারী নেকুত্তল ও অপরূপ জন্ম প্রতিষ্ঠাপিত অনাৎকারার পরিপূরক হুন ।

স্থায়ী সংস্থাহ কেনে বিকাশ স্থায়ী জন্মকের ভাবনা অনুযায় ওই উন্নয়ন কেনে সংস্থাহকে বিকাশাত্ম ফাইথ পাইলোক হুন প্রক্রেত। প্রক্রেত নিকটবর্তী সংস্থাহ খনে আধ্যকারণ সংরক্ষণ কাটি স্থায়ী আধ্যকারণকে পরিপূরক কষ খনে কুরালাই এক অর্থকে পরিপূরক দুর্গায় মানবিক বিশেষ করণে নীতি তাহক করানুনে খনে স্থায়ী গয়র সরকারী সংস্থাহ এই বিকাশকে জানানে রূপায় স্থীতা গরের পাইলোক।

সামুলিক সিঁহাই আয়োজনকে প্রতিষ্ঠার সিঁহাই পরিশেষনাত্ম করা ভাটি পাইলোক বিকাশ সাধারণ সম্পর্ক ব্যবস্থাপনা নির্মাণ হুন। সরকারী সন্দর্ভ কার্যমুখন পাইলোক সামুলিক সিঁহাই কার্যমুখন ব্যবস্থাপকী সম্পর্ক করণের উপস্থিত নীতি তাম লিখে সংঘকে খন অর্থ সামুলিক সিঁহাই কার্যক্রম সংস্থাহ গনে নিম্ন রপ্তানি পাইলোক খনে বেক্ষ।
ಕ) स्थानीय उपोष्ट्या ना संस्थानाचे संचार जवळपास निर्णायक आहे हेंगु पर्यंत.

ख) वाह्य साधन र उपोष्ट्या क्रमांक माहितीदायक निर्णयांचा सिंचाई परंपरेवाप्रथावत प्रत्येक सहभागी क्रत्ताएँ ते आपल्या सामाजिक संवादांचे ही प्राप्तते ही पाहावा. चुकून प्रत्येक सिंचाई आयोजनाचे निर्णय करावा याचे श्रेय तरुणांना चाशनांपासून र एकत्रक ठरवावा हेंगु पर्यंत.

१०) विपण्य समस्याखालील सिंचाई कार्यक्रम संचालन गर्दा आपल्या आवश्यकता काव्यांनी अपनावे. अनुसूची अपनावे. सिंचाई व्यवस्थापनाच्या क्षेत्रात आपल्या सामाजिक संवादांचा प्रयोग करून संपूर्ण सामाजिक संवादांचा प्रयोग केला जातो. सामाजिक संवादांच्या उद्देशात व्यापारी क्रांतीस चालवणे गरावा. विकृत विशेष नोंदविला विनवार पर्यंत.

१०) वर्तमान आर्थिक बिघासातील पानी जनसंख्या गिरून जातात. कार्य कृत्रिम गरतो. ग्रामीण दलांमध्ये अतिशय संस्थाने गॅसर सरकारी संस्था र साधन उपलब्ध. गरावे वाह्य समस्यावरून आपल्या सामाजिक सांगणार्या माहिती नवीकरण काम गरी विकृत वाह्य साधन पारंपरिक गरावे अपाजीक गॅसर सरकारी संस्थानाच्या प्रबंधन हेंगु पर्यंत.
बनामोभब्या सिंचाई:
गैससको भूमिका

वेजेन्द्र एस. राणा
उन्नयन हिमाल पेटनकर

यस कार्यक्रममा सरकारी योजनाको सफल कार्यनियनमा गैर सरकारी संस्थाहरूले विभिन्न र सारे वेबका विकसनीयता नै सुझाउने परिवर्तन ल्याउन धिनीहुन्ले काम गर्नु पर्दै आवश्यकता वाले चर्चा गरिएको छ।

बनामोभब्या जिल्लामा क्रमक मुहूर्त सरकारी निर्माण गरी संचालनमा ल्याउने कार्यक्रम सिंचाई योजनालाई निर्माण स्थापना गर्नु, वित्तस्पर्धा, स्थायी निर्माण उत्पादन, सरकारी तथा देखि उपलब्ध धिनी, धिनी र आवश्यक निर्माणको आधारमा स्थापित पाएको छ। वेबका सिंचाईको विकासमा जुट्दी ल्याउन निर्माण तथा योजना वित्तलाई सिंचाई योजनाको बन्दै गरेको छ। यसत्रै विविध कार्यक्रमको अध्ययनहरूको मिल्न सुरुहुन्छ प्रदेश लेखन आएको छ।

क) यी विविध योजनाहरू लक्षित उपयोक्ताहरूलाई भन्ना बढी योजनाको कर्मचारी एवं वातावरण संस्थाको व्यवस्थाहरूको फाइटेनिट प्रस्तुत वेबिङ्को छ।

ख) यी योजनाहरूको लक्षित भन्ना र अनुरोध प्रस्तुत वेबिङ्को छ।

ग) यी योजनाहरूको कार्यनियनमा लक्षित जन समुदायको सहभागिता निकै सम भएको छ।

अध्ययनहरू वेबिङ्का वेबिङ्का जी कृतिहरूलाई ध्यानमा राखेको गैर सरकारी संस्थाहरूले सिंचाई व्यवस्थाहरूको क्षेत्रमा निर्माण उन्लेखित रूपमा सङ्केत लिएको छ।

१ जनसम्बन्ध सेर्फिंग, आगामित स्थापना काम गरेको छ।

२ योजनाको सम्बन्ध वर्तमान सरकारी कार्यक्रम एवं कर्मचारीहरूको रोल र व्यवस्थाहरूको नीति नियम र कार्यविधि र लक्षित जनसमुदायको आवश्यकता र सहभागिता बीच लेखन व्यवस्थाहरूको काम गरेको छ।
कार्यक्रम प्रभावशाली र अवैधित ठंगवाट सृपादन गर्न कारक तत्परको रूपमा काम गरेगै।

जनसमुदायलाई जागिर्दार ओधिराः दिनाउने कामथा समाह पुर्याउँछ।

यस क्षेत्रमा सम्बन्धित विभिन्न संघ र संस्थाहसंघ नेटवर्क स्थापना गरी उपयुक्त अनुप्रयोग आवश्यक प्रवाह गरिएको छ।

जनसमुदायको वस्तूस्थिति र बास आवश्यकताको ठीक ठीक पहिचान गरेका र रचना तरफको गरिएका छ।

जात्रामा भनेर हो पनि, गैरसरकारी संस्थाहरू डिच्युने कार्यक्रिया र प्रयास स्थानीय जनसमुदायको मात्र सिमित नराइको राष्ट्रिय स्तरमा नीतिगत क्षेत्रमा स्वभाव आवश्यक स्थान प्रभावशाली भूमिका बैठनु पर्दछ र बैठेका पर्दछ भन्दै। किनै वेगका विकास कार्यक्रम प्रभावकारी एवं फलाहारी बनाउने विश्वास नीति र कार्यन्वयन जैनी को सुधारको कुनौं हो भन्द।

१८
नेपालको सिंचाई प्रणालीको विकासमा केहि नेपालको अनुभव

सारांश

चित्र बिजुलाग
केहि नेपाल

नेपालमा किसानबाट द्वारा संचालित हँसारी सिंचाई प्रणालीहरू छन्। केहिलाई यस्ता सिंचाई प्रणाली तथा लाभको पुराना छन्। सिंचाई विधानमा बुझो वा खालको सिंचाई योजना बनाउन जिम्मा लिएरहेको छ। यसले साना सिंचाईहरू विकास गर्न अपनो शिष्ट र साधारणको कमीले प्रयासको हुँदैन। विसानी संचालित सिंचाई प्रणालीहरूले खालको कृषिगतीको वास्तवमा सिंचाई विधानमा संख्यालग गरेका सिंचाई प्रणालीहरूले तुलनामा घेरेको हुन आउँछ। यस अर्थमा देखि बाधाहरू बुझि गरेका विशेष, यसला किसान संचालित सिंचाई प्रणालीहरूको विकासको निकै दुई योगदान हुन आउँछ। त्यसले विभिन्न अन्तर्गतिको एवं स्थानीय गैर सरकारी संस्थाहरू, सरकारी निकायहरू एवं जन समुहहरूले यसले साना किसान संचालित सिंचाई प्रणालीहरूको विकास गरेर खिराम सेवा र टेक्निकल विशेष माध्यम रहन्छ।

सन् १९५३ देखि केहि नेपाल साना र समुदाय खालका सिंचाई प्रणालीहरूको विकासमा संलग्न रहेको छ। यस संख्याले विभिन्न सरकारी निकायहरूसँग देखि विभिन्न अन्यहरूले सिंचाई विकासको काम गरेको छ। यस कार्यक्रममा यसला विकास कार्यक्रम क्यानिडाउन गर्न संस्थापन खिसेका गाउँहरू, विभिन्न निकायहरूले सहकार्य गराउने वेखा परेका समस्तहरू प्रत्याभूत गराउँछ।

यसै अन्तर्गतिको एवं स्थानीय गैर सरकारी संस्थाहरू, सरकारी निकायहरू एवं विभिन्न समुहहरूको संस्थापन देखि सिंचाई विकास गरेका कम्युन, यसले उल्लेखित अनुभवहरूको जानकारी भविष्यको नागरिक उपयोगी नै होला भन्ने आवश्यक छ।
छेलुंडो तलो कुनो सिंचाई प्रणालीको परिचय

तयार गर्ने श्री बीर बहादुर बाबा
छेलुंडो तलो कुनो

१ निर्माण अवस्था

संक्षेप १९८९ सालमा छुने कुनो को निर्माण भएको गाउँमा पानी अभिलाषा सकेको उपलब्ध छैलेबाट क्षेत्र मात्र कुनोका माहिती गाउँका कृषिका बाटौले पानी भिडिफेरुने नाप आफ्नो पानी गाउँमा आफ्नो माध्यममा प्रदान गरिएका थिए। तर छुने कुनोको पानी नष्ट भएर भएको भिडिफेरुने पानी गाउँका कृषिकी जनसँख्या नेपालीको बाहिरको निर्माणको क्रममा बन्ने योजनामा भएको थियो। कुनो कुनो निर्माण गरिएका आफ्नो माध्यममा यस क्रममा पानी हृ ५५०० पानी नपर्न समयमा त्यसका घिनै कुनो बनेको थिए।

सो निर्माण कार्य १९९६ मा पूरा भएको थियो। विशेषता बाणाको, भौगोलिक, सामाजिक, र प्राकृतिक मुद्दा पानिको बाहिरको निर्माणको समस्या गरेको १९९५ मा सामान्य ग्रामीणहरू र पानी कुनोको निर्माण कार्य पाएको हो।

गाउँमा पानी ल्याउने सकेको पानी निधान र वितरण क्षेत्रो संचालन र मर्यादा संस्थाको सार्वजनिक नीतिले प्रयोगको निर्धारण गरिएको थियो।

कुनो निर्माण गर्ने खर्च पाएको बुना लगायी हृ ४५०० बाढी ५५ मा प्रथम विधान गरिएको छ अनुसार बुना चिन्तन र विकास क्षेत्र १६ वर्ष भएको थियो उसको हृ ७०० खर्च गरिएको थियो। एक जेषय बाढी ५०० भएको एक इन्जिनियर जस अनुसार खर्च शुरु प्राप्तको छुन महात्मागौरी ४५ मा भएको थियो। उपरोक्त बाढी वर्ष भएको एक बुढी जीवनको नाप अनुसार बाढी काटको पानी निधान गरिएको हो। एक जेषय वर्ष १ भाग दिने नीति निर्धारण गरिएको हो।

लाई र खर्चको समस्या र मर्यादा संस्थाको साथ अभिलाषा आवश्यकता गरेको र सबैलाई सिंचाई प्रणालीको समाधान गरेको उद्देश्यले जेषय बिठक गरी न्याय मेहिकी संस्था वितरणमा भिन्न नीति सम्पन्न गरिएको हो। यसै अनुसार छप्पानी गर्दछ पानी हिस्सा तिय जेषयको फूलको बृहस्पति भई हाल १ जेषय पानीको हृ ५००० (बि.स. ७००) मा विधीले वितरण पाएको हो।
सिंचाई व्यवस्थाको लागि कुनो समिति

सिंचाई व्यवस्था सिलाई, अथ जेल र साधन जुटाइन र भै फाडा समाधानको निम्नलिखित लक्षातीन कुनो निर्माणमा सक्रिय हुनाइ सेवाले गर्नु पर्याप्त जनात्वर गतिक सिंचाई तटस्थ (मुखिया) र लेखन हर्षबीर (सिच्छलाई) आवश्यक सिंचाई व्यवस्था सिलाई निम्नलिखित अधिकार बिराउँै।

कुनोको वर्तमान सुधारको साथै किन्नारै सिंचाई क्षेत्रको पानी किन्नारै भए। २०१६ साल तिर उनै मुखिया र सिच्छलाई सम्भालने उद्धर्य साल बार्यको साल जना धरिएको गठन गरिन।

समृद्ध कुलोलाई साल क्षेत्रमा विभाजन गरिएको छ जस्तै अनुसार साल वटै धरी अन्तमा एक एक बारेको सरसफाई गरेको अपने पानी धीने साल धरिए गराउँछ।

यसैसम समाधान ध्वनी प्रकाश गरेको, अभिप्रेत र साधन जुटाइने सक्रियको समयमा काम संपन्न गरेको आदिकाल काम गर्दछ।

२०३२ साल वटै सिम्बल प्रथा हटाउँै। सिच्छलाई काम गर्नेछो लागि समितिमा सचिवको पनि स्थापित गरिन। हाला लेखनहरूको काम सिच्छलाई नै हनेछै गर्दछ।

२०३४ सालमा कुलोको मुहाना देखि १.५ कि. मि तल गाईघाट पार्ने झाउंगा पैरले गर्दै कुलो संचालनमा निकै जटिल समयमा गरेछ। त्यसप्रति सिच्छलाई क्रियामा सुधार उपमीमारी वसीहरुलाई गर्दै अर निर्माणमा पैरो गर्दै कुलोको सार्वजनिक क्षेत्र मध्ये राख्ने प्रयास गरेको थियो। कुलो सार्वजनिक रहेको तपाईको औषधि युक्त अन्तर्गत पोखरीमा कुलोसँग सम्बन्ध गरी उक्त स्थलको पोखरीमा कुलोलाई सुबूत गरी यसको अंगभूत बढ्दै मुहाना देखि २.५ कि. मि तल सम्म तपाईको पोखरीमा कुलोलाई वै त्यालाई र त्यसका भन्ना तलमात्र पूर्वानुसार कुलोलाई काम रहेको निर्माण छन्दोका विस्तारको गरेछ। किची मा तपाईको पोखरीमा हिउने पानीको उत्तल पानी राम्रो भएको।

यसै सिविलियाई लागि सुधार रुपमा उद्य डुट्टै कुलोको औषधि र तपाईको गाई पन्चायतको प्रतिविधिहरूमा रोपबाला वैधक वर्षो र दुई प्रमाण पाठ्य तपाईको पोखरीमा कुलोसँग सम्बन्ध गरी यसका अन्तर्गत कुलो पुरुष बिरेको र यसका पन्चायतका दिनमा ११ ई० र छन्दो सत्य २० ई० नाले विरेको कुलोसँग रुपमा निर्माण गरेको गरी सम्बन्ध गरिन। तर हिउने पानीको उत्तल काम पार्ने एक पुरुष रुपमा किन्नारा पानी उपभोक्ता गरेको पाइन।
२०६६/६७ सालमा सत्कृतिकृत जिल्ला पार्चालनबाट छ ९५ हजार सहयोग र ६२ हजार जैविक व्यवस्थाको अन्तर्गत खेतौं देखि परिधिम तक अन्तर्गत गाउँनालाई सिंचाई सुरक्षाको पुर्याउने उद्देश्यले तो सा योजना ना गरियो । उह योजनाको अन्तर्गत सम्पूर्ण विस्तार गर्नको लागि दैनिक विवाद उत्पन्न भएको थियो । दिनांक तर्फ पूरा विषयक यात्रा यसको पानी विपणनमा पर्ने समयमा बढ्यो पथों। अन्तर्गत तर्फबाट राजनीतिक एवं प्रशासनिक सहयोगमा पानी विपणन गरेको बस्त्र बालिका महत्त्वपूर्ण हो । तर केहीदेखि २० जा वर्षामा र लहाक्ष, परिस्थिति, अथवा संस्थानी व्यवस्था व्यापक खुल्को पानी विपणन र पुरानो सिंचाई क्षेत्राको स्वतंत्र ध्यानमा राखी अन्तर्गत क्षेत्रहरू यसको पानी विपणन बस्त्री गरेको या स्वाभाविक दिनी सहयोगी व्यवस्था जगाउने कि जनाउने समयसम्म खेतौं रेखा लाई फेदरल परिस्थितिहरू थियो।

अन्तर्गत र खेतौं योगी वस्ती आपसमा थलफल गरी ५५ लाई ५७ पा बुझ्दघरी ३ पानी अन्तर्गत गरी र १५ बेलाहरू मर्फत र संचालको लागि दिनेका सहमतीबाट सम्भावित पथो पहिले सम्भावित सुनसान अनुसार अन्तर्गतबाट एक सबसे लाभकरी युक्तो सामग्री समावेश गरिएको छ।

हाँ आएर यसको लम्बाई ५ कि मी चाल २० कि मी हुन आएको छ ।

सिंचाई व्यवस्था

धान जातीको लागि लगातार दृष्टमा प्रदेश सौंचालन गर्न सामग्री दिनेको लागि २ जनाको पानीलाई परिवर्तनी बिनु रहाँने र केरियाला जसले भोजन खाउने पानीलाई परिवर्तनी बिनु रहाँने अनुसार खट्टै युक्तो संचालन गर्ने गरिएको हो । तैनात कुनाहरू रेखाखंडको लागि पानी खट्टै गरिएको हो ।

कुनो संचालन

निर्माण दृष्टमा व्यवस्था खेतौं कोल्काता सम्म २ जनाको पानीलाई परिवर्तनी बिनु रहाँने र केरियाला साल भोजन खाउने पानीलाई परिवर्तनी बिनु रहाँने अनुसार खट्टै युक्तो संचालन गर्ने गरिएको हो ।

तर चेन्नाई, पानीलाई खेतौं खट्टै भएका फारासयाँ भएका विधानसभा (अध्यक्ष) योगी फारासयाँ लागि, खुलो मर्फत गरी, कुनो संचालन गरिएको व्यवस्था छ । तर ८-१० जनाको पूरा गर्न सबैको पानी खेतौं पाउँछ खाम गराउने व्यवस्था छ ।
कुलो संचालन

नियमित रूपमा आफ्ना वेतन वा साधारण सम्बन्धमा पारिधान तिरहुने र लागु विदेश भएको संरचनाको आफ्नो प्रभाव अन्तर्विकासको उपलब्धताको नेपाल अनुसार बढाउने कुलो संचालन गरिन्छ। बैनिक कुनै रेखावेदको नागरिक पालो बढाउनुहोस्।

तर पैदा गर्न, पालनको बढाउ निर्देशनले फारा ज्याहरार (अव्वल) बोल्नाको फाराकी लगी, कुलो मूल सर्दी, कुलो संचालन गर्ने व्यवस्था छ तर ५ जूनले पूरा गर्न सर्दी गराउने काम भएका खेतालाल प्राप्त तर गराउने व्यवस्था छ।

मर्मत संचार

नियमित रूपमा प्रत्येक वर्षको जेट्ट प्रोत्साहन र आवश्यक अनुसार समय समयमा पर्ने संचारको लागि गर्नुहरू। कुनैले अवस्था र व्यक्तिको अवस्था हर्षिन्छ तर एका र संचर नयाँ हुने पाटोज्याप्रमा कुलो मर्मतको काम पनि गर्ने गरिन्छ।

वैठाक

प्रत्येक वर्षको जेट्ट र कार्यकाल आफ्नै वैठाक व्यवस्थापन। उनको वैठाकमा संगठन वा समिति पुनरार्थितिहारको लेखाजोखा, नियम धार्मिक निर्देशको बागाऊ, विविधता तथा परिवार को निर्धारित, कुलो सरस्फाईको योजना र भित्र र ले‌वे काम हुन्छ। यस वैठाक मा पनि आवश्यकको बेला वैठाक बनाउने व्यवस्था छ।

समितिको परिधान

अव्वल नयाँ काम गराउने वापस एक खेतालाल छुट पाउने। वाचन र समितिको सविस्तरहरूमा छ एक गर्नुको लागि खेतालाल काम छुट दिने व्यवस्था छ।

२३
सिचाई व्यवस्थापन सम्बन्धी विचित्र घटनात र तालिम

२०३०(३) सालमा अमेरिकको केनेड विश्वविद्यालयमा आध्यात्मिक अनुसन्धानका अध्ययनसंग्रह भएको व्यवस्थापन गर्नु पर्दछ। यस प्रणाली व्यवस्थापन कृत्रिम जनप्रतिष्ठित विचित्र, विचित्र योजना तथा विचित्र कार्यक्रमको व्यवस्थापनको धेरौती व्यवस्थापन कार्यक्रमको व्यवस्थापन गराउन महत्त्व पुरा भएको भएको धेरौती। यस तालिमको एक आपस्मि अनुशंसा आवश्यक र पाइएको धेरौती नियमहरू विस्तार गरको महत्त्व पुरा भएको छ।

यसको नगरी र विज्ञानको केनेड विश्वविद्यालयमा आध्यात्मिक अनुसन्धान भएको विचित्र प्रणालीको अनुसन्धान गर्नु पर्दछ। भएको प्रणालीको व्यवस्थापन प्रणालीको धेरौती विचित्र विचित्र अनुसन्धानका उपलब्धिकाहरु र अन्नराज्यका परिचय गराउन महत्त्व पुरा भएको छ।
छौल्डो कुलो सिंचाई व्यवस्थापन
प्रणालीको
छोटकरी परिचय

तयार गरेका: श्री रेखन बहादुर पापके
उपभोक्ता संवैधानिक
२०४५/५ वटमार्ग

निर्माण अवस्था

१९५५ सालमा वराहेको बोलामोट धारी बाही गोरेटोको रुपमा स्थानीयसाधन बील र शीर्षको प्रयोग विभिन्न जैत्यिक, सामाजिक तथा अर्थिक समस्याहरुको सामग्री गर्दै ४ वर्ष पछि ७ जसे मित्र शोधको निर्माण गरी गाउँमा पानी न्याय सफल पाइएको हो। गाउँका २ जना समाजसेवीहरुको सक्षमता र प्रतिक्रियालाई यस सिंचाई प्रणालीको निर्माण परेर्नुहो।

कुलै निर्माणको लागि त्यति बेला प्राथमिकको रुपमा कल्पना आपराधिक र जिल्लाको बमकारी गाउँबाट प्राप्त दिए। त्यति आपूर्ति हुने समाजद्वारा पिछडिएका अवस्थायी समूह विवरणहरू जानिएको परिणाम र जुनिहरूको र ५,००० माहे तिम्बी निर्माण पार्नको हो।

आपूर्ति बजार पहिरा बोल्न, सुरुवात बोल्न र समेट्यो गर्न विशेष दक्ष तथा अनुभवी दिए।

व्यवस्थापन:

र पसिना बजार, भनेसबति वर्ष गर्छ शोटे पानी गाउँमा आए पुरोहित र उक्त पानीवा सहयोगहरु गरेका कुरामा गाउँबाट व्यवस्थापन बनेको त्यसै फाइन स्थल तथा लक्षण हुने बाबिल्ला र त्यसैले पानी विभाजन कसरी गरेका, कुलाहरु समाज र संघर्षको व्यवस्था कसरी पिलाउने बनने कुरामा बसी बैठकबाट सुरुवाट भन्नुको छ।

पानी विभाजन को आधारण गरेका, कुलाहरु संघर्ष र संघर्ष कसरी गरेका पानी निर्माण कसरी गरेको पनि विधायक छलफल गरी नियमान्तरको तयार पारियो।

२५
पानी विभाजन

पानीलाई कोट्दैपर्दछाँ मानिसलाई ज्ञात राख्दै। ३० हजार मान्यता विभाजन गरियो। कोट्दो साँस गन्ने सुदृढ़ जोडलाई एक ईन्च पानी कुलको पुरा पानीलाई १५ हजार मान्यता विभाजन गरियो। विस्तार नेपालको सुधार हुदै गर्ने र इन्फ्रास्ट्रक्चुर पनि विस्तार भयो। व्यावहारिक रूपमा व्यवस्थापनको कार्य क्षेत्र पनि विस्तार भयो। २०१४ सालमा १४ हजार (१३००) को पानी विभाजन गरी बाडी हुन्छ। २०१५ सालमा २० हजार मान्यता विभाजन गरियो। व्यवस्था नेपालको सुधार हुदै गर्ने कुलको पुरा पानीलाई बढाउने गरियो। पानी विभाजन गरी २० हजार मान्यता विभाजन गरियो। २०२२ वर्ष सालको विभाजन गरी २० हजार मान्यता विभाजन गरियो। २०३१/२०३२ सालमा ६ हजार मान्यता विभाजन गरी २० हजार मान्यता विभाजन गरियो।

पारिष्ठिक र भाषाले व्यवस्था

(क) मुख्य ब्राह्मण (अध्यक्ष) हुँदै ३५२। पारिष्ठिक र १ बेलास छूट।
(ख) जिन्द्रालाई हुँदै ३०० ब्राह्मण बराबर मान्ने ३ बेलास छूट।
(ग) सचिवलाई ब्राह्मण गरे बापत १/४ पारिष्ठिक बेलास छूट।
(२) धरी (सदस्यहरू) ने र० २५। जेयर जराबर्को क्षम गरे आफ्नो प्रविष्टी व्यक्तिले पाउने परिवारीपक्ष १/४ बेलालाई छुट पाउने व्यवस्था छ।

प्रत्येक वर्षको पाप ६ गते आपेक्ष नुस्का दसम्बर र ७ जनाढै धरीको पुनर्गठनक हुनै। प्रत्येक पवित्रिकारीहरूको कार्यवार्षिक १ वर्षको हुने प्रवक्षण भएका पत्रन परिक्षेत्री अनुसार पूरा नै समितिको पवित्रिकारीहरूलाई काम गराउने परिवारी पत्रक रहेको छ।

कुनै संचालन

धरी रोपी सक्षेपछि भावना देखि कार्यकर्ता समम जना गरे रहनेको। हिन्दूमा मातीको देखि आपात समम १ जना गरे रहनेको। तर पतेको व्यक्तिस्तर हुन नसके आफ्नो जारीमा पाउने गरिन्छ।

पाले दिनहरू नियमित रूपमा गाउ देखि कुलको मुख्य समम जानु पर्दछ र कुलको रेखाले गरे, सामान्य वृद्ध महिलाले पर्दछ गरे र वदि पाले नसकने काम रहेका मुख्यालयको बाट गरे र मुख्यालयको बाट अनुसार १०/१२ जनाढै व्यक्तिले पूरा गाउ। सबै काम पाए बेलालाई रूपमा मार्गदर्शन गरेका। त्यस सनमा नेवी व्यक्तिहरूको आवश्यकता भएमा मुख्यालयको भएमा जानु पर्दछ र काः भएका भएमा अनुसार अनुसार १ जेयरको एक जनाको दरमा बेलालाई जानु पर्दछ नागरिक जरियामा लै पर्दछ। भारतीय नेपाल जेबाल वर्षमा दुई पटक हुनेका वर्षीको कार्यकर्ता र हिन्दू पत्रको जेबाल पत्रिकामा हुनेछ।

अथवाको काम कर्त्तव्य र अधिकार

- कुनै पैरा गएमा पालको बाट अनुसार भारा जेबाल र उपविभाग भारामा लागू गरेका।

- पालको विभाग र वितरण व्यवस्था, वागमा लागाउ रूपमा, र हिन्दूमा एकमात्र पालको भारामा लागू गरेका।

- नियमित बा आवश्यक वेदिका जेबाल लागू गरेका।

- वेदिका संचालन गरेका।

- समितिको सदस्यहरूलाई आवश्यक निर्णय दिने।

- कुनै पापी संबंधित समस्याको अन्तिम संकेत दिने।

२७
- पानीको विभाजन र वितरण व्यवस्था, वर्षामा समालार दृष्टिमा, र हिउँग्च एकमूल्य पानो लिन्छन् व्यवस्था पिलाउने।

- निर्णय था आवश्यक बैठक बोलाउने।

- बैठक संचालन गरेन।

- समितिका सुस्थापनालाई आवश्यक निर्णय दिने।

- कुलो पानी समानिको भएको अन्तिम निर्णय दिने।

सचिवको कार्य क्रमव्य र प्रधानकर:

- कुलाङ्को लेखाजोखा राखबै।

- बैठकमा नेपाल वैज्ञानिक प्रस्तुत गरेन।

- आयोजनका निर्णय जनसङ्घ युवा पाठाउने।

- कागज पत्र सुरक्षित राखबै।

- बैठकमा गरेका निर्णयको माइन्यूट राखबै।

समितिको कार्य क्रमव्य र प्रधानकर:

- आफनो अन्तर्गत रहेका पोखरो हुँग्चमा समाचारको आवार प्रकाश गराउने।

- तौलिका समय सत्ताघर दिनो जरियालाई अभिलस्थ गरेन। सचिवलाई लिनु।

- आफनो अन्तर्गतका उपमोक्तकालाई पालो बटाउने।

- व्यवसायी सफा गराउने समय समाप्तमा आफनो अन्तर्गतका उपमोक्तकाल उठाउने एक बिन संपूर्ण कुलो सफा गराउने।
(क) क्लेडॉ कृत्ति सिंचाई व्यवस्थापन सम्बन्धी विभिन्न अवस्थात स्थानगत प्रभाव तथा लागि:

२०३९ वट ०४ नेपालको केन्द्रीय विश्वविद्यालय अध्ययन अनुसार एक वर्ष विद्यालय तथा सन्तान परीक्षा सहित शिखर प्रशासनीको अध्ययन गर्नु पर्ने एकहरू पर्ने प्रशासनीको प्रशासन गर्नु २०४१ नेपालको राष्ट्रिय नुमाखोटकको कृष्ण क्षेत्रमा अन्य व्यवस्थापन क्षेत्रमा प्रमुख हुने गर्ने बिजल्का जनप्रतिनिधित्व र कृषि प्रशासनीको समुहलाई स्थानगत प्रभाव तथा लागि प्राप्त क्षेत्र जुन गराउनु पर्ने गरी वेतन हटाएको रियो।

यस परिपत्र नगरी स्थानका क्षेत्रमा गायनाको गायनी अन्तर्गतका कृषि समुदायकाको पाणी स्थानगत प्रभाव गराउनु यस प्रशासनीको वीच छलफल गराउनु अनुभव आधान प्रवाह गर्नी तालाबी गराउनु पर्ने यस प्रशासनीको दिनु पाएको रियो।

यसस्तो किसिमको कार्यक्रम नेपालको केन्द्रीय विश्वविद्यालय अध्ययन नेपालको केन्द्रीय विद्यालय तथा शिखर प्रशासनीको अनुसार गर्नु गएको दिनो। यस्तो साधन भविष्यका कृषि र यस प्रशासनीका कृषि वीच सिंचाई सम्बन्धी र शासन विभागी पार्टी मित्र सम्बन्धी अनुभवको आधान प्रवाह गराउनु दिनु पाएको, भन्ने राष्ट्रिय जनतराफितब्द क्षेत्रमा यस प्रशासनीको परिवार गराउन दिनु पाएको महत्त्व पुर्याउन दिनु माथिएको छ।
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अर्गली राज कुल को संक्षिप्त विवरण

श्री दुर्गादत राममी
अर्गली राज कुली उ र स
तिल प्रसाद नौसाने
अर्गली राज कुली, साखिब

१२

४८

१५०४ वि.स. १८३० सम्प पाल्पामा राजा श्रीमाणी मुकुन्द शेरका राज्य रहेको थियो र उनी धर्माला राजा थिए पनि ऐतिहासिक आधार रहेको छ। यसै वेला अर्गली गा बि स बाह्र नु ९ केत्रमा श्रीकृष्ण गण्डकीवाट प्राप्‌त राज्यको भगवानको मूरि प्राप्त पर्नु पुरुष बिवरण गरी हो अर्गलीको बिवरण र निर्माण र बिवरणमा रहेको निर्माण र जस्तो फाउंट, फाउंट, तीव्रोग पांडो, तल्लो पांडो, र फाउंट, सपेंट आधार गरी हुन देखि नै (माटो पुरी के) आधार थालीले र पुरुष अनौचले एक पात्र मासामा हिस्सा पानी अलाने बिलाईएको थियो। यससमा व्यवस्था आधार लागभग काठको सीजे बनाई माटो पुरीलाई बिलाई आधार परिणत गरी पानीको बोडफाउंट लिलाउने गरेको छ। बोडफाउंट पानीको वितरणमा कोसै कोसै शोधन गर्न लगभग र निम्नलिखित आधार वितरण गरेको छ।

यस कुलको व्यवस्थापन संक्षेप बार्त गर्नेको लागि कुलको भेलिङहुँ जान समाप्त एउटा ५ सवरीय कार्यकालीन सम्पत्ति गठन गरि कुलको संपूर्ण क्रम गराउने निम्नलिखित परिणाम देखि चल चल र अन्य व्यवस्थापन प्रक्रिया फिलमाउन सो भन्ना वची उद्ध्वस्त प्राप्त समाहारको समितिको गठन पहाएको छ। जसमा निम्न पदहरूको व्यवस्था गरिएको छ।
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(ब) पानी विवाजन प्रक्रिया

पिपलपते मने ठहर देख युन बुविसम्प बुई जेलस्ला वरावरके पानी विड़ बुड़टाब फॉटलाई १०० मुरी पानी चिने r यूल सायोवाट रक्क्वास फॉट तरी १००० १००० मुरी पानीके हिसाब राशि हाल पविक सौंचो जनाडहरे था
(१) प्रत्येक वर्ष जेठ १ गते कुलाका योद्धाहरूको आपसमा बसी दैर्घ्यको नीति 
नियममात्र घरपट गरेको र नयाँ व्यवस्थापनीय तत्त्वको व्यवस्थापन गरेको आन्तरिक श्रेणी तथा 
वाहिकाली बाट कुनै मद्दत गरिने व्यवस्था छ।

(२) गर्दनपर देखिने पानीको बाँड फांडको हक प्राप्त गरेका पौडको 
काटो पुरी ३० को १ बेलाला खुटिनाम तरफ र गाँव पूरी ४० को १ बेलाला 
लीनसम, बालसाय र राजस्व तरफ व्याप्त भएको खुनो सुखार सफल 
कर्म परिवर्तन जन्राष्ट्र निर्माण कर्म लागे खुनो मर्यादान्तर 
र विवाद समेत हुनेछ। देखि दुर्नाट्यका कुनै धरे निर्माणस्तूपको 
अवस्थायमा आपूर्ण भएका गरी कुनै मद्दत समेत गरिने व्यवस्था छ।

(३०) दशतरी कुनै सफल कार्य समाप्त भएपछि आवश्यक १ गते देखि कार्यको ९५ गते 
सम्पात पानी देखि अन्य काम खुनाका योद्धागत २ जना पालो हानी 
व्यवस्था छ। साधै कुलाका गरु भने कार्य पनि जानेलाई खिले गरी उक 
व्यवस्थाको विवाद र पुनर्दृष्टि संस्कारलाई खिले गरी कुलाका गरु भने कार्य 
गराउने व्यवस्था छ।

२ (क) सिमाई व्यवस्थापन संचालक विपिन वापसी स्थानार्थ 
प्रमण तथा तालिम

यस राज कुला (केट्री कुमार नाईर) राष्ट्रीय राष्ट्रीय क्षेत्रमा पटक्य 
गराउने भएका अर्गिनिता अनुस्मान गरेको लाख विद्वान भएका 
अमेरिकी विद्वान खोल गोइर र खोल गोइर ध्यानबाट पाट हुनै 
हुनेछ। यहाँ हाम्रो कुलाको नमूनाको रुपमा पटक्य गराउने थप 
सुविधा समेत प्रचार गरु भएको छ।

(ख) यस कुला विरोधक गरेको भएको पटक अन्य थेरे जिल्लाका कुप्रण टोली 
विध राज्य संघ यहाँ ध्यान हाम्रो कुलाका व्यवस्थापन तथा पानीको 
बाँडफांड प्राक्रियालाई विवेचण महत्त्व राख्ने र विवेचने गरिने 
क्षण।

अर्गिनिता आउँदेख्नेको सुप १८ जना जलिएको थियो। खेलुङ र अर्गिनिता गरी 
२८ राज्यको टोली आएको थियो।
(২) সিংহাইকে সাধারণে রাজকুমার যোগ্যাপন সমিতিতে অন্য সামাজিক কার্য গরেরে সম্বন্ধে।

যদি রাজ কুলাকে যোগ্যাপন সমিতি সিংহাই যোগ্যাপন বিভাগে নিয়ম রাখা যে ছিল।

৩ সংবিধান সিংহাই যোগ্যাপনকার প্রাধিকরণহীন বাহির গই তামিল লিখে বংচিন গরেরে ছিল।

নন্দকুমার সিংহাই যোগ্যাপন সংস্থা এবং শাস্তি তথ্য প্রমাণ আন্তর্জাতিক সংস্থাগুলো তথ্যবাহী যোগ্যাপন বিভাগে অনুপ্রাণিত হয়েছিল।

৪ গৈর সরকারি সংস্থা যোগ্যাপন গরে সংবাদনা

ক্ষেপপন সংস্থার কার্য, সরকারি নিয়ম প্রাপ্ত তার বলে প্রকাশ ধরা যোগ্যাপন তথ্যের তালিকা ছিল। তিনিও মানবিক স্বত্বের সংস্থা করা সংগঠন দাঁড়ি নির্ধারণ করা প্রকাশ বিভাগে নির্ধারণ পার্থক্য হয়। তস্রো গৈর সরকারী সংস্থা মানবের মহাসাগর গরে সংবাদনা হয়।

ক্ষেপপন সংস্থার কার্য, সরকারি নিয়ম প্রাপ্ত তার বলে প্রকাশ ধরা যোগ্যাপন তথ্যের তালিকা ছিল। তিনিও মানবিক স্বত্বের সংস্থা করা সংগঠন দাঁড়ি নির্ধারণ করা প্রকাশ বিভাগে নির্ধারণ পার্থক্য হয়।

৪ কিসানকে অনুপ্রাণ ও প্রাধিকরণ বিরুদ্ধে

যে রাজকুমার প্রাণীকে এক্ট কর্মকর্তা নায়কে অনুপ্রাণ সংগঠন উচ্চত প্রশ্ন ও প্রাচীন প্রাচীন যোগ্যাপন এবং প্রাচীন প্রাচীন যোগ্যাপন বাহির বিষয়ে নায়কে বাহির হতে ব্যবহারের প্রমাণ হয়।

৩৫
किसानको अनुपच र प्रविधिको विस्तार

यस राजको सिंघाई प्रणालीको सबै वर्धको नामो अनुपचारी संगीत उचित प्रयोग र प्राप्तिलो व्यक्ति र आफ्नो पार्श्वको अनुपचारी विस्तार गरेका खाली व्यवस्था हुन सकेमा विशेष नै हाम्रो व्यवहारिक अनुपच र अनुपचारी देखि किसान नामगमा पु-थाई सिंघाई प्रणालीका विस्तार गर्न सकिने कृपया विश्वास राखेको छौ?

खिनकी केही वर्ष यज्ञा विशेष खिलाका सिंघाई प्रणालीवर्तक किसान, प्रविधिक, व्यवस्थापनक, र विभिन्न तहका प्रविधिक प्रकारको समूह यस प्रणालीको व्यवस्थापन पक्षको अनुपच र प्रविधिक वाडपुर्ख सिरिकाठायत हुने र सिबने गरी रहेको छौ?

गैरसरकरी संस्थाको विवासको नागरी उचित नीति नियमावली

गैर सरकरी संस्था स्थापना गर्न सरकार पक्षकार लिबिने नीतिको आवश्यकता हुन्छ। त्यसको विधान र कार्य विविध स्वतंत्र रुपमा हुनु पर्दछ। आवश्यकता अनुसार सरकारेको नियम आवश्यक कार्य प्रविधिक विधान नै आवश्यक साहयको व्यवस्था गर्नु पर्दछ। साम्य रुपमा त्यस संस्थाले गरिएका कार्यको हानिका हारी सलाह र सुमाव दिनु पर्दछ। जसबाट गैर सरकारी संस्थाहरू भौलाउन सक्कृयन र उपहारबाट देश निवासको दुनौ योग्य भए र सरकारले लोकहरूको संशोधन सक्कृयन र देश विकासको तरिका निर्देश जनजीवन सँगृहीत गर्न सक्छ।

तस्मा गैर सरकारी संस्था स्थापनको आवश्यकता बेलिन्छ। यसलाई खाली स्थापनहरूमा गैर सरकारी संस्था खोला ना स्थापना गर्न प्रदेशको मार्ग आवश्यक छ। त्यसको नागरी उचित नीति नियम समेत तयार पार्न जरिहरे बेलिन्छ।
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केही नामको अन्तिम दिन २०४८/०८/२४ मा गरी १४ रामनवमी कार्तिक मासको रेखाय सम्पन्न भएको जस्ता नामको जेरी मानिस नेपालीले।

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छत्रिस मौजा सिंचाई व्यवस्थापन
प्रणालीको छोटकरी परिचय

तयार गरेका: श्री एम नाथ रायअसा
सम्पादक

परिचय:

रुपन्देही जिल्लाको उत्तर पूर्व बुटवल वन्यजनस्तरिका बेलिक बक्सिया प्राकृतिक जलयुगम पनि आकर नागर, जनान-न्दन, करेया र महबुब गा बि स अन्नगतका ४४ मौजाहरुमा करिन्छ १० हजार (दशहजार) विगाह जपनको निपटत सिंचाई सुविधा उपलब्ध गराउनेका छ। हाल आएर ३६ मौजाहरु ४४ मौजामा सिंचाई सुविधाका वित्तप्रबंध पुर्यो कर्माचारको कार्यालय बुझाउ। हिसाबमा आफ्नो कार्यालयमा विभिन्न पदाको कार्यालय विभिन्न वर्षमा २०३९ र २०४३ माघमा भएका सरकारी डिप्लोमात्मक स्तरको स्विट्जर तथा जनासम्म स्तरको स्विट्जर तरल निर्माण गरेका १६ र ३६ मौजामा संयुक्त जीवन बनाउन मान्ने गर्ने हिस्सा बाध्यता गर्ने व्यवस्था निर्माण गरिएको हो।

सरकार यसै योजना आफ्नो अनुसार राज्यमा ६,००० विगाह जपन पुनियमाय (स्वतन्त्र) प्राप्त गरिएको २०३१ मा डेखि उक्त जपनको आवश्यक गरेका गरेका गर्दछ।

यस सिचाई प्रणाली अन्तर्गतका कृपकारको निभाउन उचित पानीको उपाय, हक दिलो संरक्षण, न्यायिक पानी वित्तप्रबंधका प्रणाली उपनिषादका पानीमा विक्षिप्त गर्ने, उनकी नै रूपमा आफ्नो विवरण राख्न संस्थावर्गमा एक काय्यकारिणी समूहको गठन गरिएको छ। उनले सम्मानित सम्पादक, प्रणाली, सम्पादक, स्थापन २ माहा निर्माणस्थलका र १ माहा समाप्त समय रहन-खतन। काय्यकारिणी समूहको जामाख २ माहा नेपाल पुक्तियाङ र २ माहा सेहत तथा पर्यावरणको कार्यकारिणी रूपमा रहन-खतन। जामाख ४४ मौजामा एक एक माहा पुक्तियाङ र जामाख हुन्छ।
कार्यालयी समितिक पाठधारीहरू ले क्रम गरे वापस लिने पारित र पताके सुविधा

समाप्तिले छनौटको ४० जना बेलालाई पाउने रकम भराउ रामिनीफङ्क पाउँछ।

उप समाप्तिले २० जना बेलाला वराहरको रकम पाउँछ।

सबस्त संचालनको४५ जना बेलाला वराहरको रकम दिइन्छ।

उपरोक्त पाठी उल्लेख पाईको छूट वाहनको ४ विगाह (आफू जमीन) सम्पत्ति कुसाही पिनाहा दिने व्यवस्था छ।

कृषि प्रशस्तिको पानी ४ विगाह सम्पत्ति नीति बेलालाई कुसाही पिनाहा हुन।

चौकिरार पेटु पुलिसकारहरूले पाउने तलब साधारण सपाटे निर्णय गरे अनुसार दिइन्छ। हाल पुलिसकारहरू रु ६,०००। र चौकिरारले रु ४५। वित्त प्रधान तलब पाउँछुन्।

आम सपा

- श्रीमत मोी निष्पादन व्यवस्था प्रणालीमा सविभाजन भाषिन्छ निम्नाय आम सपा हुन।

- आम समाधानको बाजार पुरक संख्या वैश्विक क्षेत्रको ६२ प्रतिशत हुन पाइँदै।

- २४ विगाह खेत छनौट भने मोी जा व्यक्तिको एक बेलाला तैयार विविध पपरान्मा घोरे जमीन हुने व्यक्तिको यसमा अनुगतत्व भन्ने जुटाउने व्यवस्था छ।

४०
४४  मौजाबाट छनौट पाई आएका जीवन बुनारा प्रतिनिधिको समुहलाई आमलमा परिनाम छ।

यौजहाजाबाट आएका प्रतिनिधिको नाम संकलन कार्य लक्ष्यीन कार्य कारिनी समितिले गर्ने व्यवस्था छ।

साधारण समा:

४४  मौजाबाट छनौट पाई वा निर्धारित पाई आएका मुख्याचार्यु वा नीलले प्रतिगम दुपारा ज्ञाताय दिइ धारा व्यक्ति र कार्यकारिणी समितिका संगृण सबैशहर्षको भेलाउँगै साधारण समा पानिन्छ।

साधारण समाले माध्यमले पहिलो सलाह केहीलया ४१ गतिकाल बो वहूँले सफेदहरु पदघोषात कार्य शक्ति पाएका उपयुक्त व्यक्तिहरूको पूर्व सवर्णीय निर्णय उग समितिले गठन गर्दछ।

यस निर्णय उग समितिमा साधारण समा बा कार्यकारिणी समितिका प्रतिधिकारीहरू बसन पाउने छैन।

संकटको अवस्था बारेको आमसमा सामान्यतया वर्षमा १ पटक मात्र हुन्छ।

कार्यकारिणी समितिर र साधारण समाला सबैशहर्षको समावेश, उप समावेश र सबैशहर्ष साथिपनको प्रति आफ्नो मत बिन पाउने व्यवस्था छ।

विधान वर्गको उपमुख्य वर्धिकार उपमुख्य हुन पाउने छन।

केन्द्र विभाजन

४५  कुनै पानीको संगृण केन्द्रलाई ६ केन्द्रमा विभाजन गरिएको छ।

लेखकको ९ केन्द्रमा केन्द्रीय सबैशहर्षको उपमुख्यसरस्वत प्रतितक्षेत्रबाट खरानाएक आएका मुख्याचार्यु पात्र हुन सक्ने छ।
हरेक क्षेत्रका क्षेत्रीय सदनमा निर्वाचनको लागि संबंधित क्षेत्रका आम समाधान प्रतिनिधित्व गर्ने मतदाताहरूले पात्र पत्र दिन पाउने योग्य छ।

आम सभा

35 कुनै सर्मेलने गुप्त सभा पनि एक महिना पहिले तिने पौजा होन्छ। आम सभाको लागि पितक निर्माण गरेको नियमपूर्वक एक पौजाहरूका मुख्तारलाई कार्यकारी प्रतिनिधि सर्मेलने सुचना दिइँदै।

सुचना प्राप्त पएको पिलिले ५ गिन मित्रमा दिदोका संपर्क उपमुख्याध्यक्षका मुख्तारले सुचना गर्नु पर्ने योजना छ।

पौजाका र प्रतिनिधिको निर्बन्ध गरी सो को प्रमाण सहित ३५ कुनो पानी सर्मेलना माध्यमो योग्य साई क्रिया गरेको मुख्तारले पत्रकार पत्रकार नगरु गर्न छ।

समाप्तिको काम कर्त्तव्य र अधिकार

आम सभा साधारण सभा र कार्यकारीको वैठक देखाउन साजाउन।

३५ पौजा अन्तरगतको केहीहरु, कान्छा दुर्गामा परीक्षण गर्ने कुला पानीको 
को फल्ट हुन अविश्वसनीय सम्बन्धमा पौजा मुख्तारले् र क्षेत्रीय 
सदनमा हरूको मुख्तारले पात्रमा लागू गर्ने।

समस्या समाधान खुन नसको एक्षरका समाप्तिले तै न्यायपरिल कर्त्याना 
गर्न।

समाप्तिको अधिवक्षको प्रस्ताव, लेखापरिसर निर्वाचन सम्बन्धमा 
वाहिका आम सभा र वैठकको अध्यक्षता गर्न।

कार्यकारीको सम्पर्कमा वैठक लागि विभिन्न विध्यमा उद्देश प्रस्तावको 
नियम एक विषयक मतमा समाधान भएका निर्णायक बन दिनेको 
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लपाख नसका कृषि सरस्फाई कार्य र पानी निर्माणकाय कर्मचारी तथा प्रतिनिधिपत्र या सामाजिक तथा लक्ष्यक्षम ताला साथ न्याय सेवा कार्य गरेका नसार्ने र गर्ने लगाउने。

लाखद, केपायस्क र प्रकृतिवा र बीमारीसहि आफन्ते आफन्ते काम कर्ता पुरा गरे नागरिक र रेखेख गर्ने र यीन अन्न की ताला तथा बाटो लागि सुधार र सल्लाह हुने भएका मार्ग समस्तालाई कार्यकर्तारी बैठका राखी त्यसको निर्णय अनुसार कार्यात्मक गर्ने।

धान, गडहु र म्याकेचीको लागि सिंचाई आन्यका नुसार विशेष महानायकहरू नहर सङ्गालन गर्ने सिफँसिलामा आन्दोलन अनुसार कायम र भोले र चैपरी आउने समय समाधान गर्ने।

४

उप समाप्तको कार्य र अधिकार
समाप्त विवरणको अवस्थापत्र र नीतिलाई कार्यवाही गर्नको लागि वस्त्रको वैठव र सामग्री समाप्तिका गर्ने।

(क) सिंचाई व्यवस्था सम्बन्धी विभिन्न आवश्यक स्थलात प्रमाण र तालिम:

२०४७ सालमा महाकाली सिंचाई योजनाको नसकी सम्पत्तिकात्र कार्यक्षेत्रहरु, परामर्श नदु ईन्जिनियर, गूढ अधिकृत, कोइनिस्ट्र, जे. टी, जे. टी. ए. र ए. जो गरी ३२ जनाको समूह प्रमाण आउदा दिए।

२०४८ सालमा सिंचाई विभाग र आई आई एप आई को संयुक्त आयोजनामा आयोजना सिंचाई योजनाका १२ जना क्रम्य समूह र कार्यकारीहरू पाँच तालिम र स्थलात प्रमाण आउदा पाएको दियो।

२०४९ सालमा आपोक्त काठमाडौं अयोजित प्रमाण वेबसाइट आएको ईन्जिनियरहरूको टोली।

२०४९ सालमा काठमाडौं ईन्जिनियरहरूको टोली।

२०४९ सालमा अमेरिकन ईन्जिनियर टोली।

४३
(६) सिंचाईको साधारण समितिको माध्यमवाट भएको अन्य कामको जानकारी

२०४४ सालमा श्री ५ महाराजाधिराज सरकारको वेतन वित्तीय राजनीतिक सम्बन्धी लाभ लागू (२०४५ सालमा) वा विभागका वर्ष पारिरहेको र २०४६/४७ मा आफ्नै लाभको अन्तिमी २ लाखको साधन र २ केटा र एक बैठकहरूलाई पारिरहेको हुन्छ।

६ संबंधित सिंचाई प्रणालीका पर्वतवाहिनीहरू बाहिर गएको सिंचाई क्षेत्रमा व्यवस्थापन तालिम हुने र विशेष गरिएको हुन्छ।

२०४३ सालमा आफ्नै आफ्नै तथा कुरौ तथा भन्दा विज्ञान अनुपातको संस्थानको संयुक्त लाभवाहन विभागको प्राचीन वेलभएको र नेपालका सिंचाई विभागको वर्तमान गरिएको हो। यसको सम्बन्धलाई सभापति र सचिवको पालन दिँदै गएको र लिनु पारिहरू रियो।

२०४५ गरी अविश्वसनीय बारेमा पारिहरू गैर सरकारी संस्थाहरूको केन्द्रवर्ती लागू भएको पालन पारिहरू भएको निर्णय दिइयो।

१० गैर सरकारी संस्थाबाट बनाउने संपादनाः

बजार, बेलख विभिन्न समस्याहरूलाई समाधान गर्ने सिंचाई व्यवस्थापन अनुरोधको लागू परिपक्वता आफ्नो लागु बनाउ र तर यस अनुपातको अन्तर्गत विभागको विभागको अन्तर्गत (श्री ५) को सरकारको संस्थानी संस्थान, सिंचाई प्रणालीहरू, र विभागवाहिनी संस्थान संगठित) एवं आयोजनहरूको सिंचाई प्रणालीहरू, र विभागवाहिनी हरूलाई लागि एउटा संचालनको दृष्टि प्राप्त र लागि संपन्न देखिन्छ।
किसानहरुको अनुपव र प्रविधिको विस्तार

पानी विभाजन र वितरण, परम रचालन र संचालनमा स्थायी रूपमा परिवर्तन व्यवस्थापन समयमा र तिनको समयमा, व्यवहारिक रूपमा नागू हुन सक्ने स्थायी रूप र साधनवाट तयार हुने संचालनको बारिया सत्ताह दिन सङ्खेय नीति निर्माण गर्न सक्ने जस्ता अनुपव र अनुपव वर्तमान जानकारी गराइन सक्ने।

योद्धा लगायत भर्पर्दो जोखीम संचालनको निर्माण गर्न सक्ने जस्ता अनुपव र अनुपव बारे जानकारी गराउन लाग्ने।

सेवा जोखि र अनुपवस्त रूपमा नीति उपयोग गर्ने नीति निर्धारण प्रक्रम र नागू गर्ने तारीखको अनुपवको सल्लाह दिन सङ्खेय।

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

बुङा र उदार बालको नीतिको निर्धारण हुनु आवश्यक छ। संस्था चर्चाको लागि सरल नीति प्रक्रम र निस्तार प्राप्ति न हुने बुङा र फङ्गफङ्गबाट मुन्न हुने विविधता विधान हुन आवश्यक देखिएको छ।

गैर सरकारी संस्था संचालन गर्नको लागि आवश्यक प्रावधिक रहस्यो र आर्थिक प्रतिसाहन स्वरूप अवलोकन हुने व्यवस्था हुन जरूरी छ।

संस्थालाई संचालनको लागि आवश्यक पनि साहन रूपमा पर्दा पर्ने गैर सरकारी संस्था विकास गरी आफ्नो बुद्धिमत्ता उपयोग सक्ने छै। नेपालजो राजन आवश्यक तालिका व्यवस्था हुनुपने देखिएको छ।
पिठुवा सिंचाई व्यवस्थापन प्रणालीको छोटकरी परिचय

तयार गरेको: जयेन्द्र कुमार बेपुँ, कृष्णकुमार खुंवाङ, सद्यक
तिलक प्रसाद धनेन्द्र, दशाय खुंवा उपदेशी, सद्यक

श्री ५ को सरकारको लघु सिंचाई योजना अन्वैतिक २०३४ सालमा कायर खोलको मुहूर्तवाट नहरको बीच निर्माण पएको हो। २०३९ सालमा पिठुवा जन प्रतिनिधिहरूको अनुरोधपत्र ३ को सरकारको प्रेक्षक जाखालेको निर्माण गरियो। यो नहरले ३० वेदिक ३५ विघा जमीनमा बिजोलाई सुबिधा पुलिएरिएको ढिको। २०३९ सालमा बेखिली जाखालेको दिनस्तार पनि र करिहर ६५० विघा जङ्गल जमीनमा सिंचाई पनि। २०३९ सालमा १७ जाखालेको निर्माण पुरा पनि।

२०३९ साल सम्म जितका लागी उसका तीसरा पण भए सिद्धान्तकाल नहर संचालित ढिको। यो हाँ, सातका यस नहरको बाबा नेपाल सयूर्य गर्नको लागि एउटा बाबा व्यवस्थापन समितिको गठन पनि। तत्परतात ड्रिप: सबै जाखालेका बाबा समिति गठन गरियो। बाबा समितिहरूको समनबाय, पूरा नहरको व्यवस्था, मर्मत संपार्कको लागि सरकारी सहयोग गुटाउने उद्जोगले स्थानीय गाउँ विकास समितिको आध्यक्ष पदने ज्ञान रहनेको गरिए। आय मोहिनीहरूत उपाध्यक्ष र सचिव छनौट गरी तूल सुझावस्था समिति गठन गरिएको छ। सबै बाबा आध्यक्ष पूल समितिको पदने सरकार रहन्नु। बुढकाली बर्षात ३ जना मनोनित सवस्त्र राख्ने प्राणप्रमाण ४। समितिका सदस्यहरूको अद्यावधि २ वर्षको हुनेका。

मूल समिति संगठन तालिका

| अध्यक्ष | १ |
| उपाध्यक्ष | १ |
| सचिव | १ |
| सवस्त्र | १७ |
| मनोनित सवस्त्र | ३ |

जम्मा: २३

४६
शाखा समितिहरू

शाखा समितिको काम कर्त्त्व

अन्तर्गतका किसानहरूलाई समान रूपमा पानी वितरण गर्दै

पर्नत संचार गरेइ गराउने, अनुनिश्चित व्यक्तिको नेपाली वनप्र जरियालाई गराउने

शाखाका समस्याहरू पूल समितियाँ प्रस्तुत गरने

पूल समितिको निर्देशनको पालना गर्ने

धान रोपी सङ्केतक तालिका बनाउने, पालो अनुसार पानी वितरण गर्ने

आफुनेछ शाखा अन्तर्गतको हिसाब रु हुने क्षेत्रमा अड्डा संकलन गरी पूल समितियाँ

पानी माग गर्नको लागि वटनाली गराउने

पूल समितिको काम कर्त्त्व

- शाखा हरू नीच समन्वय काम गर्ने

- पूल नहरको पर्नत सुधारको लागि स्थानीय र बाह्य शोध बुझाउने

- आधिक शोध बुझाउन र जन समवेत लागाने गराउने

- श्री केन्द्रका बाहेर सरकारी संग संस्कृति सहयोग बुझाउने

- नहरपाट्र उपलब्ध पानीको अनुपालन गरी किसानको व्यक्तिको कारना पिलाउने

- पूल नहरपाट्र लोकप्रिय हानी नैवशाली पर्नत खण्डन गरी समस्याको समाधान गर्ने

- शाखाहरूलाई हुन नसकोम भएको समस्याको समाधान गर्ने
विधान अनुसार को व्यवस्था र कार्यालय गरे।

सिंचाई व्यवस्थापन बिधिमा ताउजाट स्थलात प्रभाव तथा तालिममा सहयोगी

सिंचाई सम्बन्धी बिधिमा सरकारी, नैर सरकारी संग संस्था र कृपालिक प्रभाव आउने गर्नुहोस् प्रभावमा आउने युक्त तार्किक व्यवस्थापन द्वारा संगठित पानी वितरणमा कुनै किसिमको योजना नरेको र सिंचाईलाई आफ्नै संस्थालाई कृपालिक प्रभाव गरी गरेका छन्। यौगी पानीलाई पनि आपैसो गरी सिंचाईलाई राप्रेरण गर्न फिलाईएको छ। याबाट गर्दा आफुले अवसरको अनलाई पानी ल्याउँछ पनि आफुले पनि अघि किसानहरूलाई याबाट बोल्न बाटो बिनु पगिन बाटने सिंचाईको कृपालिक प्रभावमा सेषको क्षेत्रमा याबाट गरिएको हुन सकिएको हो।

पानी कृपालिक संस्थाली बैठी पनि कृपालिक राप्रेरण पनि कृपालिक राप्रेरण छ। यसलाई अनलाई कारण यसलाई व्यवस्थापन पक्षलाई आफ्नो अनलाई यसलाई अघि प्रभाव हुन पर्ने हुन सक्छ।

हालसम्म आएको बिधिमा राष्ट्रिय, अन्तर्राष्ट्रिय समुहहरूको प्रभाव यस प्रकार छ।

(क) अन्तर्राष्ट्रिय सिंचाई व्यवस्थापन संस्थाली प्रतिनिधि डा. प्रशांत प्रधानन्युको प्रतिनिधित्वमा आएको प्रभाव टोली।

(ख) अन्तर्राष्ट्रिय सिंचाई व्यवस्थापन संस्थाली प्रतिनिधि डा. प्रशांत प्रधानन्युको प्रतिनिधित्वमा आएको भूमिका सिंचाई र धर्मप्रचार कार्यकारिक प्रतिनिधि टोली।

(ग) डा. प्रशांत प्रधानन्युको प्रतिनिधित्वमा प्रभावमा आएको रीतकको टोली।

(घ) नेपालवर्गमा विश्व विद्यालयाले यहाँ नेपालको लागि अन्तरराष्ट्रीय कार्य गर्न आउनु प्रयास गरेका नेपाली बिश्वविद्यालय।

(ङ) तिरियलो तौरमा सिंचाई प्रणालीको किसानहरूको २ पटक प्रभाव तथा तालिममा

(घ) हाइड्रोलॉगिस्ट सिंचाई योजनालाई किसानहरू।
(७) रूपवेष्टी छत्रिस पौजाका कृष्ण प्रतिनिधिहार।

(८) वाल्पा आर्याका कृष्ण प्रतिनिधिहार।

(९) अन्तराणिष्ट दिसंबाई व्यवस्थापन संस्थाको र सिंचाई विभागको संयुक्त सहयोगमा कृष्णलब्धि बायागण्ड्रा प्रणालीका कृष्ण प्रतिनिधिहारात प्रमण।

(१०) एकोसियमन आर्यनाइजर टोलीहर।

(११) आपेक्षक कम्फ्लिकता आयोजित प्रमण कार्यक्रम अन्तर्गत बंगालवेशका सिंचाई दीर्घजिनियरहर।

(१२) ओपरेसियर टोलीहर।

(१३) जिल्ला सिंचाई योजनाका प्रमुख दीर्घजिनियर टोलीहर।

(१४) नेपालस्थापको विश्व विशालमा पड्ने विषायको श्री त्रिलोक्य पान सिंह प्रधानको सिंचाई व्यवस्थापन प्रणालीमा अनुस्मारक पैठेको।

पाथि उल्लेखित टोलीहर्ले व्यवस्थापन प्रक्रिया छलफल र प्रणाली निरीक्षण गर्नु पर्याप्त थियो। यसको अवधि १ वेखि ७ दिन सम्प्रभु रहेको थियो। यस वाहेक अन्तराणिष्ट सहयोग संस्थाहरुका प्रतिनिधिहरुको पटक पटक निरीक्षण भएको छ। यस प्रक्रिया ले प्रमण तथा तालिमको बुझाल २०३७ साल पन्द्रा पक्षिक पर्याप्त थियो।

४९
3 सम्पूर्णत सिंचाई व्यवस्थापक पदाधिकारीहरू वाहिर गएर तालिम दिने र लिन गरेको

(क) अन्तरराष्ट्रीय सिंचाई व्यवस्थापन संस्था र कृषि तथा पालन सौंप अध्ययन संस्थानको संस्थानकार कार्यकारी प्रबंधक नेपालमा सिंचाई व्यवस्थापन वर्गे कार्यशालामा गएर २०५३ साल निम्नवर्ग भरतपुरमा यस सम्पूर्णता अध्ययन गरेर लिनु पाएको थियो।

(ख) सिंचाई विभाग तथा अन्तरराष्ट्रीय सिंचाई व्यवस्थापन अध्ययन संस्थानको संस्थान संस्थानकार सरकारी संस्थानको सहभागिता र व्यवस्थापन विभाग राष्ट्रिय कार्यशालामा गोपीनाथ (वैशाख १८, १८, २०५९ काठमाडौं) पूरा सम्पूर्णता अध्ययन गरेर लिनु पाएको।

4 गैर सरकारी संस्था स्थापना गरेन संभालना

(क) २०३१ देखि २०४९ मासामध्ये १८ वर्ष यस संस्थाले नहर संचालन गरेर आएकोले सिंचाई प्रणाली प्रति जिम्मेदारी बढ्नु स्वाभाविक हो। पाइने वितरण प्रणालीमा नियन्त्रण र तथा समय अनुकूल कम गरीर्नु प्रायद यो व्यवस्थापन प्रभावलाई पाएको हो। किसानहरू अनुशासन, संगठित रुपमा कार्य संचालन गरेर किसनको कार्य कमतरको विकास गरेको थिए।

(ख) तत्कालीन श्रेणी सिंचाई प्रणालीमा पाइनौट खोजेको रूपमा गैर सरकारी संस्था स्थापना गरेन संभालन रहेको खुरामा विकस्त हुन सक्नु हो। गैर सरकारी संस्थाको अध्य अनुसार संस्थागत विकास गर्नको प्रयास सम्पूर्णता स्वस्थहरूको उसीत तालिम र सहयोग उपलब्ध पाएको खण्डमा नृपालको रुपमा विकास हुन सक्यो खुरामा आशावादी छ।

5 किसानको अनुभव र प्रशिक्षको विस्तार

यस नहर संचालनको अनुभवलाई संगठन प्रसार गरी सम्पूर्णत लाप पुढौएन यस अध्ययन स्वस्थहरूको छात्रहरूले तालिमको व्यवस्था पूर्व दिएप्राय यस संस्थानको संस्थाले वस्तीको व्यवस्थापन तथा विभाग प्रणालीमा सुधार व्यवस्थाको साथै अन्य सम्बन्धित किसानहरूको समाधानमा समेत ठुलो टेक पुनः सक्ने लक्ष्य छ। हालाँकि यस संस्थाको यहाँ व्यवहारिक अध्ययन र अनुभवको विकास गर्न अन्तरराष्ट्रीय सिंचाई व्यवस्थापन संस्था (आई एस एम आई) मे एक केन्द्र स्थापना गर्न लिएको खण्डमा हालो सिंचाई व्यवस्थापन सम्पूर्णता स्वस्थान विकास हुने दियो।
गैर सरकारी संस्थाओं विकासको लागि उचित नीति नियमावली तयार पानेसुप्रभाव

गैर सरकारी संस्था संचालनका लागि ऐतंतिक रूपमा नीति नियमावली बनाउनेव्याख्यान निरुपण पानेकुदायः

संस्थाहरूको पारस्परिक सहयोगद्वारा स्वतंत्र रूपमा आफ्नो आफ्नो स्थायी परिस्थितिसम्म अनुसार जनताको जनहाउन अनुकूल संस्थाहरूको उन्नती गर्न पाउने खालीको समवेतान हुन आवश्यक छ।

संस्था संस्थामा प्रतिष्ठापनार हुन सक्ने प्राध्यापन हुनु पर्दछ।

हाल खुनी न कुनी रूपमा संस्थाहरू संपर्कको रूपमा बार्ता गर्दै आएका समावेशको व्यवहारिक अनुसूचनालाई समवेश गरी नीति तार्किक हुनु पर्दछ।

प्राथमिक पक्षीने व्यवस्थापन पक्षमा जोडा से वही स्थापत्य पुरुषांने हिसाबको नीति नियम तयार हुन पर्दै ७५७।
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<td>60 92 144</td>
</tr>
<tr>
<td>16</td>
<td>16</td>
<td>29</td>
<td>38 9 32</td>
<td>83 2 4</td>
</tr>
<tr>
<td>जन्मा</td>
<td>1767</td>
<td>1767</td>
<td>312 4 70</td>
<td>82 3 4</td>
</tr>
</tbody>
</table>

नोट: योजना गुरु गदाको कुल क्षेत्रफल 6100 है सिंचाई विघामा को अंक व्याख्या।
सिंचाई क्षेत्रमा गैससको नेटवर्किंग

संभावना

सारांश

डा. शम्भु प्रसाद दुङ्गाना

नेपालमा नौरं सरकारी संस्थाहरूको पहल्व र प्रधुन्त व्यवस्थापन, विभागीय व प्राध्यायक रहनु, तथापि समस्तको राष्ट्रीय परिचालन र ग्रामीण स्थानीय सरकार राष्ट्रीय काम गर्न सक्नु भएको छ। यहाँ प्रत्येक ग्रामीण स्तरमा सेवा प्राप्त गरिने र गरिने उन्मूलन गर्न सक्ने क्षमता पाइने देखाउन थालेको छ।

गैर सरकारी संस्थाहरूको संसाधनको ढुङ्क मुनि साथै नेटवर्किंगको आवश्यकता पाइन गरिसौं थाने छ। एउटा जो बिजलीको नेटवर्कको उद्देश्य एक अनुप्रयोग नेको आवास बढाउने, कार्यलयको प्राप्तकारिता व्यापार, नाताका नागरिकता बढाउने जस्ता कार्यको लागि दुर्गम नगरको प्रवाह विकासका लागि राष्ट्रीय वातावरणको सुन्दर गर्ने रहिने छ। नेटवर्किंगको प्राप्तकारी प्रवाह विकासका लागि एउटा जो बिजलीको प्रबन्धन, बिजली फार्म, योजना बद्दू बेलिको र यस्तै कृप्तक (बिझला र कृप्तका) ने लागि गर्ने जस्ता कार्यक्रमहरू बुझाउन गरिने छ। सिंचाई क्षेत्रमा हालसम्म रहेका कम गैर सरकारी संस्थाहरू कार्यरत छूनौ नेटवर्कको धेरै भएको छ। नेपालमा वित्तीयको विकास र व्यवस्थापनको सम्मान नै सानो नीतिहास छ। यस पानीमा हालो सिंचाई विकास एवं व्यवस्थापनको प्रयासमा कृप्तक समुदायको यस लागि अनुपात निर्धारित पाइन पूर्वायो छ। एकैतिर हिसाब समुदायहरूको सिंचाई व्यवस्थापनको लागि नामुन अनुपात सरकारी स्तरमा पोखरेको भएको हो। सिंचाई प्रणालीको नेको उपभोक्ता टेक्नोलॉजीको विकासमा बहुत पुर्याउन सक्ना पने जस्तै र रस्ता किसान उपभोक्ता समुहलाई समय सापेक्षिकता साधन र लिगि बनाउनु सरकारी एवं बुद्धिजीवीको प्राप्तकारो जैसौ छ। सिंचाई प्रणालीहरूको व्यवस्थापन, संचालन, मूल्य संचालन एवं शील परिवर्तन राजकीय कृप्तक, उपभोक्ताहरूको समूहलाई संचालन विकासकार गर्न सक्नु हुने लागि यस्ता समूहलाई कार्यक्रमहरूको लागि बाँट्ने स्थानित्व, उत्तरदायित्व, संचालन आवश्यक सम्पूर्णता प्रवाहीकरण काम गर्न गरि अनुपात निर्धारित पूर्वायो छ। किसान उपभोक्ता समुहलाई पनि सक्य हुन सकेको गैर सरकारी संस्थाहरूको दुर्गम निक्षेप तपाईंका गैससको एउटा नेटवर्क जनेको बन्नेका बन्नेका एक अर्को अनुपात र समस्त सामाजिक उपायहरूको आवास प्रवाहात लागाइ-बन्नेका छ।
नाफ संस्थाको ढावामा गैर सरकारी संस्थाहरूको स्थापना व्यवस्था क्षेत्रमा सलगन हुने सक्ने सम्भावना

हताराम बैच्च
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परिचय:

यो कार्यक्रम नेपाल एनएफएफँ फाउंडेशनलाई नाफ भनिएको हो । यो कृषकहरूको कृषि वनलाई समाधान पु-मिस्त्र बनेको एउटा गैर सरकारी, नाफा आर्जन गरेको, विज्ञान र प्रौद्योगिकी प्रेरित संस्था हो । यो संस्थाले बाल गरी विकासको भागामा भाग नेको जनतहरूको सामूहिक प्रयासमा मारी उठाउने र कृषि वनलाई चालो निर्माण समूहहरूका आपसमा तैयार विकास गर्ने माध्यममा राखिएको हो ।

कृषि वन के हो?

विभिन्न क्षेत्रहरूमा नसिएको वनलाई पुनर्स्थापना गर्न वनना बिद्युत रोपाली लाईक लाईक लगाउने रोपाली बाली स्थापना कार्य १५ वर्ष सम्पन्न अन्त्य भएको नाको गरिएलाई लगाउने र यस परिपक्व सेवा विकासको कृषि वन प्रायोजनको हो । हाँ र देखाइमा दैनिक र केही आफ्नो आफ्नो अन्त्य भएको नाको लगाउने र पुनर्स्थापना गर्न नसेको जनतहरूको व्यवस्था गरिएको हो । यो विकासको कृषि वन प्रणाली हो । यो व्यवस्थापन नेपाली उपाय र प्रौद्योगिकी विकासको नसेको जनतहरूको, केही आफ्नो आफ्नो बाली तस्वीर हो । यो विद्युत विद्युत व्यवस्था गरेको हाली नसिएको बाली नसिएको बाली भनिएको हो ।

नाफको स्थापना

यहि कुछ समाधान खोज "नाफ" भएको स्थापना गरिएको हो । यो संस्थाले सामूहिक विकासको कार्यक्रमको साथ साथ कृषि वन व्यवस्थाको क्षेत्रमा १५ वर्षको अनुपात भएको हो । बाली उपाधिकारी नेपाली केन्द्रको स्थानको बन्दी, स्थानीय जनता र अमेरिकी गैर सरकारी संस्थाहरूको तृप्ति योजनामा सहयोग, सिस्टमाल्प्लेक्सको जिल्लाका
ईन्द्रधनुष नदी कसुटाउ भागी पाटो वजान जङ्करौ रत्नराज निन्नाङ्को निम्नाङ्किका साफी सामूहिक नाम सन् १९४८ घर बिधिल अग्लो राईको प्राचार प्रसार वृहत गरिएको थियो। ३ जनवारी सन् १९८९ कल १० प्रतिशत गाउँपालिका अनुसरण गरी। विरोध संख्या ६०,००० को समान थुमा। सन् १९६२ का ५१ प्रतिशत गरिएका भएको वेधार दस्तावेज चिण्डेन भन्ने १९५९ मा ७० प्रतिशत हुन आएको। पछि विभक्त गाउँसँग वार्षिक आयुक्त रहने नौ,००० पाटो परिको प्राचार ३,००,००० भर्यो। पछि सरकार एक धारी प्रमाण प्रमाण गरेका पाटो वेधार दस्तावेज र वाहन निम्नाङ्क भएको। यहाँको वार्षिक सामूहिक विवाद विवरण प्राप्त बढ्दै गएको देखिए र तन्द्रा जलाने लेखको सामग्री हामी दिइ गरिएको।

यस्री अब सामाजिक र गैर सरकारी संस्थाहरूलाई संयुक्त संयुक्त वृहत अमेरिका विस्तार एजिया तर्फ १९६३ देखि बढैले आएको एन्प्रोच्चलीलाई एकै लागि सुरू गरेका थियो। यसै अवस्थाको सामना गर्न स्थानीय जातका ढाके पाटोसँग, अब वार्षिक त्याङ्कुङ्कुङ्कु ढाले पाटोसँग जातका र फिल्ड निर्देश सामान्य एन्प्रोच्चली पाटोसँग निर्धारित गरेका। भएका अनुसूचि, त्यासँग प्राचार र सामुहिक तनिमाको राम्रो सम्बन्ध गर्न आएको। यस अवस्थाको रूपमा पाटो की तरुण निर्देशना र नयाँ नैसर्गिक र वर्तमान अवस्था पर्ने आएको, क्याप्लान-नेको हिमुला पाटो नसरीमा धेरै गरी गरिएको।

नापको संचालन

यो स्थलको संचालन कार्यकरी निर्देशककार हुन्छ। नापाउँगु वर्ग जन समूह नै मुख्य हुन्छ। टिन्नीहरूलाई निपटे जन समूह हुन्छ, जसले:

१) अनुसूचिक समूहलाई कुपशक्तिको समस्या हल गर्न उनीहरूलाई भेटबारीका उनीहरूलाई साममागी बनाएर काम गरिएको। जसले अरुणा अनुसूचिक हुन्छ उन्न यस विषयक प्राचार प्रसार पाटोगरी हिन्दु प्रचार।
2) तालिम प्राप्त बिसानुको विसानलाई गरेको हुनेछ। तहा तालिम व्यवस्थारिक हुनेछ। आवश्यक परेमा मात्र विशेष व्यस्तहरू वोलाइने। तालिम लिन आउने व्यक्तिरुँल गतिपरिणाम बिन २०० वृक्ष निर्माण र तालिम शुल्क, सामान र खाने वर्तने व्यवस्था घोषित हुनेछ।

3) प्रशासन प्राप्त निर्माण नै गरिन्छ। यस्ता विसानहरू संपर्क संयुक्त नितिहरूको संयोग स्थायी विभागको हुनेछ। ती संयोग संयुक्त नितिहरूको ५०-९५ जढानको विसान सम्पूर्ण विकासको हुन्न भएको हुन्छ। तिनीहरू फाल्गो एक जना आफ्नो छान्ने पङ्खाङ्गु फर्जी, जसको तालिम पालिकाहरू कृष्णीहरू क्षेत्रमा गएर अध ९४ जढानको प्रशासन प्राप्ताको तालिम र कार्यवाहीको व्यवस्था गराउनु पच्छ। तिनीहरू स्थायी सेवक हुनन्।

नाफलेको कर्मचारीहरूले बराबर तालिम पालिकाको विसानहरूको स्थायी निरीक्षण गरी कार्य क्षमता बढाउने व्यवस्था हुनेछ। यसको प्रतिक्रिया प्राप्तापन र सामग्री, संघ संयुक्त कार्यक्रमका प्रमुख नयाँ नितिहरूको प्रस्ताव विभाग र विभागको विकासको निरीक्षण गरिने गरेको छ। भने गर्ने संगम विभागको कार्यक्रमको विस्तार हुने गरेको छ।

अर्हते नाफलो ६ जदा सामग्री तथा संघ संयुक्त पशुसंग्रह काम गरेको छ। र गर्ने गर्नेको २५ धुन कार्य संयुक्त हरूसँग नर्सरीहरू र २५ व्यापारी पशुसंग्रह र २५ पशुसंग्रहका तथा काम गरेको छ। भनेले सहयोग पानी व्याप्त आएको छ। आपसी सहयोग पानी व्याप्त आएको छ।

नाफलाई अर्हते फोर्वर्ड फाउंडेशनल विभागको अधिकारी सहयोग पूर्ण आएको छ। भन्नुहोस् नेपाली निर्माणको समूहहरूले नेपाली समूहहरूले तालिम लुभाइले विभाग र विभागको विभाग लुभाइले विभाग र विभागको विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले

सिंचाई व्यवस्थापन नै गरिन्छ। सरकारी संयुक्त

नाफलेको संचालन विभाग, नेपाल र उच्चतम अभियोक गरिएको छ। हलाका जसले नाफले संचालन निर्माण र संयुक्त विभागमा नाफले नेपाल एन्जी जी और फीडरेशन एन्जी जी जो फोर्वर्ड फाउंडेशनल नेपाली समूहहरूले नेपाली समूहहरूले विभाग र विभागको विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले विभाग लुभाइले।
धी चारबंद गैर सरकारी संस्थाओं के संच संस्थाओं के संग संबंधित इतने स्थानीय विकास के काम संभालने गए:

1. जनमुक्ति: लगभग उठने समां स्वाभाविक शाक्ति बनाए एक नामित समूह जा लक्षित समूह के काम गर्ने।

2. एतेक अर्थों के लिए राशन न्याय व्यवस्था हुई पनें आवश्यकता बेडामें दिन।

3. प्रोरम र फाउंडेशनों के बीते सहयोगियों के आवश्यकता बेडामेंन।

यो गोडीका परिपथवहन के गैर सरकारी संच संस्थाओं के कार्यक्षमता बारे राष्ट्रीय कुरा चिन्हिण्ड के र नामी अनुसूचित, तालिम र प्रशासन प्रसार आचारण प्रवासियों व्यवस्थाओं आवश्यकता बारे उल्लेख दिए गए। यस कुरा लाभ अनुप्रंव नामसंग छ र यसके नामी उल्लेख प्रस्तुत किए। तर, यस गोडीका उद्देश्य मा गैर सरकारी र अन्य निहें संबंधित नामांकित सिंचाई वोजनकारी के गैर सरकारी संस्थाएं संभालने भने संचेत दिइए। यस्तो कार्यक्रम लक्ष्य संयुक्त हुई, सहयोगियों प्राप्तामा यस्तो हुई, यो माध्यम स्थल प्रस्तुत कार्यक्रम अनुप्रंव र यो नाम जो कार्य संभालनेता दिइएं पिन्न आउँै।

सहहरी उद्देश्य मा गैर सरकारी संस्थाहों एजेंटी र कनसलट-टेस्टके आवश्यकता पुणिफ कब लक्षित पने जनाए बोजिए। सिंचाई व्यवस्था राष्ट्र पाईने निधिमा यो उस्तो पने आउँछ। सिंचाई व्यवस्था तृप्ति गर्न सहयोग गर्ने किसानहरू के आवश्यकता यस्तो एजेंटीब्ज र कनसलट-टेस्टको टेस्ट पुणिफ सक्ने सहहरी पने प्रश्न उन्मा पने हो। यस विवादमा नामको कटु अनुप्रांव पेके कुरा व्यक्त गर्ने।

सिंचाईमा विज्ञान र प्रबंधको बार्षिक दा यस्तो किसानहरूका यस्तो व्यवस्था परिचालन गर्न निर्देश पढिए तिकनु पने र धारा पाउनु पने कुराहरू छन। हत्तार मान्नु हुईं।

५७
सुप्रभावहरु

१  के संग्री वनाउँ बोजिएको हो ल्यसो स्पषट परिभाषा दिनु । नगरिएका कृपा वनाउँ बोजिएका परिभाषा अलमालिए जल्दी अलमालिन्दैः

२  कःपकःको समाज समाधान पुक्का एउटा अनुसन्धान, तालिम र प्रशासन प्रसार के जसै आवश्यकता ४ जसलाई विस्तारित गरेरा गरिदै हुन्छ ।

३  यस्तो गर्न १ (२) को उनीहरुलाई गूढै नेखि सप्ताहको सहभागी वनाउँ पर्दै उनीहरुलाई पनी लाई तिफ गर्दै गर्नु पर्दैः

४  गैर सरकारी संग संस्थाहरुलाई सरकारी कर्मचारीहरुलाई गूढै लेखि अस्त्रहरु गर्नै मनोबलिमा लगाउनु पर्दैः खिशमा निप्द हारे रास्ताब्य विकास प्रयासमा प्रवाहित हुने पर्दैः

५  ल्याम र उख्चणको नियो गर्नु पर्दैः स्पष्ट्य स्पष्ट जानकारीबाट आधार गूढै गर्नु पर्दै र यो आधारमा स्पष्ट नै गूढ हुन्छ । योजना अधि बदलाउन यो नप्द हुदैः

६  अनुदान र मिश्रितहरुको टिपोट राखनु (रेडी राखनु) पर्दैः

७  तालिम बिने व्यक्तिहरु र योजनाका कर्मचारीहरुले सहभागिता भनेको संग हो ( र संस्करण भनेको को हो ) स्पषट धारा पाएको र भावमा प्रयोग गरेको हुनु पर्दैः

८  विस्तारित अर्थ समाधानको पात्र हुन्छ । योजनाबाट त्वतीय पुरानो पात्रहरुलाई पुनर्भवित पर्दैः

९  व्यापार संस्थाले, सल्लाहकारहरु, व्यवसायिकको तथा समूहका व्यक्तिहरुको शीर्ष, विश्वास, भावनामा समन्वय हुनु पर्दैः यस्तो निर्माण अनुपस्थितको हेल्पलाईहरु प्रस्ताव हुनु पर्दैः

नाफ ५५ वर्षको पुरानो संस्था स्पषट पान यस्तो काम गरेको सवे व्यक्तिहरुको सहयोग र विचारको आधार प्रदानिने नाफ बढाएर गरिएको हो । यसलाई यस्तो जनसहभागिताको आधारमा काम गरेको जा गराउन खोजन संस्थाहरुले फेई ५५ वर्ष विलाए अलमालिन्दैः पनि छैनः

४५
सिंचाई व्यवस्थापनमा लागेका संस्थाहरूको नेटवर्क स्थापना गर्नेमा भौगोलिक सूचना प्रणाली (जी.आई.एस) को भूमिका

सारांश

ईन्द्र द्वारकने लिपि
UNDP/NFC

हाल हारौँ सूचना प्रणालीहरू व्यवस्थापन डिग्नाज वैराङको क्षेत्र । रिकॉर्ड राख्ने क्याम्हु पुरातन डिग्नाज अधिकतम रहेको छ । तुर्ने सूचनाहरू उपरुपरात्मक व्यक्ति का संस्थापनु पुग्ने एउटा राख्ने वातावरण पृथ्वी सूचना पार्सको क्षेत्र । यस माध्यम, भौगोलिक सूचना प्रणाली (जी.आई.एस) एउटा जटिल उपयोगी साधन हुन सक्छ । सिंचाई व्यवस्थापनको प्रयोगसम्म यसको विशेष उपयोगीता रहने विज्ञापन पनि लाग्न सक्छ ।

यस प्रणालीको महत्त्वले सिंचाई प्रणालीहरूको भौगोलिक वन्यजीव र प्लांट सम्बन्धी व्यवस्थापन पत्र हाईड अन्य सेवा वा वातावरण सम्बन्धी व्यवस्थापनके अध्ययन प्रभावकारी ढुंगाले गर्न सकिने हुन्छ । रिमेट सेंसिंग (Remote Sensing), एअरिझोन फोटो ग्राफी (Aerial Photography), ब्राउन र हाउसफोटो स्पेक्ट्रम, इन्फार्मेटिंग हिडैज्म, डोटा, सेन्सर्स र स्पे सेंसस वर्ग (Census Survey) र नवावाहरु नै यस जी.आई.एस. का डाटा आउटपुट हुने गर्दछन् ।

जी.आई.एस. स्वयं सूचनाहरू आधार प्रयोग गर्ने काममा निक्षेप तृतीय पर्याप्त सक्षम बन्ने सक्छ तिमीले यस एउटा साफ डाटाबेस बनाउन सकिन्छ । विभिन्न उपज्ञान लिमिट्सको व्यक्ति, समृद्धिय आवृत्तिहरू र नयाँ उपयोग केराउनुका यो प्रणाली अत्यन्त सक्षम हुनेछ । सिंचाई व्यवस्थापन कार्य विपुल व्यवस्थापन डिग्नाज पत्र लागि तरिका सुनिए हुन्छ जी.आई.एस। एउटा राख्ने, उपयोगी उपकरण हुन आउँछ ।

५९
सिंचाई व्यवस्थापनमा गैससहरुको भूमिकासँग सम्बन्धित केही प्रश्नात्मक विषयहरू

उपवर धारण

सिंचाई एवं अन्य व्यवस्थापन सम्बन्धितहरू एवं विश्लेषण नेतवर्कको भूमिका बारे
छलफलेका हेलु निम्न लिखित विषयहरू प्रस्तुत गरिएका छन्।

१. एन.जी.ओ. हरुको स्वीकार र विश्लेषण

एन.जी.ओ. भन्ने लुकिने हुँदैन र केही प्रश्नका छाेर? उदाहरण नापा कमाउने उद्देश्य लिएका संस्थाहरू, नापा नक्नाउने उद्देश्य लिएका संस्थाहरू, ज्ञात संस्थाहरू, धन उढार संस्थाहरू, या ल्याता संस्थाहरू जसको उद्देश्य
ह्या क्षेत्रमा हेरफेर ल्याउनु हुन्छ, जाँदै।

ली संस्थाहरूले अग्रिम गरिएका विषयहरू बाट गर्ने काफी, रूढकर्ण्यहरू
एवं अन्य परियोजना गर्ने तौर-राखी प्राधिकृत प्राधिकृत राखि ली संस्थाहरू के
विवरण र तर्कहरू विवरणहरूको आपत्ती विवरणहरूले मार्फती विवरणहरूको एन.
जी.ओ. भन्ने जस्तै फाइडा वेकावारा वा कम्युनिटी सङ्कल्पित हुन्छ, हुन सक्छिन्?

उपमानहरू आफ्नो उद्देश्य पुलिपा के काठमाण्डौ विश्लेषण नीति एवं संस्थापाल
व्यवस्थाहरूले साथ वा व्यवस्था पुनर्दैएक छन्।

कतै बालको एन.जी.ओ. हरू सिंचाई व्यवस्थापन प्रयासमा सपाट उपयुक
हुन्छन्? र सिंचाई व्यवस्थापन र विकास कुन क्षेत्रहरूमा?

कानृत तथा नीतिहरू

विश्लेषण कानृत तथा नीतिहरूलाई काठमाण्डौ एन.जी.ओ. हरूको प्रवर्धन पर्दै
राखेका छन्?
के लक्षण प्रावधानहरूले नष्टक्र प्रज्ञालक (ईनेस्टिन) एन. जी. ओ. को उत्ताहन्ना बाढ़ हादी राखेको त छैन।

कै खास एन. जी. ओ. सो स्वाध्यात्मक २००४ बास कानूनले सुरक्षित राखेको छैन? कसौं खालीबो एन. जी. ओ. हक्को विश्वासनिर्माण वर्गीकरण मुक्त हुन सक्नक्छ?

प्रावधानक दोल व्यवस्थापन एवं जनसमुदाय विवाद गर्ने लक्ष राखेका एन. जी. ओ. हक्को विवादको निम्नत को कसोटा नयाँ कानून प्रावधानहरू वा विवाद गर्न तिनका कसोटा भरने हुने हुन्छ?

दोल परिचालन (भिन्न एवं वाहिरबाट)

आफ्नौल्लाई चाहिए दोल परिचालन वा सेवक संस्थापको निम्नत विभिन्न एन. जी. ओ. हक्को को कसोटा प्रकृत/ विधिहरू अनुसार रहेका छैन?

यस्ता दोल परिचालन विधिहरूको आधारमा, कसोटा प्रकृतको एन. जी. ओ. हक्को हिचाई व्यवस्थापनको संस्थाहरू विवादको व्यवस्था उपयुक्त हुनेछ।

स्थायी एन. जी. ओ. वेब र गत्रजल्लो दोल परिचालन गर्ने विवाद कर प्रणाली एवं कार इनस्टीट्यूशनको कसोटा दिउधार गर्नु पर्दछ।

दोल परिचालन गर्ने विधिहरूका तम उल्लेख गरिएका तरीकाबाट एन. जी. ओ. हक्को दिउधार हुन सकसने र?

क) कर ग्राहक इनस्टीट्यूशन (नेपाल वातावरण संस्थाहरू कर ग्राहक विवाद)

ख) वातावरण संस्थाहरू उपदान र चप्पा सहयोग

ग) विभिन्न संस्था वेबबाट चप्पा सहयोग

घ) सरकारी रकमको व्यवस्था
पाठीके यूनाहुए ए. जी. जी. के विगो भविष्य, उदेश्य प्राप्ति एवं स्वायत्ती विषयम रहने आधि वूंटकोणात हेरिनु पर्दछ।

संचाई व्यवस्थापनमा ए. जी. जी. हस्तको पूर्मिका

संचाई व्यवस्थापनको विषयनु कार्यक्रमामा सरकारी संस्थाहाँ एवं विभिन्न प्रकारको एन. जी. जी. हस्तको क्षेत्र आफ्ने प्रकारको तुलनात्मक फाइचाहु हुन सक्छ।

सरकारको संयुक्त व्यवस्थापन र टर्न ओपन नीति अनुसार काम गर्ने एन. जी. जी. हस्तको क्षेत्र आफ्ने प्रकारको कार्यक्रमहरूमा पहुँच गर्न सक्छ।

क्षेत्रमा क्षेत्र एन. जी. जी. हस्तको प्रकारको नीतिको तुलनात्मक वर्तमान वर्ग उपयोगी हुन्छ।

क्यूने एक एन. जी. जी. हस्तको क्षेत्र छलको किस्तामा गर्नु हेसी) तल उल्लेखित क्षेत्रमा क्षेत्र विभेद पूर्मिका बेलन्न सक्छ।

निर्माण

प्रमूख संपादक

संचालन

किसानहस्तको संस्थागत विकास

निर्माण, संचालन एवं प्रमूख संपादनमा किसानहस्तको लागि महत्व

सरकारी वर्तमानीहरू, संचाई व्यवस्थापन विषय प्राप्त व्यापस्था

किसानको प्रतिक्रियाँ र किसान जन समुदायक विकास लागि सम्बन्ध तलालिमहस्त

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किसानमूलक एन.जी.ओ.हर

के किसान मूलक एन.जी.ओ.हरको आवरणकला छ। यदि छ भने त्यस्ता एन जी ओ हजारौं कसाई प्रतिभूत गर्न सकिअ। हाल कसाता कनुनहरको प्रावधान छन ज्या नयाँ कनुनहरको वर्तमान परिस्थितिको विषयमा धन मनोविनिर्भर लागि सकिअ।

कसाता विविध परिस्थिति एन.जी.ओ. हजारौं बढाउँदा विन सकिअ।

बुझाई इमान एन.जी.ओ. नाई कसाता काम र कसाईको प्रावधानको दिनो राख्न सकिअ?

- यदि कसाई सिंचाई योजनाघर जीन रहेका छन् भने स्थानता
  किसानहरुलाई सालिन दिएर

- सिंचाई सिवाएका व्यवस्थापन संग सम्बन्धित नीति र कनुन बार र सुवास दिएर

- किसानको व्यवस्थापन क्षमता बढाउने काम

- व्यवस्थापन क्षेत्रमा सरकार र किसानको आफ्नो पक्षको हबकोल्त
  वारे प्राप्तैघर्ने काम

- जनतामध्यका विष एवं जनसुचारु र सरकारी बीचको भी फागु गर्नभए समाधान गर्नेसा साधारण पुराइन्छने काम।

- किसानलाई उपयुक्त हुने प्राक्कलकहरको प्र्यासमा साधारण पुराइन्छने काम

- जल उपोधेसमूहमा संटोस बनाउनमा साधारण पुराइन्छने काम

- सिंचाई व्यवस्थापनको अनुपत्त्य कार्यमा संचयन साधनो कार्यक्रम

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नेटवर्क र आपसी समजन्य विकास (Coalition Building)

सिन्धै व्यवस्थापन एवं विकासको माध्यम के यस्ता एन जी ओ नेटवर्कको आवश्यकता पर्दछ ? पर्दछ पनि, किन?

सरकार र विभिन्न संस्थाहरूले कस्री मद्दत पुर्याउन सकिन्छ?

केकस्तो जङ्गमिद्ध र संस्थागत ढाँचाहरूले प्रावधानले यस्ता निर्णय बनाउन सकिन्छ?

केक सरकारी निकायहरू, वातावरणहरू र विभिन्न संस्थाहरूलाई नेटवर्क बनाउन सकिन्छ?

केक सरकारी निकायहरू, वातावरणहरू र विभिन्न संस्थाहरूलाई नेटवर्क पित्र समावेश गर्नै आवश्यक छ ? यदि छ पनि, किन ? उसिच्छेद्वा यस्तो के ले नयन सक्दछ?

नेटवर्कका बस्ता एन जी ओ हक्को प्रतिनिधित्व वाणिज्यीय धुङ्ख?

कस्ता प्रक्षा र कार्यबिन्दुहरू नेटवर्क प्रबंधन सान्तावर्तिक होना ? प्रक्षाले कार्यक्रम र कार्यबिन्दु प्रविधिलागु एउटा Ad hoc नेटवर्क लिङ्ग बनाउन सकिएका?

नेटवर्क कार्यक्रमको हुन पर्दछ र यस्तो सरकारी निकायसंग बस्तो समजन्य हुनेछ।
तलका कुन विषयमा नेटवर्क सघाउन जरूरी पनि ? यदि पर्छ पनि, क्यूँ?

क) सूचना आवाह विभाग

ख) सघाउने काम र संयुक्त कार्य गर्ने

ग) विनेशकी बात संस्थासंग सम्पूर्ण गर्ने

घ) लोक (फण) नियुक्तिबाबुले एउटा माध्यम बन्ने

ङ) सरकारसंगे बालकामा उपयोगी पुस्तक बेल्ने

च) जनसम्पदामा सिङ्गाई व्यवस्थापन सम्बन्धी चेतना तथा आंगार विकास गर्ने

छ) क्षेत्र र सरकारी नियुक्तिबाबुले आकाष र आवश्यकताहरू

ब) जन उपयोगी र स्थानीय जनसम्पदाप्रणाली बढी अधिकार दिन्छ।