

**A Study Report on Organisation, Negotiation and Contracting:  
Case Study of West Gandak and Marchawar  
Lift Irrigation Systems**

**(Nepal)**

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**February 2002**

**Employment-Intensive Investment Branch  
International Labour Office, Geneva**

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## Preface

The ILO has been promoting “people’s participation” since the mid-1970s, particularly in the framework of the basic needs approach developed under the World Employment Programme. Participation of local communities in decisions of direct interest to them was seen as a precondition to economic, social and political changes required to achieve better working and living conditions for the low income groups in society, and to break the vicious circle of un- and underemployment, poverty, marginalisation and social exclusion.

However, a quarter of a century later, the question can be raised whether popular participation has become the tool which enables the poor to fully take their place in society. Well documented experience has shown the limits, both conceptually and in actual practice, of “participation”, and points to the need for greater “empowerment” of the poor.

In this regard, the ILO’s Employment-intensive Investment Programme, which aims at improving access of poor communities and low income groups to productive resources, remunerative employment and basic social services, has come to the conclusion that “participation” needs to be materialised in concrete, operational systems which, ideally, would give people both the voice and the power they need to defend their interests. It’s experience has shown that the key concepts underlying participation and, indeed, empowerment, are **organisation** and **negotiation**, and that **contractual arrangements -defining rights and obligations of all parties concerned-** can provide the operational tool to both promote people’s own institutions and their collective bargaining capacity, thus enabling them to defend their interests in a long-term development perspective.

The present Working Paper by Khem Raj Sharma, which focuses on Water Users’ Associations in Mid-Hill Irrigation Programmes in Nepal, is one of seven case studies commissioned by the ILO in 1998, to document and assess various experiences with contractual approaches at the community level.

I take this opportunity to thank Khem Raj Sharma for his interesting case study and his valuable contribution to the overall research programme on contractual approaches. The results of the research have been incorporated in a synthesis study by the late Peter Oakley, entitled “Organisation, Negotiation and Contracting in Development Programmes and Projects: A Study of Current Practice at the Community Level”<sup>1</sup>, which I invite the reader of the present document to also consult.

Jean Majeres, Head,  
Employment-Intensive Investment Branch.

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<sup>1</sup> This publication can be obtained free of charge from the EMP/INVEST Branch (ILO Geneva).

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## ACRONYMS AND ABBREVIATION

APP	=	Agricultural Perspective Plan
CMWF	=	Canal Management Work Force
CO	=	Community Organization
DDC	=	District Development Committee
DIO	=	District Irrigation Office
DOI	=	Department of Irrigation
DRO	=	District Road Office
DWSO	=	Drinking Water Supply Office
GDP	=	Gross Domestic Product
FfW	=	Food for Work
HMG	=	His Majesty Government
ICM	=	Indian Cooperation Mission
IIMI	=	International Irrigation Management Institute
IMD	=	Irrigation Management Division
IMTP	=	Irrigation Management Transfer Project
INGO	=	International Non Government Organization
IP	=	Irrigation Policy
IWMI	=	International Water Management Institute
MPHBS	=	Multipurpose Household Budget Survey
MLD	=	Ministry of Local Development
MLIP	=	Marchawar Lift Irrigation Project
NGO	=	Non Government Organization
NPC	=	National Planning Commission
PDDP	=	Participatory District Development Program
PLRP	=	Pilot Local Road Project
RTDB	=	Research and Training Development Branch
SCCs	=	Savings and Credit Cooperatives
SECS	=	Self Employment Creation Scheme
SMC	=	Sub Project Management Committee
VDC	=	Village Development Committee
WECS	=	Wage Employment Creation Scheme
WFP	=	World Food Program
WGIS	=	West Gandak Irrigation System
WUAs	=	Water Users' Association
WRR	=	Water Resource Regulations
WRA	=	Water Resource Act

## **1. NATIONAL CONTEXT**

### **1.1 National level policy and legislation favorable to community level initiatives**

Nepal has long history of community level initiatives used on developing community infrastructure in rural area. In the earlier days, local people mobilized their labor and local resources voluntarily for constructing rural infrastructure. In irrigation the existence of thousands of Farmer Managed Irrigation Systems (FMIS), which comprise over 75% of the total irrigated area of nearly 1.1 million hectares in the country are the testimony of community level initiatives. Some of the strengths of FMIS are that they are demand driven and of low cost and are based on local resources. Moreover, they are management intensive and technical deficiencies are compensated by management inputs; that they have ability to respond quickly to the maintenance needs. With the initiation of development intervention in early sixties and seventies, the concept of voluntarism gradually eroded and replaced by payment of wages on voluntary labor used. To correct the situation, the concept of community level initiatives emerged which is used for the creation and development of community infrastructure in rural areas.

Mobilization of local community in the form of labor for constructing community infrastructure has been greatly focused in various five year plans. It dates back to 5<sup>th</sup> plan (1976-80) where concept of people's participation had been introduced in several Integrated Rural Development Projects implemented in the country. The concept obtained further impetus with enactment of Decentralization act in 1982. After that most of the community projects were implemented by identifying users, organizing them into users' group/committee and mobilizing them for design, plan, implement, monitor and evaluate rural infrastructure projects.

Use of community initiatives in a systematic manner started only after 1988 (7<sup>th</sup> and 8<sup>th</sup> plan period) where large infrastructure like rural roads, irrigation schemes, drinking water schemes, etc. were completed mobilizing the local communities. Use of such initiatives for constructing community infrastructure is emphasized among projects funded by donor agencies as well.

In general, use of community level initiatives supported by the government with financial and technical assistant from international donors labor intensive technology, is confined at constructing rural infrastructure like rural roads, suspension bridge, trek-trails, school buildings, etc. This technology is also adopted at constructing rural road, which are often called as Green-road, and irrigation schemes. In this approach, use of heavy machinery like bulldozer, excavators and rollers are prohibited and the use of explosive is avoided for environmental protection and human labor has been used to the maximum extent. Decision on local road construction and maintenance depends on user committee through people's participation.

There is no explicit policy of the government that deals on promoting local level initiatives. Such approach is dealt with indirectly. For instance, the current Ninth Plan (1997 - 2002) emphasizes on promoting agro-ecologically suitable technology to achieve targets of poverty alleviation and micro economic stability by capitalizing the local level initiatives.

Some of the basic strategies mentioned in 9<sup>th</sup> Plan, which are directly related to promoting community initiatives at local level include the followings:

- ❖ Employment promotion: The Plan highlights need to encourage labor intensive technology in local infrastructure development including construction works carried out by national and international agencies. It is clearly mentioned that such activity needs to be coordinated with district level planning.
- ❖ Regional development: The plan proposes to establish labor-based industries for maximum benefits of rural poor and farmers for enhancement of agricultural productivity and creation of enabling environment for regional development through construction of rural (agricultural) roads and irrigation infrastructure using labor intensive technology. This is being focused on agricultural commercialization.
- ❖ Labor and social welfare: The plan seeks to generate employment by exploring opportunities for use of traditional skills and knowledge on local infrastructure development.

Alongwith overall national and economic development policy, the 9<sup>th</sup> plan also deals about promoting labor intensive technology in sectoral policies (directly or indirectly) mainly to promote employment at local level. Some of the outstanding features of sectoral policies are noted hereunder.

- ❖ Focus at undertaking agricultural research according to local demand and appropriate technology that use local skills and knowledge ,
- ❖ Emphasize at conducting agricultural program in the forms of mini projects which will absorb local skills,
- ❖ Provide special attention to use labor intensive technology in small and medium scale surface irrigation projects,
- ❖ Emphasize employment promotion and poverty alleviation through establishment of industries based on local materials and labor,
- ❖ Expand the use of locally manufactured goods and handicrafts to develop tourism potentialities of the country,
- ❖ Maximize the use of labor intensive technology and local construction materials while constructing new roads except highways thereby generate semi-skilled and unskilled employment opportunities,
- ❖ Construct drinking water schemes that require simple and economically cheaper type of technology and are within the capacity of local users,
- ❖ Apply local materials, skills and technology while constructing building and other physical infrastructure.

Main His Majesty Government of Nepal (HMG) institutions promoting labor intensive technology at rural areas are: District line agencies like Drinking Water Supply Office (DWSO), District Irrigation Office (DIO), District Road Office (DRO), District Development Committees (DDCs), Village Development Committees (VDCs), etc. These institutions have more or less clear policy on using labor intensive technology in rural areas employing preferably local manpower.



Programs implemented by most NGOs/INGOs and projects of some bilateral and multilateral institutions assist only for imported materials and mobilize users for managing locally available materials. In this context, local labors are also mobilized to increase local voluntary participation.

Nepal's Agricultural Perspective Plan (APP), which is designed for the period 1995-2015, has duly addressed the national imperative stressing that the country can lose no more time in pursuing course of rapid economic growth combined with a just and equitable social transformation. It lays out the strategic focus and the prioritized productive package essential for a holistic and sustainable development of agriculture and rural sector. Given the overwhelming importance of this sector in the national economy in terms of both employment and income generation, APP in fact embodies a development strategy to transform entire economy. In order to achieve this, APP has identified increasing irrigated agriculture and construction of rural roads as a priority investment to be promoted in rural areas.

APP proposes to increase well-controlled year-round irrigated land from approximately 549 thousand hectares in 1994/95 to 1126 thousand hectares in 2014/15, which calls for an average of 34,000 ha. per year to be added to the well controlled irrigated area. Further APP recognizes that other priorities are complementary to obtaining high returns to irrigation. Thus, irrigation is presented as major part of a package of efforts. The key components in packages are all weathered agricultural roads and electrification while fertilizer distribution and marketing activities will also be coordinated. APP suggests that rural development can not proceed sustainably without technological changes, specialization and commercialization. For these to occur transaction cost must be reduced and identified a road to be the first and the most important step towards reducing this cost. It proposes to construct 6200 km additional rural roads (3400 km of road in terai and 1950 km in hills and 850 km in mountains), which will be mainly labor intensive. This gives a figure to construct approximately 525 km of rural roads each year within APP period.

Thus, APP focuses on generating sizable employment through the construction of irrigation and rural road infrastructure. construction of both agricultural roads and irrigation infrastructure are labor intensive, hence, possess prospects to generate sizable employment at local level. If labor intensive technology is to be promoted in rural areas as an employment generating mechanism, it is felt that a strong coordination and linkages with APP implementation arrangements should be developed and labor intensive technology is integrated as APP physical infrastructure package.

HMG has recently formulated national strategy for Rural Infrastructure Development with objectives to develop basic rural infrastructure nationwide using labor intensive technology focusing on using local resources based environmental friendly infrastructure under decentralized participatory framework in a planned and sustainable basis. A separate department has been constituted under Ministry of Local Development (MLD) that will look after promotion of community infrastructure in rural areas.

Establishment of Department of Rural Infrastructure Development within MLD is expected to create favorable environment for promoting labor intensive technology by unifying resources channeled to local institutions (VDC, DDC, etc.) through one

window system and developing tested approach for using labor intensive technology for rural infrastructure development.

## 1.2 Decentralization and participation

HMG policy seeks to promote decentralization and local development policies. Since 1982, the decentralization act focuses on promoting decentralized local development through one or combination of following policy measures.

- ❖ Institutionalizing participatory development process,
- ❖ Expanding use of local skills and technology to create self-help attitude,
- ❖ Launching rural development program with the active participation of local institutions,
- ❖ Conducting rural infrastructure development program to make the accessibility of local community in the service delivery system,
- ❖ Encouraging the use of locally available technology wherever possible

Currently, different institutions (government and non-government) implementing community development projects in rural area focus on using labor intensive technology and mobilizing local people for their own community works under the decentralization framework and contract approach. This approach has helped in fostering local employment and empowering local communities through employment creation and income generation.

The decentralization laws revised in 1991 have specified the organization and functions of local bodies at the district, municipal and village level. The necessary set up for decentralization is already available in DDCs, municipalities and VDCs. Although currently these bodies are mainly to provide policy orientation on local level issues and coordinate the work of the government agencies, government is keen to strengthen these bodies financially and administratively by devolving them grants and separate funds. The decentralization system provides opportunities to local people to formulate district development activities according to their felt needs. People are reported to have a sense of involvement in cases where they participate in the planning and implementation of community development activity. As earlier mentioned, the 9<sup>th</sup> plan gives much emphasis to organization of the poor, social communication, participatory planning and institutional development of NGOs, private sector, user's committees and farmer's groups. International institution such as UNDP, DANIDA, GTZ are also supporting the efforts for decentralization and participatory development.

There are two ways of interpreting a decentralized approach to local level employment promotion. In broader sense, this could mean integrated development and employment promotion. This would cover the entire gamut of sectoral activities for production growth in the village/district supplemented with special efforts to provide employment to the target group. Further, this would lead to formulation and implementation of special employment programs with local initiative and involvement. Aiming the easing the promotion of participatory approach to infrastructure development, the government has amended the financial rules permitting user's groups to execute rural development projects up to a cost ceiling of Rs. one million.

### **1.3 Strengths of civil society and conditions under which it operates**

Persons benefiting from labor intensive technology are mainly unskilled laborers and few semi-skilled and skilled laborers. Infrastructure is basically constructed by organizing users' into users' committee. Basically, existing labor act and trade union act do not take into account interest of workers involved in such works as they are mainly unskilled laborers working in unorganized establishment. To a limited extent interest and welfare of these workers are covered in DDC and VDC acts.

Clause 14 of labor act mention that in any construction project contractor should make provision for construction tools, temporary shelter, fooding, accidental insurance, security, etc. which is applicable in large projects implemented by contractor against labor intensive technology. As discussed already, labor act and trade union acts have not been effective in construction projects like rural roads, irrigation, and drinking water. Further, it has been found that in contrast to provision in clause 46 of the labor act, large contractors are using non-Nepalese unskilled laborers without permission from Ministry of Labor. It has been felt that there is need for the controlling mechanism to check such tendencies of the contractor.

Decentralization policy enacted by the government puts the focus towards maximum involvement of people on self-governance and development function. The political strategy ensures involvement of local people at the grass roots level through the development of their own institutions and foster multi-party system by elected represnetatives in all districts. DDC, VDC and municipality act provides top most priority to programs that use local resources, skill and local capability.

As such, act directly related to labor and their welfare do not emphasize on promoting labor intensive technology and protecting the interest of unskilled labor in organized sector rather it is the DDC act, VDC act, municipality act, etc. that have emphasized on promoting labor intensive technologies on constructing small and sustainable rural infrastructure. These acts implicitly focus on voluntary mobilization of labor used in infrastructure projects. The act is rather salient on wage payment to households providing labors in the creation of rural infrastructure. This is an area, which requires to be focused if labor intensive technology is to be provided as an employment generating activity.

Village Development and Self-help Program implementation guideline 1995 emphasize on implementing program that is sustainable and promotes local skill, utilize, conserve and mobilize local resources. It insists on projects that involves local skills, resources, technology and local participation to a maximum extent with special emphasis on labor intensive works such as rural roads, trek-trails, small irrigation and soil erosion control.

Other aspects to be considered for the promotion of labor intensive technology include the process of user group formation and mechanism to mobilize users under framework of labor intensive technology and as a strategy for employment generating program. This requires clearly worked-out process of institution building and institutional framework under which they should operate.

## 1.4 Poverty and distribution of wealth and resources

The most recent available estimate of incidence of poverty in Nepal is that of the National Planning Commission for the year 1996. According to this 49 % of Nepal's population live below the poverty line. This indicates that Nepal has a poor population of about 11 million in 1996.

Not much information is available from the NPC document. The most comprehensive survey available for poverty analysis in Nepal is the Multi Purpose Household Budget Survey (MPHBS) which was conducted by the Nepal Rastra Bank in 1994/95. A thorough analysis of the data from this survey was carried out by the World Bank that emerged following important facts.

- ❖ Bulk of the poor (95 %) live in rural areas.
- ❖ Most of the poor (79 %) work in agriculture either as self-employed or as wage laborers. Indeed, even in urban areas, nearly 50 % of the poor are engaged in agriculture.
- ❖ Underemployment is a major cause of poverty and that the underemployed, generally speaking, are not poor.
- ❖ In addition to underemployment, low return to labor in both self-employed and wage employment is also major cause of poverty.

Distributional inequality is remarkably low in Nepal. The estimates made in 1994/95 survey by Nepal Rastra Bank study indicate that the bottom 40 % population has 23 % of the total income, the middle 50 % has 54 % of the total income and the top 10 % possess the remaining 23 % income. Poverty, therefore, is attributable much more to low level of development than to distributional inequality. This indicates that economic growth is more important than re-distributive measures for poverty alleviation on a sustained basis. Economic growth, of course, will need to be employment intensive, otherwise, the effect of growth may well be cancelled out by raising distributional inequality.

The average per-capita income of the rural households has been estimated at US\$ 170 per year. The combination of very low average income levels and a fairly uniform distribution of income suggest that basic cause of poverty in Nepal is excessive population concentrated on an insufficient economic base rather than the in-egalitarian distribution of available wealth. The weaknesses of the base stems from natural disadvantages which hinder modern sector growth (i.e. a difficult topography and location), the early stage of development, manifested in an unskilled workforce and weak managerial capacity and a failure to transform agricultural productivity in a way that the green revolution has done in most developing countries. All of these factors have been exacerbated by sustained rapid population growth. Population growth of 2.7 % per annum has eroded the limited gains, which have been made the Gross Domestic Product (GDP) and food production. If population growth had been confined to 1.5 % per annum over this period, then real per capita GDP would have risen by 45 % rather than the 14 % which was achieved.

## **1.5 Programs which seek actively to make resources available to the poor**

Diverse type of programs are implemented to tackle with unemployment and underemployment problems faced by rural poor and these programs seek actively to make resources available to the poor. These programs can be broadly grouped into two viz. self-employment and wage-employment program.

### **1.5.1. Self-employment creation programs**

Self-employment creation schemes (SECS) are basically designed to create self-employment opportunities for the poor by offering them either subsidized credit to purchase income generating assets or providing management and skill training opportunities or both thereby ensuring access to resources to the poor. SECS programs implemented in Nepal can be broadly grouped into two viz. credit based and training based.

Credit is most important element of credit based SECS that is directed for generating low value assets for income generation and towards non-farm activities. Various institution and non-institution based credit programs are implemented in Nepal and some of the institution based credit programs are the followings.

- ❖ Small Farmers Development Program implemented by Agriculture Development Bank since 1975 with support of FAO, UNDP, Asian Development Bank (AsDB), International Fund for Agriculture Development (IFAD), etc. with the objective to provide production credit, information on technology, training and community development services with diversification of end use of funds to cottage industry and other business activities to the people below the poverty line.
- ❖ Production Credit for Rural Women Project executed by Women Development Division of the Ministry of Local Development (MLD) initiated in 1982 with two public commercial banks and UNICEF as their partners and specifically targeted to women, implemented under the financial support of UNICEF and IFAD. The MLD with the support of AsDB has also launched a separate Micro Credit Program to help exclusively the disadvantaged women in the rural community.
- ❖ Gramin Bank model targeted to rural women from households with less than 0.6 ha. land in the Terai and 0.5 ha. in hills. Peer groups of 5 members are self-formed (members must be unrelated) and incorporated into village `centers' of up to eight peer groups. This model is operated through five Gramin Banks and covers all 20 terai districts.
- ❖ Intensive Banking Program implemented under the directives of the Nepal Rastra Bank in light of very limited share of commercial banks in agricultural credit and deprived sectors in order to increase the flow of credit towards small farmers and small businesses.
- ❖ INGOs/NGOs initiated micro-finance model wherein INGOs are either directly involved in implementing credit program or supporting professional NGOs to implement such programs through revolving fund, over-head support, matching fund and technical assistance.
- ❖ Rural Self-Reliance Fund of Nepal Rastra Bank that lends to local NGOs or Savings and Credit cooperatives (SCCs) to on-lend the amount borrowed to their clients. Under this program, NGOs/SCCs act as financial intermediaries. The Fund is aimed at providing financial assistance to deprived section through NGOs/SCCs for carrying out income

generating activities using their own labor, skill and other local resources and thus helping deprived people to achieve economic self-reliance over years.

Training based employment generating scheme is often directed towards imparting management and technical skill to target people to enable them to be self-employed or manage the self-employed ventures. Training program are conducted by various institution which can be broadly grouped into two viz. management training and skill training.

- ❖ Management training is basically meant to improve managerial capability of target population. These programs focus at developing entrepreneurial capabilities of local people in diverse activities. Entrepreneurship development is assumed to be a prerequisite for micro-enterprise promotion and development and this has high implications for employment generation mainly in urban areas.
- ❖ On the other hand various types of skill training (plumbing, carpentry, black smithy, nursery, agriculture, construction works, etc.) program have been implemented in Nepal since long. Based on institutions involved, skill-training program conducted can be broadly grouped into two as under.
  - formal technical and vocational training conducted by various institutions under Tribhuvan University and Ministry of Education and
  - informal technical and vocational training conducted by various specialized government, semi-government and non-government organizations.

Formal technical and vocational training programs are mainly conducted by universities and academic institutions. It is geared at producing middle to higher level workforce required to transfer technologies and meet demand for technical services for different infrastructure programs including management of contracts and other related activities. Likewise, informal technical and vocational training program is conducted by various government, semi-government and non-government institutions and these programs focus at producing lower level *yellow workers* to facilitate the process of technology diffusion at grass-roots level. Various type of skill development such as plumbing, carpentry, mason works, etc. has been possible through this process.

### **1.5.2. Wage-employment Creation Schemes**

Wage-employment Creation Schemes (WECS) are meant for short-run employment generation and at times to generate public goods as well as utilize the skills acquired by local people under self-employment schemes. These schemes are basically in response to emergency situation like famine, potential drought, etc. as well. Under WECS, public works are generated as its outputs, which are secondary to minimum relief to provide people from poverty by creating demand for labor. Mainly wage-employment program focuses on labor-intensive public works. Besides employment, output of the program has large multiplier effect on economic development. These programs are quite successful in increasing income and improving health of rural poor especially during slack agricultural seasons. Food for Work (FfW), roads and hydropower infrastructure,

irrigation infrastructure, etc. are some of the typical programs implemented to generate wage employment at local level. These programs are briefly discussed hereunder.

### **Food for Work**

Under Food for Work (FfW) program local people (wage earners) work as labors for constructing public works and obtain wage in kind. This program mainly uses foodgrain obtained under different food aid. Some of the FfW program implemented in Nepal is:

- ❖ WFP and International Fund for Agriculture Development (IFAD) funded program on rehabilitation of flood affected areas mainly in the Terai district.
- ❖ Asian Development Bank funded road construction program,
- ❖ HMG and WFP funded rehabilitation and minor infrastructure program such as trails and trek, irrigation, school construction, etc.

Mainly these programs are targeted to poor districts. Rural works program assisted by FfW programs are important examples of construction through infrastructure development geared towards targeting the poor participating in this program. The treks and trails construction program in hills was one such program completed in 1992, which primarily focused on providing employment to seasonally unemployed people living in food deficit areas. Moreover, such works occur during dry season when employment opportunities are scarce. Besides employment, output of the program has large multiplier effect on the economy. They are successful in increasing income and improving health of the poor especially during slack seasons where the opportunity cost of labor is minimal.

It seems that targeting of poor is easy in such a program, however, the program in many instances has suffered from un-institutionalized nature of its implementation mechanisms, which resulted in mis-targeting of areas and laborers are compelled to surrender with middle men and labor contractors. Problem of leakage and recycling of consumable goods back to market was quite common. Other problem of FfW has something to do with scale of coverage. Unless scale is very large, in serious wage differential prevalent rural areas, seasonal labor migration occurs and local targeting gets affected.

FfW suffers from certain weaknesses such as problem on targeting, need for intensive supervision makes the program costly, limited expansion possibility due to limited administrative capacity and lack of work guarantee system, all of which inhibit the flow of benefits to the poor. Impact of FfW remains marginal and sustainability of this approach is often doubtful.

### **Roads and hydropower infrastructure**

Road and hydropower construction activities are considered to have significant employment implications. Conceptually, road building and electricity generation are not always employment generation programs, unless these activities are undertaken for employment creation. These programs can be marked as successful only if they resulted in expected growth to be brought about by labor-intensive techniques and are well targeted to the benefits of the poor people.

Labor materials ratios are used for estimating workforce employed in construction sector. It has been estimated that around 400,000 workers are engaged under roads and hydropower construction sector every year of which 80,000 were full time workers. Available information indicates that throughout 1990's, roads sector expanded by nearly 300 kms a year and ratios of labor to materials in different types of road building and hydropower vary. Tractor treks and mule trails have more favorable ratios with respect to employment generation (90:10 and 95:5 respectively) while rural roads and highways have less favorable ratios (60:40 and 30:70 respectively). Most hydropower schemes have labor to materials ratios of 20:80. These figures indicate that these schemes have significant short-run employment generation implications and their long-run employment implications largely depend on extent at which they are linked with other sector of the economy.

### **Irrigation infrastructure**

When infrastructure are constructed with labor intensive techniques and with a specific beneficiary target groups or communities in mind, irrigation development programs provide employment for targeted section of the population. Magnitude of employment generated will be increased with the completion of irrigation schemes through increase in (i) cropped area and (ii) increase in labor employed in irrigated agriculture with increase in cropping intensity. ILO has the history of implementing labor intensive public works program under the Special Public Work Program (SPWP) to construct labor intensive small hill irrigation schemes and mule trails.

There exist tremendous prospects for irrigation infrastructure development in Nepal. Of the net irrigated area of about 1.095 million ha., 0.786 million ha. is in the Terai, 0.253 million ha. in the Hills and 0.052 million ha. in the mountains. The expansion potential of irrigation is not insignificant in the hills where about 115,000 ha. of rain-fed irrigation can be converted into irrigated land. The Terai has over 60 % of its estimated potential (1.338 million ha) under rudimentary surface water schemes requiring rehabilitation and technical improvements. Increase in area irrigated through surface and ground water irrigation scheme is one of the target set in the currently implemented APP (1995-2015).

Irrigation infrastructure will have implications on employment generation, if small and medium scale gravitation scheme and tubewell irrigation is promoted. National Planning Commission (NPC) estimate on employment effect in agriculture due to irrigation schemes at 135,000 full time jobs every year as a result of adding 300,000 ha. of land under irrigation with increase in labor demand coefficients by about 100 workdays per ha., if rain-fed and irrigated agriculture are substituted. The labor: materials ratios for irrigation schemes is estimated to be 40:60 ratio for small scale schemes while medium and large scale schemes, the ratio increases to 30:70.

## **1.6 Community level social capital**

At community level, there exists lot of social capital in the form of capability to manage varied type of community based construction works in the form of labor contract as well as skills such as plumbing, mason works, carpentry, blacksmithy etc. required for varied type of construction works in rural areas.



With varied type of specifically designed training programs implemented at local level by different institutions a lot of skilled person power has been developed and local people have acquired skills and knowledge for managing varied types of community works. These are community level social capital. Experience has shown that there are number of skilled laborers in almost all the community capable of managing contract of varied scale and magnitude as well as those with training acquired on vocational subjects such as construction works, carpentry, etc. This has greatly contributed to the implementation of various rural infrastructure projects.

On top of availability of such skill and knowledge at local level, there are other local institutions promoted under decentralization act under the banner of users' groups/committee, which could be seen in almost all the clusters in rural areas. These include another form of social capital formed for successful creation and management of community infrastructures at local level. Estimates made by UNDP project on "Participatory District Development Program (PDDP)" in 1995 indicated that on an average there are over 30 community organizations (COs) on activities such as irrigation, drinking water, community forestry, local trails/trek, savings and credit, school, etc. in one VDC of Syangja district. These community institutions are involved in design, planning, implementation, monitoring, follow-up and self-evaluation of different community projects by utilizing their own resources potentials and seeking resources from external institutions. Most of the works undertaken by COs are done under people's participation and within the provision of the decentralization act and rules of the HMGN.

Further, local people possess stock of indigenous knowledge and skills regarding suitable technology and methodologies to be used for the design and implementation of different community level infrastructure at local level. There exist instances showing the fact that thousand of farmers' managed irrigation schemes, rural roads, trek-trails, schools building, etc. are constructed successfully using local technique. It has been felt that there is dearth of approaches and mechanism that blends such stock of indigenous knowledge system to modern scientific knowledge prevalent in local areas.

To sum up, there is plenty of social capital at community level, which creates an enabling environment for using these resources for productive activities. Challenge lies at using these resources for the causes of the poor and socio-economic development of the local communities by creating productive physical infrastructure at local level.

## **2. BACKGROUND CHARACTERISTICS**

Nepal has a culture of promoting employment intensive strategy that seeks to use public funds for a range of labor intensive infrastructure programs as a means of giving the poor access to income. This is being used as a mean to improve their livelihood. Several approaches are tested in Nepal as a means of facilitating access for the urban and rural poor to development resources. This is based on the assumption that possibility of access to and control over productive resources, both physical and financial, are a powerful force for mobilizing informal common interest within the context of development programs and projects designed to link such groups with available resources. Labor intensive and local resources based investments have long been seen as a mean for creating immediate employment and income for the poor and strengthening local institutional and operational capacity, ensuring the cost effectiveness of local works and developing link in the local economy between the ranges of small producers.

### **2.1 Emergence of `contract approach' over the past decades**

"Contract approach" has a long history in Nepal. It dates back to early fifties wherein planned development efforts commenced in Nepal with the commencement of first five-year programs. "Contract approach" has been emerged in Nepal as a substitute of inability of the government to implement different infrastructure development program at local level within a reasonable cost limit. Mainly inability of the government to manage the larger irrigation schemes, suspension bridges, drinking water schemes, etc. led to the emergence of contract approach at the local level in the past decades.

In the subsequent decades, several advantages of `contract approach' especially as a means to create immediate income and employment to the poor, strengthening local institutional and operational capacity, ensuring the cost effectiveness of local works and developing links in the local economy between a range of small producers has been felt. This lead towards major shift in using this approach towards the creation of medium to small rural infrastructure and their management.

With the enactment of decentralization act in 1982, there has been major shift in the understanding and use of the `contract approach' mainly towards creating rural infrastructure. Several advantages of `contract approach' in local infrastructure development have been felt. Some the advantages realized include the possibility to complete works within mutually agreed time frame, cost and time effectiveness, developing the feelings of ownership on infrastructure created, devolution of responsibility for the user's group for operation and maintenance of infrastructure created including local level employment creation and poverty alleviation. This realization has further led at shifting policy towards adopting `contract approach' in all the rural infrastructure project, be it a small or medium or large. As far as employment generation and poverty focus has been concerned, use of contract approach in the medium and small-scale community infrastructure has shown several advantages compared to larger schemes.

Adoption of `contract approach' in the rural infrastructure program obtained further impetus with the restoration of democracy in 1990 wherein government opened new intervention in the form of self-help program and build your village yourself program

along with ample opportunity to organize, raise voices on various issues of common concern, negotiation and bargaining. Various acts and regulations regarding contract process were made flexible with the ultimate goals that the process has been simplified and more work can be undertaken under this process. Provision has been made and government line department and ministries were provided with the authority to sign a contract between execution committee and construction committee acting on behalf of users' committee before initiating construction works for the execution of small infrastructure on irrigation, rural roads, drinking water, etc. Further, the government for past years, has been providing certain amount annually to each VDC as an incentive to encourage local people's participation in the development activities whereby local groups execute the infrastructure works and are expected to bear certain capital costs incurred for the infrastructures.

At present, there exist wide spread application of 'contract approach' in creating community based as well as larger infrastructure. Planners', policy makers, development analyst, politicians', etc. have realized the advantages of this approach against direct implementing which makes monitoring difficult and excessive shirking and moral hazard leads to inefficiency on whole process. Excessive focus lies towards using community organizations on the contract process and enhancing their capability to manage and execute the entire contract undertaking.

## **2.2 Existing traditional understandings of concept of 'contract'**

Traditionally 'contract' is understood as a process or agreement between two or more parties for completing particular assignments under agreed upon terms and conditions to produce agreed amount of outputs to be produced within the mutually agreed upon time frame. Usual notion is that if the work is to be completed under contractual arrangements, there is always a contractor of varied nature and categories, who undertake this function for profit by employing required workforce by paying them at market price or even below market price.

Usually it has been understood by the common public that most contractors do not perform quality works, they insist in making perfect billing mechanism and work for making profit rather than doing standard works for the welfare of local people.

Based on the volume of works to be undertaken, in Nepal, private contractors are classified into four categories: A, B, C and D Class. These classes define level of expertise of contractors and their capacity to complete particular piece of works. For instance, class A is the most qualified, experienced and capable while class D is least qualified, little experienced and less capable. Class B and C is in between. Though most of the works under contract process is done by skilled and semi skilled labor forces, most however do not take into account the welfare and interest of the user communities.

These days, there is gradual shift in the understanding of the concept of 'contract'. Local people are sometimes of the opinion that work done under 'contract' process is not necessarily of low quality and during contract administration process sizable employment can be created for the unskilled and semi-skilled rural unemployed labor forces.

Contract approach blended in decentralization act 1991 (ammendment) is considered as needs and demand driven process whereby previously excluded groups enter into a contractual arrangement and negotiate with local government to implement development programs in order to gain access to resources for a productive activity, which will lead to an improvement in their livelihoods. This approach is more pronounced in the donor driven development programs wherein users or local people are organized into community based groups which through a process of bargaining and negotiation, enter into contractual arrangements to provide certain services in return for agreed disbursement. This approach is gradually becoming popular in almost all the development projects implemented in rural Nepal.

### **2.3 Culture of `negotiating' and `contracting'**

"Negotiating' and `contracting' are considered to be an established culture under Nepalese circumstances. Since the concept is already grown up and matured, the process has been well established and documented. Under Nepalese perspective, culture of contracting has to be viewed under two scenarios and circumstances as under.

- ❖ Formal process of `contracting' and `negotiation' applicable for contractors of different classes and
- ❖ Informal or semi-informal process of `contracting' and `negotiation' applicable for community groups and most operational under decentralization acts and rules in line with the country's financial regulations.

The formal process of `contracting' and `negotiation' starts with announcement of sealed tender bids from the qualified contractor and contract is awarded to the lowest bidders. The system is more pronounced among infrastructure development project such as larger roads, hydro power and irrigation projects and contract documents are made perfect and precise as far as possible. The quality control of the work supervised with the provision of a cadre of competent technical experts. Negotiation is less pronounced in this approach. In cases the quoted rates exceed the official cost estimates, the bidders may be invited to sit for negotiation and finalize the rates within the framework of contract regulations.. The mechanism function within the framework of contract act and rules.

The informal process of `contracting' and `negotiation' has become a generic term for a development approach, which seeks to include community common interest groups in development activities on the basis of a formal agreement between the community and the providers of the resources. This approach has been seen within the broader context of the continuing and even strengthening efforts to break the seclusion of the urban and rural poor and to create the means whereby they can fully participate in societal development. One of the prerequisite for this approach to be effective and functional is the existence of the local organization. Under this process, community organizations are awarded contract on undertaking particular piece of works and price for the contract is to be accomplished based on `negotiation' between the two parties. This process operates within the framework of the decentralization acts and rules 1982 and 1989. Mainly user's groups and community organizations are used as an agent for the contract processes and there exist series of negotiation process. As the community groups attain their managerial and operational competency, their capacity to bargain in implementing the works under contract process increases. This has helped in developing `negotiation' as

a key operating principle of development intervention and as a basic means of ensuring effective community participation in both local government and donor agencies supported community development programs and projects. Thus the informal approach of 'contracting' and 'negotiation' is gradually emerging and institutionalizing in Nepal.

## **2.4 Forms and patterns of traditional contracts**

Critical assessment of the existing forms and patterns of contracts reveals that there exist two types of system of traditional contracts.

- ❖ Piece work system
- ❖ Project contract system

Under piece work system, construction works are generally broken down into packages for the purpose of awarding contracts to several construction groups. Construction management and execution responsibility is given to community based construction groups or local un-licensed / licensed contractors according to the nature of works to be undertaken. This provides the scope for an upgrading of construction skills of laborers, artisans and local contractors. This creates additional employment and income opportunities at local level and an incentive for rural communities to take responsibility for managing their infrastructure which is considered to be a sustainable approach. This system is more pronounced in the Department of Irrigation implemented irrigation system. In this system, 'negotiation' process has been highly institutionalized within the people and community organization concerned. Any conflict arising in contract administration is solved through 'dialogues' between parties concerned andh special focus is put on creation of strong and stable community infrastructure.

Sukla and Sharma (1997) reported that the piecework approach adopted by ILO in the implementation of Dhaulagiri Irrigation Development Project was fully compatible with participatory process of development, where local community was involved in decision making and project execution. The approach promoted local skills and saved on cost while ensuring timely execution of the project.

Unlike in piece works system, project contract system become functional by calling sealed bid or tender following standard bidding process. A comprehensive bidding document is prepared and contract is administered within the framework of quantity and quality estimates mentioned in the documents. This approach focuses least on community development and rather embark on getting the infrastructure completed instead of strengthening community capacity to use and manage infrastructure created. This form and pattern is mostly applicable in constructing national level physical infrastructure such as large irrigation schemes, hydropower, highways and major feeder roads, etc. This form is rather of minor significance for present study.

Usually project contract approach is characterized by the fact of (i) awarding construction works to local users' groups deducting contractor's profit and in management transfer the provision of System Management Committee comprising of Project Manager and WUA representative to settle and award the contracts.

It is to be noted that the traditional construction contracts in Nepal are not favorable for the poor. This becomes evident from the fact that the contract rate of earth work done by poor wage earner is less than 20% or one fifth of the contract rate quoted by the contractor (Koirala, 1998). ILO study on DIDP asserts that direct contract work to the people increases their earning from 35% to about 50% of the contract amount.

Mobilization of beneficiaries to accomplish improvements in their irrigation, drinking water and village roads instead of employing the conventional private contractors is a very viable low-cost assistance strategy. The use of participatory piece-work system as an option for cost effectiveness and labor mobilization has been found supportive in many infrastructure development projects (e.g. WECS/IIMI, 1989, SPIN/FAO, 1997). The farmers' work output exceeds government norms. The norms set by HMG for material and labor required to complete a constructional job were found to be generally inflated and not suitable for participatory assistance. When farmers executed the construction works using the estimates and specification of the improvement works, it was experienced that farmers' could do a lot more works than what were planned to be accomplished.

The impact evaluation study findings of the World Bank funded Irrigation Line of Credit Program reveal that the award of contract works to WUA is made on expectation that the quality of construction works would improve. However, in practice cases were found where some influential farmers or contractors intentionally compelled implementing agency to award contract to WUA and carried out the works on their behalfs for profit motive. In such cases the awarding of the contract works to WUA resulted to poor quality works and conflicts among the beneficiaries on the profit making issues. Other cases also were observed where a strong WUA had excellently managed the contract works and benefited the institution with the profit earned, and the quality of the works was also good. So there are always positive as well as negative effects of this issue. What could be inferred from the study is that awarding the contract works to WUA should be made carefully after thorough evaluation of the WUA capability and their motive behind the profit making (Singh et al, 1998).

## **2.5 Relationship of power in contract negotiations**

Relationship of the power in the contract negotiation varies with the existing forms and patterns of contracts. There exist significant variation on the relationship of power in this process under piece work system and project contract system.

Relationship of power in contract negotiations under project contract system is governed by the contract acts and rules. Since this is based on low cost bidding process, there is documented basis for checking quality of works and power relationships has nothing to do in the contract negotiation process. Contractor should complete the work within the agreed up time frame. Failure to do according to the specifications and within the stipulated time can lead to the cancellation of the contract and or legal action leading to the imposition of a penalty.

Under piece-work approach, relationship of power has something to do in the contract negotiation process. The concerned community organizations (COs) submit the form of tender to the sub-project and it is complemented by other documents including details

on works to be done. Mainly relationship of power in contract 'negotiation' lies on both government agencies or project staff and community organization (COs). This is considered to be a critical stage when informal group/organization enters into direct contract with the resource providing body and ultimately agrees the basis and conditions under which the resources would be made available. In this case, more power remains with the resource providing body. But if the CO is strong enough it can exert its influence and manages to get work completed with a good quality.

### **3. FOCUS OF THE RESEARCH**

#### **3.1 Policy and Program**

The irrigation management transfer is a broad policy of government designed to enhance the roles and responsibility of farmers in irrigation management. The intention is to reduce government's financial burden on O&M of the agency managed irrigation systems and provides greater control to farmers in the management of the systems and utilization of resources. This has been for the reasons that agency managed systems have often failed to fulfil the target set for agricultural production increment and economic benefits there of. HMG/N, in this context, is consistently emphasizing increased role of WUAs in construction, rehabilitation and maintenance of irrigation systems of all size and nature. To expedite the process, the government is vigorously pursuing a policy of gradual hand-over of irrigation systems to farmers through their own organizations. In line of the broad policy, management transfer efforts have been initiated at different levels by different projects under Department of Irrigation (DOI). Currently, several irrigation projects in the country have been undergoing through various stages of transfer or hand-over process in one or other ways. The modalities of such transfer seem varied across the projects. Two major irrigation projects that are recently transferred to farmers' groups seem to be quite interesting for the purpose of the study. During the transfer period, these projects underwent an intensive evolutionary process of organizational growth activities. During the process, these farmer's organizations entered into several formal and informal agreements; made negotiations at different levels and hierarchy of government and other organizations; undertook various renovation, repair and maintenance works; supervised the construction works of privated contractors etc. All these functions were previously carried out by the concerned irrigation agencies. The two irrigation systems selected for the study is (i) West Gandak Irrigation Project (WGIS) in Nawalparai district and (ii) Marchawar Lift Irrigation Project (MLIP) of Rupendehi district. A brief introduction of these projects is given below.

##### **3.1.1. Irrigation Management Transfer Project**

The WGIS, with a command area of 10,100 ha, is located in Nawalparasi district of Western Terai. It is typical to nearly one dozen Irrigation Management Transfer Project (IMTP) sub-systems that are currently at different stages of management transfer to the farmers. The IMTP was launched in March 1995. The AsDB is providing loan to execute the project activities and USAID/N has provided a grant for the technical service support to advise and assist Irrigation Management Division (IMD) of DOI as well as the WUAs in proper implementation of IMTP. The estimated cost for the project is

18.35 million US dollars, in addition to a grant of about three million US dollars in the form of technical assistance component by USAID/N.

The goal of the project is to assist DOI in improving the O&M of irrigation systems currently managed by DOI by involving farmer beneficiaries in their operation and management, by that complementing ongoing efforts to encourage the private sector's participation in irrigation development and management, promote economic growth and reduce poverty in rural areas (IMTP Loan Agreement, 1995; Asian Development Bank, 1995). The system has been turned over to the WUA after rehabilitating the physical infrastructure with farmers' active participation.

### **3.1.2. The Marchawar Lift Irrigation Project**

Located in southwest of Rupendehi district of Western Development Region, the MLIP was initiated in mid 1960s with the assistance of the Indian Cooperation Mission (ICM). The headwork, constructed by ICM, failed shortly after its completion. HMG/N, with World Bank's assistance in late 1970's, studied the ground water potential for irrigation purpose but found unfeasible. Later, a pre-investment report concluded the lift irrigation project to be feasible. Following that, MLIP was initiated in 1980 with assistance from UNCDF/UNDP and HMG/N. The original command area of MLIP was 5,200 ha. However, the infrastructure developed was only for 3,500 ha. The management responsibilities of MLIP have taken over by the legally organized WUA.

### **3.2 Rationale for Selecting the Projects**

Management transfer program of HMG/N is an approach geared to enhance the organizational capability of the farmers at the grassroots. The target beneficiaries are entirely the farmers, most of whom are marginal and poor, and who were greatly excluded in the past by the project authorities. In turn, their roles were persistently limited in major decisions making, planning, water use and water management, fund raising and utilization, employment in the canal system. Although it is not a kind of special poverty focused program, the program indirectly supports the poor through their increased participation in all kind of activities related to irrigation development and management. In both the projects, farmers now appear to be in a better position in controlling the resources and making major decisions. Other benefits in irrigation projects include increased employment during reconstruction/ rehabilitation, greater equity in irrigation water distribution, and representation of poor in the WUA committees at different levels enabling their access and linkage development with other agencies.

The WGIS and MLIP irrigation systems have been identified as appropriate programs in Nepal largely pursuing the contractual approach and strategies in an attempt to promote the roles of farmers. With the transfer of the management responsibility to the registered WUAs, they have legally entered into various agreements in connection to several negotiations and contracts. In consequence, considerable roles of the government's Department of Irrigation (DOI) and other irrigation agencies have automatically shifted to the users. With this shift of roles to the users, their access to resources and control over them have increasingly enhanced. As for instance, the



WUAs, after registering legally, have begun to perform as per their own constitution and by-laws. Their roles in construction/ rehabilitation and supervision have increased substantially than before when the government agencies administered all the contracts work without consulting farmers or their representatives. The WUAs as authority of their irrigation systems have now begun to play crucial role in need assessment of canal improvement and rehabilitation and the associations are jointly involved with government agencies to hire the contractors and supervise their jobs. In many cases, they have performed themselves as the contractors. The WUAs have negotiated with the government agency, the Department of Irrigation for construction contracting leading ultimately to management transfer.

In both projects, there were provisions for “awarding contracts” to the WUAs. However, considering limited institutional capacity of WUAs most of jobs needing high technical skills were given to professional contractors. In both projects, it has been reported that the provisions included providing relatively easier works to the WUAs. These jobs included mostly groveling on the canal service road, gabion works, earth works etc. Present financial rules of HMG/N allow for such awards and for that matter, the WUAs do not have to go through the process of competitive bidding as in the case of professional contractors. While contracting the WUAs, contractor's profit (15%) and applicable taxes (5%) are exempted from the contract amount while all other rates are similar as per office estimates.

The construction contracts to the WUAs are intended to achieve the followings.

- ❖ Making WUAs capable of managing maintenance activities by themselves so that they would undertake such tasks effectively after assuming O&M responsibility (partially or fully) of the irrigation system;
- ❖ Providing opportunities to WUAs the access to outside resources and gain some experience on local resource mobilization activities related to construction works and building up their capability for system management;
- ❖ Activating WUAs in generating some cash flows that would help in undertaking O&M responsibility in the future and
- ❖ Promoting the sense of ownership towards the irrigation system

Contractual arrangements to users are also safeguarded by government policy. The Irrigation Policy, 1997 and HMG/N financial rules have clearly mandated the WUAs to execute contracts up to a ceiling of Rs one million. This fundamental provision in the policy effectively protects the interest of farmers in receiving contractual works by themselves. This policy partially thus restricts the outside contractors to take the contracts, which they generally used to do earlier prior to the legal provision. In WGIS, the WUAs have completed 6 different construction, improvement and repair works under contractual arrangements whereas farmers of MLIP have performed 2 contracts only.

### **3.3 Relevance and Usefulness of the Program for the Study**

In Nepal, irrigation continues to be the major sector of investment both at present and in foreseeable future. Investment in irrigation projects, either during new construction or rehabilitation, shows greater potential to benefit the target groups at the grassroots provided that the works are directly awarded to them in contracts. Interventions in irrigation projects are also likely to generate quick benefits to lead sustained improvement in the condition of the people. As expected, farmers of the WGIS and MLIP seem to be benefited through their respective WUAs than before. The contract arrangements of construction works through WUAs have apparently ensured greater benefits to the users of these systems. The WUAs in both systems have replaced, although marginally, the previous contractors who generally consisted the registered contractors from outside. After taking over the construction activities by WUAs, local farmers are employed as wage earners for most of the unskilled and semi-skilled works. This has helped retain the project money with local people enhancing their access to cash income.

The study is intended to make in-depth diagnosis of the WUAs and their activities in two major irrigation systems of the country where farmers have been organized into registered associations. The purpose is to examine the approach and extent of benefits flows to the targeted people, specifically the poor and helping them reduce their poverty level. To attain the purpose, the assessment will cover different aspects such as organizational structures of the associations, capacity building of the farmers, management skill development, negotiations made by associations at varied levels, contract works performed by the associations, employment generation and its effect to the poor. All this is expected to provide great insights in considering future policy strategies of involving farmers in the mainstream of irrigation management in the national context.

The achievements, strengths and weaknesses noticed in the performance of WUAs in WGIS and MLIP appear vital in view of consolidating and refining future policy strategies. From the experience in these irrigation projects, the impact of contract system adopted in management transfer will become clearer. Few key questions will thus form the central focus of the study. These questions are i) How far the WUAs have been able to undertake the responsibility of irrigation management? Has transfer effort enhanced farmers' access to different resources and inputs? How are negotiations and dealings made by farmers' associations at different levels? To what extent the associations have developed their capability and succeed in replacing outside contractors? Has there been significant effect in local level employment and income of the poor? Certainly, these questions will be analyzed carefully to show greater relevance of the study.

### **3.4 Implementation in Practice**

Virtually contract approach is practiced in many irrigation systems, although the modalities vary from project to project. In WGIS and MLIP, the WUAs entered into series of agreement with the DOI and the projects at different stages as per HMG/N policy of management transfer. The transfer process, however, involves critical interventions such as organizational development of the farmers, rehabilitation or improvement of the physical system before transfer, awarding contracts to farmers'

associations and their members to undertake renovations/ rehabilitation etc, all in line of the implementation framework adopted by DOI and the prevailing rules and act. The transfer process is generally achieved in 3 different phases. i) Initial organization phase ii) Agreement phase and iii) Implementation phase. The initial phase covers baseline assessment and formation of water user groups. The agreement phase include development of action plan and agreement on joint management between WUAs and DOI. During the third phase, the plan is implemented together with the provision of monitoring, evaluation and follow-up. In the transfer systems, there is another phase called Post Transfer Phase where government provides certain assistance to the WUAs.

The contract works in WGIS and MLIP are provided to WUAs in the same manner as they are awarded to the professional contractors. However, no bid documents are prepared for the works to be done by WUAs and no competitive bidding was required. Once the agency decides to provide the work to WUAs, they are asked to make formal contracts with agency and a joint agreement is made. No open notices are invited for the works to be done by WUAs.

#### **4. CRITICAL REVIEW OF THE CONTRACT APPROACH**

##### **4.1 Organization**

###### **4.1.1. Legal Framework of WUAs**

The Water Resource Act (WRA, 1992), The Water Resource Regulations (WRR, 1993) and Irrigation Policy (IP, 1992) revised in 1997 provide basis for the establishment of water users' associations (WUAs). The WRA has made provision to anyone aspiring to use water resources on institutional basis by forming a consumer's association. The WRR also provides definite rules to form a consumer's group in its rules 3,4,5,6 and 7. To form a group, at least seven persons, selected from among the concerned consumers, must tender application to the District Water Resources Committee (DWRC) in a set format together with a copy of statute of the age group and a fee of Rs. 100. Rules 5 of WRR have listed the particulars to be included in the statute to be presented with the application. The DWRC, if essential, can make inquiries to approve the application, which is done by issuing the certificate of registration in a set format. All groups registered before the commencement of WRR are considered registered as per the rule 6 (3). As most of the consumer's associations prepare their own operating policy, this varies from one association to another. The IP in its section 2.3 has provisioned a policy framework for the formation of water users' committee in any irrigation development schemes/projects (IP: 1997). It has also clearly stated that at least 20 percent of the total members in any CO should be women. Formation of a users' committee is a prerequisite to implement any irrigation schemes/projects or to undertake reconstruction and rehabilitation works. There have been, however, a couple of efforts to bring about consistency in the formation and statute of the committees (NPC: 1994, APROSC: 1997). The associations' responsibilities have been identified right from the identification to a sustainable O&M of the irrigation projects (RTDB/IIMI, 1997).

## **4.1.2. Type and Evolution of Organization**

### **4.1.2.1. Water Users Associations (WUAs)**

In both the systems, fully evolved and experienced WUAs have been set up which are involved in the management of the systems. These WUAs are registered with government bodies, and bear full legal entity for O&M of their respective systems while remaining within the legal framework advocated by the WRA, WRR and IP. During the transfer process, government helped the WUAs for their formation, registration, and capability development through the provision of different supports.

The WUAs in both systems are actively engaged in membership drive in an attempt to enhance the participation of each beneficiary household towards the system operation and management. The WUAs of WGIS has a number of committees formed at different levels. These are: (i) WUA Board of Directors (previously called as WUA main committee) (ii) Executive committee (iii) Regional committees (iv) Branch committees (v) Minor committees and (vi) Tolis and Upatolis. The organization also involves 4 regional offices covering the entire command area. The WUA is assisted by support groups of Canal Management Work Force (CMWF) at the system level and *Tewa* and *Sewa Dal* (supports and services groups) at the secondary and tertiary levels. Around 1400 member farmers of WGIS have been involved in one or other position in the organizational structure. Four teams of water delivery force are assigned to 4 different blocks of the command area who are responsible for overall operation and maintenance, water distribution and management, ISF collection etc.

In MLIP, the WUA committees are formed mainly at three levels: It has one main committee of 12 members; there are 9 committees representing canal systems and 127 block committees, each committee with 5-7 members and serving specific command area.

### **4.1.2.2. Sub-project Management committee**

In IMTP, a sub-project Management committee (SMC) is established in each sub-project to support the transfer process during implementation. A SMC was also established in WGIS to see that the physical rehabilitation of the system is done well for a successful management transfer to WUA. The roles of SMC were to ensure transparency in project implementation; to maintain coordination between the WUAs and sub-project staff; to make sure that all rehabilitation and improvement works in the irrigation systems take place in conjunction with institutional development of the WUAs; and to serve as a venue for the joint WUA and DOI staff review of implementation progress and periodic reconciliation of project expenditures. The SMCs are chaired by the sub-project manager and includes the office bearers of the WUA executive committee. The SMC members were given training about construction, management/supervision, which would help when they do their own contract and where they supervise private contractor's work. The

SMC of WGIS was dissolved in July 1998 after formal hand-over of the system to the WUA. On the whole, the role of SMC during project implementation was commendable in many respects.

#### **4.1.2.3. Negotiation committees**

In WGIS, separate negotiation committees representing the WUA were formed as and when they were considered essential by WUA members. These committees had the mandate of negotiating services, facilities and other resources to be offered by DOI both during and after management transfer. These negotiation committees were temporary bodies, which were assigned specific responsibilities to support, expedite and streamline the transfer activities. At least, 5 such committees were formed during 3 year period in WGIS.

#### **4.1.2.4. Canal Management Work Force**

CMWF is an integral part of WUA in WGIS, which consists of 5 lead persons responsible for water distribution and management. To support the delivery force, about 250 farmers of WGIS have been imparted training by DOI. For the sake of convenience, the main canal system and the entire command area is divided into four major blocks which are looked after by 4 water delivery forces, each led by the trained member. The fifth person coordinates other 4 teams and works as liaison with the main committee. Rest of the trainee's work for delivering water in their respective outlets and tertiary canals in coordination with the respective members of the water delivery force. They also collect the irrigation service fee from the water users.

#### **4.1.3. Authorities of WUAs**

The associations are vested with the responsibility right from the identification to a sustainable O&M of the irrigation schemes /projects. Irrigation Policy (IP) has made it clear that the formation of a water users' organization is a prerequisite to implement an irrigation projects/ schemes. The WUAs involve themselves in survey design, construction, resource collection and mobilization, operation and maintenance and conflict resolution. They can enforce penalties on free riders. However, such involvement varies from project to project and much also depends on the dynamism of and contribution by the WUAs in the irrigation projects. The WUAs have written bylaws defining the authorities and responsibilities of the associations.

#### **4.1.4. Structure and Functioning**

The form, type and structure of WUAs could vary according to size and nature of the irrigation systems. Generally, the formation of WUA is to be initiated based on hydraulic boundary of a system beginning with block and tertiary level to the main canal system. The DOI has identified the need for four tiers of irrigation organization depending upon the size and structural complexity of the system. Generally, a main

committee of WUA would be mandatory in all canals of all sizes. The WUAs could be established with appropriate levels of representation for main, secondary and tertiary canal as well as the head, middle and tail sections of the sub-projects. Thus there could be one or more WUAs for the sub-projects. Canal system having independent off-takes could have a separate WUA in an irrigation scheme.

The WUAs formed in the projects -- under the legislative provisions made by water sector policies and legislation -- would serve as the main actor in the irrigation schemes after turnover. Accordingly, WUAs would be responsible for a series of services and activities either jointly with DOI or independently. The WUAs would be principally responsible to the activities of its members.

The WUAs, as said earlier constitute different level committees in both the systems. The Board of Director consisting of 40 elected officials is the apex body in WGIS whereas a main committee with 12 officials is the supreme body of WUA in MLIP. From the Board, a five member Executive Committee is formed in WGIS, which looks after day to day operation and management of the system. Likewise, the main committee officials look after day to day management in case of MLIP. At the lower level of the organizational structures, WGIS has formed nearly 200 Tolies (teams) and Upatolies (sub-teams). Similarly, MLIP has 127 block level committees at the lower level of the organizational structure. Specific functions of different committees within the WUA organization are as follows.

Systems	committees	Functions
1. WGIS	1.1 WUA Board of Directors (1)	<ul style="list-style-type: none"> <li>- develop annual plan including canal operation and management, charts broad policies on resource generation, staff hiring, contract work, assistance from government etc.</li> <li>- hold Board meeting usually twice a year on half-yearly basis</li> <li>- Instructs and advises Executive committee to carry out day to day works.</li> </ul>
	1.2 Executive committee (1)	- Work according to policy guidelines and instruction of the Board
	1.3 Regional committees (4)	- Manage the canal system at regional level
	1.4 Branch and Minor Canal committees (6)	- Supervise and manage respective canal systems i.e. branch and minor
	1.5 Tolis/ Upatolis (171)	- Distribute water in respective command areas, encourage local participation of farmers and help collect ISFs from beneficiaries
	1.5 Water Delivery Force (4)	<ul style="list-style-type: none"> <li>- Distribute water in different parts of the command areas in proportion of land area</li> <li>- Assess repair and maintenance needs of the canal system</li> </ul>

2. MLIP	2.1 WUA Main committee (1)	<ul style="list-style-type: none"> <li>- Undertake key decisions on: system operation, water allocation and distribution in different blocks, ISF rates fixation and collection, other resource generation</li> <li>- Instructs block level committees on better water use and management</li>   <li>- Make negotiations and contracts with HMG/N</li>   <li>- Arrange inputs supply to farmers through its depo.</li> </ul>
	2.2 Canal System committees (9)	<ul style="list-style-type: none"> <li>- Supervise and manage respective canal systems</li> </ul>
	2.3 Block committees (127)	<ul style="list-style-type: none"> <li>- Distribute water to block level farmers according to prescribed norms</li> <li>- collect ISF of respective blocks and mobilize farmers to clean their tertiary systems voluntarily</li> </ul>

#### 4.1.5. Representatives in WUAs

The WUA committees are represented by members from different parts of the command area. There is no restriction for the members living in the command area to aspire for any position within the WUAs' committees since elections are held in a democratic way. Currently, the WUA Board of Directors in WGIS consists of 40 officials representing the whole command area whereas the MLIP main committee has 12 officials. To see the representation of members in the main committees, each member's land holding size and ethnicity was obtained. From land holding point of view ( a major economic indicator) over 65% members represent the small and marginal farm size groups owning less than 1.5 ha. in both systems. About 20-25% were found belonging to the medium size farm category whereas only 10-15% were from large farm size, those too just having land enough (5 ha) to be qualified in the large category. Ethnicity wise, the higher percentage of WUA functionaries comes from middle caste groups and a less from higher caste group. Very limited representation was found from the socially backward or untouchable ethnic groups.

As such if the land holding size and ethnicity of member farmers representing in the main committees of WUAs are considered, the composition seems heavily skewed to the economically poor and socially mixed groups. The high proportion of small and marginal farmers in the committee also elucidates higher prevalence of the same farm size group in the entire command area of both systems. From ethnic point of view, no committee is dominated by higher or middle caste members. On the basis of these figures, there is little or no room to justify that the poor are not adequately represented in the main functioning bodies of WUAs. However, it was clear that the backward class of people have fewer representation in the executive committees.

In all the WUA committees at least 20 % should be the women members. In WGIS women's awareness was reported in the rising trend whereas in MLIP women's involvement was found rather minimal.

#### **4.1.6. Capacity, Strengths and Weaknesses of the Organization**

The capacity development of WUAs has been quite noteworthy in the projects studied although the capacity building needs to be enhanced further to attain a more capable level. So far, the WUAs' capacities have developed largely in its organization, financial management, system management and, technical skill development. These are briefly pointed out below.

##### **4.1.6.1. Organizational Capacity**

The WUA organizations have shown marked growth in terms of their structure and organizational strengths. Both organizations have formed committees at different hierarchies down below from tertiary or block levels to the main canal level. For instance, in WGIS, 187 committees are formed as farmers' organization. In MLIP, the number of different committees within organization is 137. All these committees are assigned different functions and responsibility to facilitate the main committee. Various training was imparted through projects for capacity building of the WUA members.

During initial organization phase, the farmers were provided opportunities to work closely with the agency which allowed the former to be aware on the concept of management transfer and also make dialogue and interactions with the later. This way, the farmers gradually proceeded towards formalizing the WUAs. Meanwhile, this exercise produced an avenue for technical, financial and managerial interventions of management transfer program.

One interesting features in both the system is the interest generated among the farmers to get elected as a functionary of the WUA. Upon completion of their tenure of office, election for various tiers of the users' committees is conducted. The representatives are elected following a democratic process and there is a tremendous enthusiasm among the farmers to get elected and serve as an user's representatives. However, a major concern has been the high degree of local party politics involved during the election process.

##### **4.1.6.2. Financial Capacity**

Financially, the WUAs have attained capacity to handle financial management of the system. This includes both fund raising and utilization. The WUAs have got autonomy for fund generation and utilization on the basis of their decisions. The WUAs receive funds mainly from Irrigation Service Fee (ISF) from the farmers which is fixed by the WUA in consultation with general assembly of farmers in line of the stipulated policy of HMG/N. Besides, WUAs have planned to raise funds from other different sources to meet their operational and maintenance cost. The financial records of WUAs are maintained either by the salaried staff or by WUAs' members. WUA's treasurers have



been trained on account and record keeping. The WUAs usually undertakes following activities themselves.

- ❖ Annual Budget Preparation and Internal Auditing
- ❖ Record and Account Keeping
- ❖ ISF Fixation and collection
- ❖ Make decision about other sources of fund raising and collection procedures

The WUAs have bank accounts operated under a joint signature of two or more members. WUAs' account is audited every year by recognized auditors giving details of their financial position including assets and liabilities, profit and loss. In both systems, the audit reports contain various recommendations to improve their financial positions.

#### **4.1.6.3. Managerial Capacity**

The WUAs were involved by the project authorities in managing various project activities during rehabilitation and improvement of the system. Intensive managerial training imparted to WUA members have bore fruits resulting in increased managerial capacity in terms of assuming responsibility, leadership, negotiation, bargaining, contracting and so forth. As a result of shift in management responsibility of canal from government to farmers, there has been a sharp decline in the government supports including funds and staff in both projects. With the implementation of agreement between WUAs and government, there will be gradual phase out of supports to the WUAs in few years.

#### **4.1.6.4. Technical Capacity**

The transfer of technical know-how and skills appears important for sustained operation and maintenance of irrigation systems by the WUAs in their respective command areas. The technical capacity building of the WUAs in following aspects seem more encouraging.

- ❖ Discharge measurement
- ❖ Canal operation including water allocation and distribution in the systems except the head-works
- ❖ Maintenance of the canal system
- ❖ Crop cutting survey
- ❖ Contract management

#### **4.1.6.5. Strengths and Weaknesses**

The WUAs are relatively new and are undergoing the transition phase and naturally they have acquired remarkable experiences which exhibit both strengths and weaknesses. The strengths observed could be replicated to other systems and weaknesses may be useful to make necessary corrections or modifications. Generally observed strengths and weaknesses of WUAs entering into contract are summarized below.

### Strengths

- ❖ WUAs have been assuming considerable amount of responsibility in irrigation system management following the transfer of the system. Together with system hand-over, they have gained exposure and opportunities to undertake various construction works within the command area. This has raised their confidence level and a sense of responsibility to undertake further works to enhance local employment and income of the poor.
- ❖ Technical capability of local people seemed to be upgraded. Technical skills acquired by workers include gabion box making, concept of technical design, layout and measurement of works. Some unskilled workers employed in WGIS have begun to work as petty contractors out of their skill and knowledge gained from working with WUA.
- ❖ Being local community organizations representing the farmers, WUA can effectively work in favor of the poor in many respects. The WUAs can motivate and mobilize the people, and manage community level disputes and confrontations more effectively. The WUA of WGIS completed part of the Jharai River training works left incomplete due to disputes between two communities of the area.
- ❖ With the shift of government's role and facilities to WUAs, they seem to be more obliged and responsible than before. WUA members thus spend considerably more time to the management of the system voluntarily.
- ❖ Contractual works by WUAs appeared to be more beneficial to communities. All kind of workers (skilled and unskilled) was hired locally when works were done by WUA or through its members. This obviously contributes to greater opportunity of employment and income enabling to retain more money locally. Moreover, there was also a tendency to use the poor people of the community as workers.
- ❖ The WUAs have apparently gaining increasing access to various resources, institutions as well as services. These opportunities greatly support the WUAs to look for the opportunity to raise funds and get other services delivered from line agencies.

### Weaknesses

- ❖ There seem inadequate legal provisions and arrangements to check and control WUAs in case they fail to comply with the conditions or do not complete the contracts undertaken. The agency cannot take strict actions to WUAs in case of non-compliance to standards and poor work performance.
- ❖ The contract conditions between Agency (government) and WUAs seem flexible and loose compared to what is applied to professional contractors. This may lead to poor functioning as well as may raise irresponsibility in the part of WUAs.

- ❖ The general tendency is that if the contract is technically not complicated it is given to WUA, otherwise, it is given out to private contractor. WUAs showed tendency of approving works done by their members without complete evidence of good quality whereas the professional contractors were increasingly harassed.
- ❖ The direct contract work to WUAs that too without competitive bidding has elevated “contractual attitude” among members. In consequence, there was overwhelming representation of contractor type farmers in the WUA of WGIS in the last main committee.
- ❖ A major flaw in the prevailing contract approach occurs due to assigning contract jobs to individuals or a team on behalf of WUA agreeing on 5% retained earning to WUA. This seems to be a kind of sub-contract, which is not allowed principally. With such practice, the workers are paid less and members who are assigned works tend to make profit at the cost of WUA.
- ❖ The work done in sub-contract manner by WUA or SMC members seems to be against the concept of community contract in WGIS. In such working pattern, there is less transparency and poor record keeping by WUA about the work undertaken. The newly elected WUA of WGIS has been asking clarification with the members undertaking the works for the discrepancy in the figures committed and actually paid.
- ❖ In the contract works done by WUAs, workers were paid almost the same rate (Rs 50-55) paid by the outside contractors based on prevailing rates which is much lower than the estimates. The estimates prepared following the government norms are rather inflated.

#### **4.1.7. Leadership and Internal Dynamics**

The WUAs after being empowered through their organizations are glowingly expanding their influence in the local political as well as administrative activities. It has opened up an environment to promote collective leadership of the people exclusively comprising of farmers, peasants, landless and wage earners. The leaders now are in a position to negotiate, bargain and deal with the local government, and government line agencies for the collective interest of the members.

#### **4.1.8. Role of WUAs and DOI**

##### **4.1.8.1. Role of WUAs**

WUAs are the main authorities involved in planning, management, operation and maintenance of the irrigation systems. Their activities can be briefly summarized as follows.

- ❖ Nominating WUA representatives to form SMC, as required, which plays vital role in rehabilitation works;

- ❖ Through SMC, conducting the work of the emergency maintenance and flood damage repair according to Action Plan in coordination with the WUA (Farmers' representatives in SMC are supposed to work under the guidance of the WUA)
- ❖ Keeping and furnishing up-to-date records of labor, cash or kind in the course of resource mobilization and contribution based on agreed upon rehabilitation works;
- ❖ Keeping necessary records and arranging for the security of the materials and equipment received for irrigation system management and related construction works; and
- ❖ Undertake construction contracting and/or supervising the works done by the contractors

#### **4.1.8.2. Role of DOI**

DOI performs the project related activities at two levels: i) Central level and ii) Sub-project office level at the field sites. At the central level, DOI is engaged in following activities:

- ❖ Deciding about the selection and the procurement of goods or tools to be given to WUA relating to construction upon deliberation with WUA;
- ❖ Procuring necessary construction, operation and maintenance of goods and equipment such as motor, dozer, loader, dump truck, excavator, grader etc;
- ❖ Supervising the work to ensure it is done according to Action Plan
- ❖ At the sub-project office level, the DOI does the following:
  - Preparing for detailed design, estimates, and contract documents related to rehabilitation works;
  - Awarding contracts for construction works to be done on DOI's part;
  - Taking measurements of all kinds of construction works done by the contractor and submits to the committee duly certified by the engineer. The approval for the measurement thus presented is given technically by the sub-project manager and in totality of the work completed by the committee; and
  - Making payments for the completed construction works against the approved measurement book, bill, voucher, etc.

## **4.2 Negotiation**

### **4.2.1. Forms of Negotiation**

Negotiations of WUAs take in various forms ranging from highly formal to informal and from small to large ones. Negotiations are generally made in writing upon reaching certain agreement or consensus between the negotiating parties. Generally, negotiations take between the WUAs and the agency or government. As for the contractual works, negotiations are made informally between WUAs and agency officials. The negotiations may go several rounds particularly with regard to the timing and quality of work to be performed. Sometimes, WUAs demand for more works which agency officials deny to approve which prolongs negotiations. The negotiations also involve assessment and estimation of work type and volume that is to be awarded to WUAs. Only after final consensus that final and formal negotiation is made. Upon negotiation, sometimes, the

technical staff split the total contract into a number of small contracts thereby enabling the WUAs to undertake more contract works.

#### 4.2.2. Negotiation Issues (Topics)

Negotiation issues and cases often relate to various foreseen and unforeseen events and activities at various levels. Most commonly, the issues emerge following some conflicts or opinion division between or among farmers, WUA members or other organizations.

The negotiation committees of WGIS held meetings, sometimes quite rigorous, with senior officials of DOI and other central level officials mainly on the following issues.

Date	Negotiation Issues	Negotiating Parties
Nov., 1997 (After handover)	Vehicle, dozer, pockland, staff retention, buildings, Rs 2 million trust fund for use of interest in repair and maintenance	DOI senior staff including Director General and his deputy.
Oct., 1997 (Before handover)	Post handover support including staff, heavy machinery, repair and maintenance fund	do
1996	Ownership and utilization of trees along canal banks	DOI and DOF
1996	Compensation of land encroached by canal system, disruption and difficulty in water supply due to Indian canal, flooding problem in Nepal side	DOI, MPs and MOWR

Source: WUA and Project Office, 1998

The latest negotiation held in November 1998 between co representatives and DOI senior officials was perceived to be quite extensive. During the meeting, the DOI officials provided verbal assurance to fulfil most of the demands put forth by the committee members except the cash assistance demand of Rs 2 million for a trust fund. Instead, a consensus was reached to provide yearly operational cost amounting Rs 200,000 for five years. Farmers also remarked the negotiation as being successful since the DOI endorsed to offer budget for all emergency repairs that cost more than Rs 50,000. The WUA is now awaiting to receive final official document as agreed by both parties. Unlike WGIS, the MLIP WUA appeared to have met with little success in terms of receiving post hand-over supports except some financial support for the pump operation and a agricultural production program supported by a NGO.

#### **4.2.3. Roles of Different Actors in Negotiations**

Many actors have been involved in negotiations for one or other issues as mentioned above. The roles of the actors often seem crucial to narrow down the misunderstanding and resolve the issues. The roles of actors in negotiations vary depending upon the level, stages and topics. Usually, the WUA main committee forms a special negotiation committee whenever negotiation is to be held at higher (DOI or Ministry) level. In most cases, the actors involve mainly the agency officials and WUA representatives. No outside agents seem to be involved in any kind of negotiations made thus far.

#### **4.2.4. Stages and Levels of Negotiations**

There are no clearly defined stages and levels whereby negotiations take place in the contract approach of WUAs. The stages and levels are largely determined by the weightage of the issue or purpose of negotiations. Usually, large number of negotiations is held at the local levels. These include internal negotiations of WUAs as well as those between WUAs and the agency or the project office. These are mostly informal and local in nature covering issues such as system operation (opening and closing schedule) water allocation and distribution, ISF rate fixation and collection and so forth.

The other level of negotiation takes place between WUAs and agency officials in the project site. These include mainly the works to be undertaken by WUAs. For instance, the WUA in MLIP repeatedly demanded the contract for 1800 meter canal lining work whereas they were provided only 215 meter work, which clearly indicates that there is resistance on the part of the technical staffs to give construction contract to WUAs. Some other negotiations took at higher level, usually with the DOI office of HMG/N between representatives of WUA and DOI.

#### **4.2.5. Influences of Power Relations on Negotiation Process**

Negotiation processes often seem to be influenced least by power relations. Established norms and precedents are often referred to influence over negotiations to the extent possible by the negotiating parties which applies mostly to outside contractors. At the extreme, legal consultancy and advice are sought as means to provide sufficient explanations and obtain legal validity. There is little use of power or influence in contract negotiation in case of WUAs. The WUAs are required to abide by the rules of agency and government for whatsoever works they are given. The decision to give contracts to WUAs is generally made at a joint meeting of the WUA and the agency staff.

### 4.3 Contracting

#### 4.3.1. Type and Form of contract

In the two irrigation projects studied, contracts have been awarded both to the professional contractors and the WUAs. New and technically complicated construction and rehabilitation works are often considered difficult to undertake and complete by the WUAs. Relatively easier works such as groveling, gabion works, earth cutting, desilting, simple canal lining, etc. were awarded to the WUAs which were completed by WUAs or the assigned members. The following table presents the work type and value of contracts completed by WUAs in two sites.

Table: Contract Works Accomplished by WUAs in WGIS and MLIP

S.No.	System	Type of Works and Amount	Contract Value (Rs)	Actual Amount Paid (Rs.)
1.	WGIS	1.1 Dhanewa Intake Repair and Jharai River control	508,278	492,568
		1.2 Loharauli Drain Excavation	15,000	7,412
		1.3 Service Road Gravelling	750,460	515,523
		1.4 Service Road Gravelling	91,000	17,622
		1.5 Darkhase Culvert/ Slab	24,406	23,297
		1.6 Gear Supply and Fitting	90,000	90,000
2.	MLIP	2.1 Canal Lining, 200 metre	528,000	528,000
		2.2 Earth Work (Hardi Minor and LMS)	400,000	400,000

Source: WUA and Project Office

As could be seen from the above table, the WUAs of both systems completed a couple of works on their own. In both systems, contractual works were awarded to respective WUAs, primarily with the intention of encouraging members to build up their institution and generate some funds out of the margins made from the works. It was also expected that by farmer's involvement better quality and more cost effective construction will be achieved. This arrangement will also prepare the WUAs for the takeover of O&M responsibilities due to increased sense of ownership.

In WGIS, the WUA performed contracts amounting more than Rs 1 million in two years. The contracts included graveling in the canal service road, river training, gear fitting, construction of intake structure etc. as shown above. Most of the contracts awarded to WUA were carried out by the committee members. The graveling contract was awarded to the WUA officials with a condition of depositing 5% of contract value as income in the account of WUA. On the other hand, the river training work was carried out by the member of SMC under the same condition on behalf of the WUA. However, the actual margin offered to WUA was reportedly less at about 2-3% against the agreed 5%.

In MLIP, the WUA completed 2 works amounting nearly to the allowed ceiling of Rs 1 million in the last year. The works included canal lining in more than 200 meter stretch and canal excavation.

#### **4.3.2. Contract Duration**

Almost all works were awarded during the year 1997/98 when handover processes of irrigation systems were in full swing with immense drive to encourage farmers to shoulder increasing role and responsibility. In both cases, most of the contract works were awarded during April to June of 1998. The contract duration for different works varied from one month to about 3 months.

#### **4.3.3. Payment System**

Unlike the private contracting, in WUA contracting, no advance payments are made. This is because the agency staff does not certify this advance and undertake the responsibility of recovery in case of non-compliance. WUAs therefore need to use their own fund initially for starting the work and only after completion of some works they get reimbursed upon submission of bills. As seen in the table above, the WUA of MLIP were paid the contracted amount whereas in WGIS, the actual payments differed with the contract amount as payment were made on measurement basis.

#### **4.3.4. Nature of Contract**

Contracts between WUAs and agencies are quite formal but the terms and conditions are different than what are applied for outside professional contractors. There is no separate contract document in case of agreement between WUA and agency. A simple contract paper is prepared and signed by the agency official, WUA representative and the witnesses. The contract paper is annexed with the specification of works to be done which include volume works, quality of works to be performed, timing and duration etc. The clauses and conditions vary from work to work in case of contract to WUA whereas it is more formal with full legal provisions in case of Low Bid contracts (LBC) usually offered to the private contractors.

#### **4.3.5. Stages and Levels of contracting**

There is no established practice regarding the stages and levels of contracting. The general practice of contracting starts from identification and prioritization of various works to be undertaken in a particular sub-project. Following this, the works are grouped into two categories: i) works to be done by DOI and ii) works to be done by WUA or beneficiary farmers. Works to be done by DOI are generally got done by professional contractors in accordance with the prevailing rules and regulations of HMG/N also considering advice of the SMC as these works are of large volume and of complicated nature for overseeing and inspection. The work to be done by the WUA is to be carried out by mobilizing local resources and not on lease or on contract to third party.

It is stipulated that contracts of some works to be done from DOI side, which are relatively easier and manageable by the WUAs, could be awarded to them. Keeping with



this rule, the WUAs of WGIS and MLIP have accomplished various contract works as mentioned earlier.

#### **4.3.6. Rights and Obligations of Different Actors in the Contracts**

Contractual rights and obligations of contractors and contract awarding agencies (Government) are as specified in the contract or agreement documents which contain all necessary terms and conditions. In absence of well established norms and standards, a great deal of mutual understanding, rapport as well as flexibility has to be maintained while working with the WUAs. And this can only lead to sustained relationship between the two. The conditions of rights and obligations seem to apply more in case of LCB procedure.

In case of past contracts awarded to WUAs, the agencies provided technical supports to the WUAs, not as obligation but as a co-operative gesture, to accomplish their contracts in time and quality. The technical help from agency involved supports for (i) design, (ii) layout, (iii) supervision, and (iv) measurement of the work, all to facilitate the WUAs to accomplish the work in time.

In addition, the agencies extend supports to the WUAs for the following.

- ❖ material procurement
- ❖ availability and procurement of materials
- ❖ checking material quality

#### **4.3.7. Penalties and Non-compliance**

The provision of contract work to WUAs is subject to the level of institutional capability of the farmers rather than their prerogative or privilege. Though government principle requires single contract works assigned to WUAs if they are willing, it is normally the agency staff who decides this. In order to get works from agency, the WUAs must have attained certain degree of institutional development together with the technical and managerial capability to handle the contracts. Even the unwillingness of WUA in taking responsibility forms a strong clause of withdrawing supports. For instance, in IMTP, it is explicitly mentioned that “in case of a WUA not willing to participate in the implementation of the program to turn over a project identified by HMG/N for turnover, HMG/N shall stop the maintenance and operation of such project (IP 3.30.2 cf. GITEC/GEOCE: 1994)

WUAs in both study sites did not report any sort of lapses, damages or gaps in their works that required to exercise fines or penalties for non-compliance. To levy a fine in case of non-compliance is also a problem. Neither the agencies officially reported such cases. However, this does not mean that all works done by WUAs were completely smooth without problems. Some documented evidences were noticed for a work in WGIS, which proved that a member assigned for a specific task was questioned on probable offense related to quality and price of the product.

Generally, agency (government) is always in safer side in terms of dealing with WUA, which minimizes the emergence of a situation, demanding penalties. For WUAs, no advances are made unlike to the registered contractors who are provided advances for mobilization against their deposit.

#### **4.3.8. Overall Contract Process and Contract Handling**

Basically, all the works are given to two types of contractors. i) Outside contractors who are also professional contractors and ii) WUAs or their SMC members. Generally, the contract process begins from the identification of detailed contract works to be completed within a particular year or season. The agency takes the lead to identify the work volume although the respective WUAs and SMC members need to be sufficiently consulted.

After assessing the detailed work volume, the works are grouped according to their nature and size. contract specifications and bid documents are prepared in case of works to be awarded through LCB. Strict competing bidding process is followed in case of LCB whereas for the works to be awarded to WUAs, such formalities are not needed.

There is no established process to award the works under contracts to WUAs. The process and steps are flexible and may vary across the projects as well as by the type of works. Normally adopted process involves the following steps.

- ❖ WUA and agency hold series of meetings (formal or informal) on construction works and that are carried out in a particular fiscal year as per action plan prepared jointly by agency and WUA.
- ❖ WUA shows its interest for various contract works in the beginning. But informal negotiations take place between agency and WUAs to decide the works to be undertaken based on its capability and also not exceeding the ceiling set in the financial rules.
- ❖ Once WUAs make their selection, the agency staff extend technical support to design and estimate cost by deducting tax and deposit which is over 20% of the total contract amount.
- ❖ Agreement is made between WUAs and agency upon finalization of design and cost of the works to be assigned to WUAs. Work order is issued to WUA by the agency to start work.
- ❖ WUA begins works, providing notice to the agency and asking for advance payment. Such payments are not necessarily paid unless the work in progress is found satisfactory enough to make partial payment.
- ❖ The agency provides technical hands on a regular basis to supervise, monitor and guide WUAs to maintain the quality of the work and to accomplish it in time. The work is supervised regularly by SMC or WUA members together with the agency staff.

- ❖ Agency keeps on making partial payment against the works completed. Final payment is made after final work checking, measurement and approval of agency technicians.

Slight difference was noticed in the contract handling system between MLIP and WGIS. In MLIP, the work was carried out straight by WUA whereas in WGIS, the WUA members did the work on condition of paying 5% of contract value to the WUA account. In this case, it could be said that the WUA informally sub-contracted the works to its members who look for making personal benefits out of the contract.

#### **4.3.9. Contract Monitoring**

The technical sub-project manager from DOI is envisaged as the main person to monitor the quality of construction work completed by contractors and the WUAs under IMTP. In addition, during implementation, the Project Director (DDG/IMD) and each SMC are responsible for ensuring that quality of construction work completed by contractors and the relevant co is as good as or better than the quality standards specified in the contract documents for such work. Besides, provision is made to depute one Quality Control Advisor in the project to control quality and standard on regular basis.

However, contract monitoring has been reportedly less than satisfactory in case of works done by WUA in WGIS. The contract responsibilities of WUA were observed to be vague as compared to that of the professional contractors. Moreover, the SMC supposedly the main monitoring body for all contracts was found to be less active in monitoring the contract works carried out by its own members. There are no stringent measures of actions in case the WUA members failed to perform the contracts as agreed with the agency. Since the work was sub-contracted to some WUA members who took the work for personal benefits, the work quality got hampered. The agency staff found it difficult to take actions against the WUAs. Only recently that a separate technical section is created in WUA to look after the works done by WUA or its members.

#### **4.3.10. Work Quality**

There are mixed findings regarding the quality of works done by WUAs. In MLIP, the work of WUA was reportedly fine compared to that of the outside contractors. Cracks were noticed in case of canal lining works performed by outside contractors whereas the works of WUA were observed firm and solid. In WGIS, however, the quality of works done by WUA is controversial. The intake structure completed by WUA members was damaged within few weeks of construction in Dhanewa River. The river training work in Jharai seemed poor and gear fitting in headwork of the system was completed with much difficulty amid lot of disputes due to quality issue.

#### **4.4 Access to Resources**

The construction contracting to WUAs has opened an avenue for the local labor to get short term employment and earn wages. On the longer term due to irrigation water availability to crop production and cropping intensity has been substantially increased providing increased farm employment and income. This was reported by all the farmers

interviewed. WUAs have apparently been prime agencies to enhance access of farmers to various resources in the command area. The WUA members in both sites admitted about the huge potential of these resources to generate funds to suffice O&M requirement of the canal system after they have taken the responsibility. But at the moment the WUAs are at initial stage in properly using these resources. Prior to handover of the systems, these resources were ignored and agency just limited its concern with the O&M of the canal system. After handover, the WUAs are trying their best to make optimal use of the available resources, which are as follows.

- ❖ ISF collection from farmer members
- ❖ Sale of timber, twigs, branches and grass
- ❖ Market (haat bazaar) tax
- ❖ Canal road service tax
- ❖ Fishery pond
- ❖ Public land located in the command area
- ❖ Profit on contract with agency
- ❖ House rent
- ❖ Community Forest
- ❖ Tractor

The above shown sources provide regular income to the WUAs to meet the expenditure to be incurred in the canal O&M. ISF is collected from beneficiary farmers at the rate of Rs 180/ ha per year in MLIP and Rs 60 per crop per bigha (0.67 ha ) in WGIS. The total ISF collection amounted to about Rs 170,000 in MLIP last year, which was slightly more in WGIS. It is to be noted that the timber value of the trees handedover to the WUAs amounts in millions and these trees have been used now to make some income from the sale of branches and twigs during pruning and thinning. The WUAs of MLIP, for instance earned some Rs 120,000 from the trees last year whereas the WUAs in WGIS sub-contracted the trees for pruning and thinning to the outsider. In MLIP, additional funds are raised from house rent, fishery pond and tractor handedover to the WUAs whereas in WGIS market tax and canal service road generates additional funds. It has also got about 50 ha land, which can be used as a major source of earning by providing in lease or contract to farmers. The annual combined income from different sources is in the tunnel about Rs. 0.5 million in both system which is much less than its potential which the WUAs expect to realize in future gradually. Increased resources or fund generation not only allows WUAs to undertake necessary repair and maintenance of the canal system but also provides opportunity to use the money for social sector in the community.

The WUAs have played vital role in improving access to institutions like Agriculture Inputs corporation (AIC), Agricultural Development Bank (ADB) and Agricultural Development Office (ADO) which are key for important service delivery. The WUAs functionaries now visit these organizations through their association demanding prompt services. As a legal entity, they can influence more to the line agencies for all kind of services and inputs delivery in the command area.

## **4.5 Issues on the contract approach in practice**

### **4.5.1. Skills required by community organizations to manage contracts**

Experience from the MLIP and WGIS sites indicates that WUA contract management is not an easy task. These organizations (WUAs<sup>1</sup>) must acquire proven capability to undertake these functions. Mainly these institutions require both management and technical skills for contract administration and preparation. These organizations should possess adequate management skills towards pricing the value of contract in advance so that budget item covers the actual cost of work including some mark-up and maintaining up-to date records of works undertaken by local people under their initiation and management. Further, they should be in a position to identify local skilled personnel capable of undertaking these works upto the standard demanded by the contract.

The WUA officials (except few who worked in construction before) have little experience to organize for contractual works. Most masons available to WUAs lack knowledge of irrigation structures. Technical assistance was required to solve this problem.

### **4.5.2. Constraints and obstacles which WUAs may find in managing contracts**

Field experience indicates that contract system has been suffering from numbers of constraints and obstacle, which have hindered both WUAs and government authority to undertake such function upto the required standard. Some of these constraints and obstacles, which WUAs have experienced in managing community contract includes the following.

Lack of skills and self-confidence among the WUA members to manage the contract is the most fundamental constraint faced by them. Often workers from local communities are disqualified or discouraged from taking part in construction activities by officials who claim that the former lack technical, managerial and financial skill required for performing construction work. Such incidence is quite common in both the case study sites. There are instances where WUA has, in certain cases, refused to execute piece of works they could have taken up owing to lack of negotiation culture and traditions at local level. It has been felt that village workers are able to perform unskilled and semi-skilled work to the required technical standard, if they are provided with some guidance and supervision at the beginning.

A certain level of reluctance has been observed within government agencies to award contract to the local people. District and local government authorities still prefer benefits of a more centralized tendering system for large packages. It can be argued that the community contract approach certainly requires more technical supervision and on-the-job training but the effect on local employment generation and sustainable operation and maintenance is much more positive. There is tendency to undermine this benefit which

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<sup>1</sup>In this report, unless otherwise mentioned, WUAs relate to the activities undertaken by irrigation institutions namely MLIP and WGIS.

is creating an environment of conflict among the beneficiaries and the government agencies.

To be eligible under the contract approach, WUAs must follow the rigid accounting procedures that must match the standard set by the government institutions. Though government legislation is in place for user's groups to execute works upto a maximum of Rs. 1 million, there are no specific administrative rules on how this process can be implemented and there is tendency to treat WUAs as contractor and expect similar accounting standard and requirements from the WUA as well for such works. In case study sites, new decentralized procedures have been piloted towards contract approach that requires to be fully understood, institutionalized, internalized and applied in other areas.

The efforts to enhance the capabilities of the government and donor agencies to apply the contract approach were often hampered by frequent transfer of some key staffs responsible for such decision making. A more coordinated transfer management system combined with assignments of certain minimum period would improve the effective implementation of the operations. Since, system for the contract approach is yet to be understood, institutionalized and internalized, frequent transfer of staffs has been working as counter productive for flourishing this approach at local level.

Rigid government rules constitutes another constraint for adopting the community contract approach, because government rules require contract to be awarded to the lowest bidders, contractor often underbid each other in an attempt to win the contract. The technicians often associate their profession with physical construction in the conventional way of contracting through private parties. The tendency of undermining farmers' knowledge and capability is a serious constraint.

WUAs have limited experience that sometimes has resulted in poor performance and poor quality. In addition, lack of transparency in the award of the contracts has sometimes occurred, which is one more reason for pushing in the direction of full beneficiaries' participation. Negotiation with one or two individuals creates problems. At a certain stage, all this has caused some confusion resulting in a reduced number of piece works controlled by the WUAs.

#### **4.5.3. Security of contracts and issues of continuity**

Under community contract approach, security of contracts and issues of continuity is not a matter of great issue. Mostly community contract is provided under the clearly specified terms and references in the form of a Letter of Agreement between concerned government authority and co. Letter of Agreement is the legal document that binds the mentioned parties together for the completion of the piece of works and sets forth rights and responsibilities of both parties. The work plan included in this agreement describes works and specifies type of contractor who will be carrying them out. Under community contract approach, no construction works could be implemented outside the scope of this plan.

Usually in case study site, government officials are responsible for drafting letter of agreement after having discussed and agreed upon its contents with WUAs, which means that, in principle, draft would reflect priorities of all WUA members. The draft agreement is presented during a general meeting of the farmers, which gives all beneficiaries a chance to express their views concerning the number of issues including contribution of WUA members (cash/labor) to complete works, work plan, modalities of payment for work contracted and arrangement of joint supervision to ensure that works meet WUAs' own need. Following the series of meeting, the Letter of Agreement is then finalized and signed. Hence, contract is highly secured within WUA system. Rather than WUA members, government always has upper hand, as the payment made is always less than the volume of work done.

Issue of continuity is the matter of great concern and function of number of works suitable for undertaking by WUA concerned. Nevertheless, field experience indicate that with the introduction of this system, local level interest to take on piecemeal has grown and village groups feel that they have the capacity of performing the type of work usually done by the contractors and this has increased a sense of self-confidence among beneficiaries. As long as such social capital remains in the community, contract approach is likely to be a continued phenomenon at local level.

#### **4.5.4. Gender issues and role of women in negotiating contracts**

Water User's Association is the local level community organization primarily involved in the negotiation process of community contract and people contributing labor and other inputs during contract administration are generally the users' of the community assets. In case study sites, both women and men are involved in implementing contract activities. Participation of women in contract administration process is less than 15 % among the community institutions under study. Field inquiry indicates that mainly women are involved in performing labor works as unskilled laborers while men are involved in performing both semi-skilled and skilled works as a skilled or semi-skilled laborers.

Participation of women as a member of command area was rather low and ranged between 10 and 15 %. Field observation indicates that they have been involved as a passive partner in the WUA under study. Since role of women in negotiating contract primarily depends on number of women in executive committee of WUA, field observation indicate that they have limited role in decision making process and they were found rather informed on the whole process. Creating environment wherein women has enabling condition to increase the active women's participation on employment and income generation has remained an issue to be dealt in present circumstances regarding gender equity and role of women in negotiating contracts.

#### **4.5.5. Contracts and incentives**

Main incentive of the community contract lies at completing local infrastructure in time and cost effective way by involving them and maintaining quality standards on works to be performed. Local communities are well aware on disadvantages of works done by outside contractor mainly on quality grounds, time and cost overruns and local

employment. They have the feeling and believe that they can perform a perfect work if such opportunities are provided. Acquired ability of the WUA members to minimize/subside inherent demerits of creating infrastructure using contractor has remained to be the main incentive to WUA members in undertaking works under contract approach.

In addition, WUA has realized the immense prospects of this approach for local level employment generation and opening of avenue for further income generation, which could be noted as added incentives of this approach.

#### **4.5.6. Main contractors engaging in WUA**

Mainly WUA leaders are the prominent players engaged in managing contract process. Local government authority has trusted these leaders mainly considering their capability and commitment to undertake such works in the past and some level of experiences attained by them. Mainly it is the cordial and harmonic relationship between government authorities and WUA leaders that determines the number and size of the community contract. If the agency staffs favor, they could split a big package and give the contract to WUAs. Further WUA executive committee members have been found exposed to outside environment on contract process and have some labor and construction management skills. Moreover, since these peoples are involved in distribution management and benefit sharing of community resources with users', thus these leaders have acquired required organizational, managerial and bargaining capacity. Unlike these leaders, most outside contractor appeared to be exploitative in nature at times underpaying laborers and undermining their level of skills, competence and capabilities. This has led the users' of community to prefer the works for community infrastructure development to be performed by WUA leaders as against the outside contractor.

WUA leaders and members possess comparative advantages on managing contract approach in view of their existing level of competence, aptitude to upgrade their experience and competence for ensuring community participation in improving their productive physical infrastructure and inherited feeling of ownership on their improvement. This is particularly so in view that contracting is a business and this requires business attitude among local people and capability to manage contract and mobilize local people.

In WGIS, some well-to-do influential farmers have found a place in WUA and have turned into contractors. They become more profit oriented and take the benefits personally doing the works in the name of the farmers.



## **5. EFFECTS AND OUTCOMES OF THE CONTRACT APPROACH**

### **5.1 Positive and negative effects of contract approach in a particular programs or projects**

Some of the positive effects of the contract approach in the programs covered under the case studies are the following.

- ❖ Promotion of social justice by providing an opportunity to poor and ultra poor section of the rural society to work on community infrastructure development activities,
- ❖ Conversion of surplus unemployed labor into physical infrastructure building activities of their own by obtaining wage of their labor input,
- ❖ Development of the feeling of ownership on the community assets being created,
- ❖ Development of linkages with repair and maintenance of the schemes,
- ❖ Promotion of participatory approach of infrastructure development.
- ❖ Cost and time effectiveness on construction works done. construction works has been completed at least one month prior to mutually agreed time frame. Farmers' work output exceeds government norms. This is owing to the fact that the work is done more cheaply by WUAs than by private contractor.
- ❖ Promotion of decentralized planning and implementation on local infrastructure creation and management.
- ❖ Multiplier effect on other sector of economy through employment generation. There are instances that wage income earned by labor force employed in such activities has been used in other income generating activities thereby contributing in the growth and development of other sectors.
- ❖ Mobilization of local unemployed labor force at local level.
- ❖ Farmers' have a direct interest in the quality of construction works.
- ❖ The WUAs are provided with technical and managerial skills and experiences that will help with operation and maintenance works in the future.
- ❖ The WUA have an opportunity to work together for the common interest.

The contract approach appeared not to be perfect on itself. Some of the negative aspects of this approach are the following.

- ❖ There are instance of resource misuse by the WUA members or person performing some of these activities on behalf of WUA,
- ❖ Existence of management problems among WUA members. Mostly WUA members lack required managerial and technical skills for managing the contract which has become at times problematic for the timely completion of the contract.
- ❖ Quality control and contract performance has remained a matter of great concern in many instances. In some works done in WGIS, contract performance has remained to be mixed and quality control appeared to be a great problem.
- ❖ High administrative cost to mobilize users' of community infrastructure in the beginning. Cost for enhancing the capability of WUA is quite high and to start with they lack proven capability and resources to manage the contract work. In some case need for enhancing the technical and managerial capacity of all those involved at local level and need of providing training prior to the execution of the works has been felt.

- ❖ Tendency of the local people to participate in more numbers of days thereby requiring strong and proven monitoring system among cos. On the lack of such strong system and proven experiences on technical cost of contract monitoring, there are some WUAs that have encountered some losses on such works.

### **5.1.1. Facilitation to previously excluded groups on access to resources for development**

In local socio-economic scenarios of rural Nepal, poorest of the poor and people of difficult circumstance and so called disadvantaged groups are the one that took part in labor intensive unskilled and semi-skilled works at local level. These section of the village populace are the one that benefit from the community contract approach. hence, this approach appeared to be a powerful tool to facilitate previously excluded groups on access to resources for development.

Field survey information indicates that most of the works done under community contract are basically labor intensive in nature and mainly small and marginal farmers who are either unemployed or underemployed were engaged for most of the work. It was found that mostly households with food sufficiency from own production and subsistence sufficiency from own household activities less than 6 months of the years are the one who have obtained opportunities to employ themselves on such activities. Those employed (both in MLIP and WGIS) were mainly the wage earners who usually migrate seasonally from the area to other parts of Nepal and neighboring India in search of seasonal employment.

Further, those employed under contract approach were mainly unskilled labor exclusively involved in activities like earth excavation, stone collection, gabion weaving and placement, dry stone, mud and cement masonry and similar works. Thus shift of the government policy on completing simple local level works through "community contract approach" has been helpful to facilitate the inclusion of previously excluded groups on access to resources to a great extent.

### **5.1.2. Benefits of 'contract approach' to the community**

In the earlier days, external contractors used to perform works related to the construction of community level infrastructure. Many demerits of this approach are noted and there has been gradual shift on this approach. This shift gained momentum with the enactment of decentralization act in 1982 and its subsequent amendment in 1992. At present there has been dramatic shift in the attitude and perception of government agencies, donors and other bilateral agencies to entrust users of such infrastructure for planning, implementation, monitoring and follow-up in such investment.

In this context, in the case study sites, community contract approach appeared to be powerful tools for creating employment and income generating opportunities to local people. This focus of the organization of the target group around some form of common economic interest groups called WUAs is being the basic for productive activity. Some of the benefits of 'community contract approach' to local community (mentioned by the WUAs in MLIP and WGIS) are the following.

- ❖ This approach provides employment opportunity to previously excluded groups thereby promoting social justice in the community. This appeared to be an effective tool for reducing poverty at local level.
- ❖ This approach facilitated the emergence of the WUA at local level. Technical and managerial capability of the WUA is being enhanced in the generation and mobilization of resources at local level. This has to some extent enhanced the negotiation and bargaining power of the local people.
- ❖ This approach has appeared to be quite effective to convert surplus unemployed labor into physical infrastructure building of their owns. Unemployed and under employed labor force at community level has obtained employment opportunities and this has been used for creating and managing the physical infrastructure at local level.
- ❖ Involvement of local people on constructing local productive physical infrastructure has been quite useful for developing the feeling of ownership on physical infrastructure created as community assets at local level.
- ❖ This approach has fostered a relationship on 'partnership' between local community, local government and other resource providers in the area. This has helped in enhancing the productivity of resources being used on community infrastructure creation.
- ❖ Local skills on mason works and technical aspects on creation and development of community assets have been developed at local level. Local skilled labor has acquired some technical skills, while semi-skilled labor has obtained an opportunity to move towards skilled labor and that of unskilled towards semi-skilled one. This has thus helped in developing local level of human resources capable of managing local community infrastructure.
- ❖ Development of linkages with repair and maintenance of the schemes has been possible due to built-in of this approach in the program implementation. There is instance that community institutions have aggressively managed, operated and maintained their own resources by virtue of their binding relationship on contract approach.
- ❖ Physical infrastructure are created and managed in short time and reasonably at lower cost in comparison to the use of contractor under standard bidding process. Time saved has been estimated at 25 % of the total time.
- ❖ This approach has supported for promoting decentralized planning and implementation mainly by ways of creating enabling environment for institution development of local institutions.
- ❖ This approaches contributed to the accomplishment of the government's goals of handing over the irrigation system to WUAs.
- ❖ This approach has appeared to have some multiplier effect on other sector of the economy through the availability of employment generating opportunities and promotion of income generating activities using wages earned from this process, besides employment creation.

### **5.1.3. Problems encountered and measures adopted to cope with these problems**

As outlined earlier, some of the problems encountered in using contract approach are related to resource use, management, quality control and contract performance, high administrative cost to mobilize local people in the beginning, lack of legal provisions and tendency of people to participate in more numbers of days thereby requiring strong

and proven monitoring system. Both WUAs and government in MLIP and WGIS have adopted solutions measures that suit local context mainly by way of strengthening the capability of WUAs.

During contract administration as well, government has adopted measures such that payment to WUAs is being done on reimbursement basis and no payment is made in advances. This has reduced the chances of resource misuse. Moreover, this policy has limited the capability of WUAs to undertake the works that requires high initial capital. The WUAs under study were awarded the contract to perform only the selected works such as canal excavation, canal lining, creation of small structures, gabins works (filling) and graveling. There is tendency for the provision of only high labor intensive and those activities that does not require capital investment for initial start-up activities are initiated by the WUAs in the area.

## **5.2 General assessment of the usefulness of the approach**

This approach has facilitated in ensuring the access for the urban and rural poor to the development resources. This has appeared to be a powerful force for mobilizing informal `common interest within the context of development program and projects designed to link community groups with available resources. This has helped in creation and strengthening of the local institutions as well.

In case study sites with the adoption of the contract approach, strong community institutions have emerged and are managing the community resources in better way than before. This approach has offered the possibility of developing important skills in the community level and of using those skills to strengthen the position of informal WUA. This approach has enhanced the capability of the on `negotiation' as a key operating principle of development interventions and as a basic means of ensuring effective community participation in both local government and donor agencies supported development programs and projects.

This approach has been quite useful tool in helping excluded groups formally gain access to resources for development and at the same time, strengthening local skills and organization for future development. This has helped in establishing a negotiated relationship between excluded groups and those who are able to provide resources for development. Despite achieving outputs or targets, this has helped in developing relationships, skills and abilities. It appears that community level organization and negotiation lies at the heart of the approach and these are fundamental for any excluded group which wishes to gain access to scarce resources.

## **5.3 Role of `contract approach' to strengthen WUA**

The WUAs in both MLIP and WGIS have realized the contract approach to be an effective tool to strengthen capability of community not only on contract administration but also by creating the fund base for initiating varied activities of their own and strengthening the overall management system in the community level infrastructure created at local level. More explicitly, WUAs under study have strong belief that introduction of this system has assisted them in creating support base and providing opportunity for ready access towards institutional resources.

It has been found that introduction of "contract approach" has broadened support base of WUA at local level to enable them to manage resource base for managing their rural infrastructure. In fact this is the added resource for them for enhancing quality of their own infrastructure for their welfare. Furthermore, this approach has also helped in gaining ready access to institutional resources to WUAs. Since these organizations have gained required technical and managerial expertise on managing community works, this has helped to bring about changes in the attitude of government authorities towards trusting WUAs for completing small piece of works. Government authority working in the working areas of the WUAs under case study are fully confident on capability of local WUAs and are heading for a shift in attitude to grant responsibility in entrusting infrastructure improvement works to these institutions.

## **6. Potential and future perspective of the contract approach**

### **6.1 Potential of contract approach**

Contract approach appeared to be a means of facilitating access for the rural poor to development resources. The possibility of access to and control over productive resources, both physical and financial, are a powerful force for mobilizing informal "common interest within the context of development programs and projects designed to link such groups with available resources. Community Organization (i.e. CO) has been the means whereby people outside formal economy have been able to gain access to such resources.

In line with what Kuiper has mentioned while reviewing the community contract, the present study finding also reveals that community contract approach possess the potentials to promote the following.

- ❖ a relationship based on 'partnership' between local communities and local government,
- ❖ greater community control over infrastructure investment,
- ❖ strengthening of the democratic forces in the process of negotiation,
- ❖ social and political recognition of WUAs,
- ❖ better communication and information sharing among government agencies, WUAs executive members and WUA general members,
- ❖ Better construction quality and
- ❖ Strengthening the ability of the WUAs to carryout O&M responsibilities.

In both MLIP and WGIS, this approach has helped in promoting broader development of communities involved. The key factor in both sites appeared to be the strength and potential of the WUAs which will take the lead in representing the interests of the target group and negotiating on their behalf access to development resources. There was one example in MLIP area where government authority was inclined to provide contract to outside contractor and the concerned WUA was keen enough to put pressure to government authority and get that work as community contract of their own. This indicates the significant potentials inherent within 'contract approach'.

Further, in case study sites this approach has been found quite useful to form basis for sustained promotion of community interests and lead to more active community participation to local development issues and concerns. This has helped to strengthen the feeling of ownership on physical infrastructure created at local level and appeared to be a means for acquiring (refining) skills and knowledge to access to resources.

This approach has formed the basis for the sustained promotion of community interest towards creation, management and use of local level community infrastructure under proven local management system. In case study sites, this approach has been able to acquire one more benefits related to local level employment generation. This approach has been an effective means for communities for acquiring the skills and knowledge to access resources as well as forming the basis of the sustained promotion of community interest and can lead to more active community participation in varied issues of managing their irrigation schemes.

## **6.2 Future development and use of contract approach**

Experience from both MLIP and WGIS provides proven evidences that the contract approach stresses processes of community organization, dialogue and negotiation as well as the social, as opposed to the purely physical development to the poor communities. This indicates that this has more positive potential since it offers the possibility to the poor of direct access to resources and bargaining with authority. This approach has contributed towards developing important skills at the community level and of using those skills to strengthen the position of local informal groups. This approach has helped to underline 'negotiation' as a key operating principle of development intervention and as a basic means of ensuring effective community participation in both local and central government.

In this context, field observation indicate that a contract approach could become a useful tool both in helping excluded groups formally gain access to resources for development and, at the same time, strengthening local skills and organization for future development. This approach has been instrumental in establishing a negotiated relationship between excluded groups and those who are able to provide resources for development.

Existing experience indicates the possibility of introducing the contract system for irrigation development with the ultimate goals of participatory approach to local development. Inquiries with WUA representatives and government authorities indicate that despite huge potentialities of the contract approach, its future development and use of contract has been constrained because of the lack of the following conditions.

- ❖ enabling environment towards participatory local development,
- ❖ decentralized decision making process, delegating investment decisions to regional and districts authorities,
- ❖ organization of legally registered farmers' association,
- ❖ a framework of negotiation between users/beneficiaries and government representatives,
- ❖ improved skills among WUA,
- ❖ promoting technical support level,

- ❖ enhancement of the organizational, managerial and bargaining capacity of the WUAs,
- ❖ accepting that WUAs should only implement activities within their level of competence,
- ❖ offering skill development opportunities to local workers (beneficiaries), etc,
- ❖ conflict minimization and management,
- ❖ trust worthy environment wherein WUAs can be eligible for advance payment so as to enable them undertaking capital intensive works during initial period.

The above factors are identified to be a limiting factor for future development and use of contract approach. Both government authorities and WUAs in the case study sites mentioned the bright prospects of the contract approach and pointed the urgent need to have well articulated act and rules to take actions with WUAs and making them more accountable and responsible for timeliness of works. Moreover, some measures need to be initiated for changing the attitudes of the bureaucrats, if this approach is to be nurtured and developed.

### **6.3 Role of contract approach in building social capital**

Emergence and development of stronger WUAs (in both MLIP and WGIS) is considered to be a social capital formed at local level. Contract approach has appeared to be an effective tool to strengthen capability of WUAs on contract administration, creating fund base for initiating varied activities at local level and strengthening overall management system in local level community level infrastructure. The WUA under study believe that introduction of contract system has assisted them in creating support base and providing opportunity for ready access towards institutional resources.

Field experiences indicate that introduction of "contract approach" has broadened support base of WUA at local level to enable them to manage resource base for creating their infrastructure base. In fact this is the added resource for them for enhancing quality of their own infrastructure for their welfare. These organizations have also acquired required technical and managerial expertise on managing community works that has helped in bringing about changes in attitude of government authorities towards trusting WUAs for completing small piece of works.

Besides, contract approach has appeared to be a powerful tool to promote new and stronger alliances of disadvantaged groups on community infrastructure improvement works. They have acquired skills and knowledge to access resources for communities and use immediate physical infrastructure. Institution development of co has become possible by promoting contract approach. These WUAs have gradually enhanced their management and technical skills towards operation, management and development of their own infrastructure through increased capacity to manage added resources. This eventually prompted them to takeover the management of the irrigation systems from the government.

### **6.4 Overall assessment of contract approach in the context of the program being studied**

In both MLIP and WGIS, the concept of the contract approach has been institutionalized and internalized among WUA executive committee members. General members of the WUA have also realized the importance and benefits of the community contract approach for local development. Critical assessment of the experience on the contract approach analyzed in this report vis-à-vis experience in the case study sites indicates that followings are some of the key issues, which influence their effectiveness and performances.

- ❖ The WUA is strong and well managed before the contract is offered so that it makes rationale decisions about how to manage the contract to get the best benefit and work quality.
- ❖ Success of the contract approach is governed by existence of target groups' organization (WUAs), favorable local or national level policies for community involvement, degree of administrative decentralization, etc.
- ❖ Strength and potential of the WUA is a key factor in the community contract approach that will take lead in representing the interests of the target group and negotiating on their behalf access to development resources.
- ❖ community capacity building is critical and must be available if the organization is to be able to prepare itself for the tasks.
- ❖ co has limited capacity to participate under community contract approach. Their competence has been limited to undertake activities such as canal excavation, canal lining, creation of small structures, gabins works, graveling etc. Some investment to enhance their management capability is must to involve these institutions to a full potentials.
- ❖ Existing government policies limits involvement of WUAs only on activities that are labors intensive and does not incur start-up investment. WUAs are not in a position to obtain contract for works that requires initial capital investment.
- ❖ Rapid expansion of community contract approach is at times threatened due to political interest and existence of possibility of not completing works in time under such circumstances.
- ❖ In case study sites, contract approach has proved its effectiveness in local communities and its further effectiveness is constrained due to lack of acts and rules to take action to WUAs, making WUAs disciplines and traditional attitudes of bureaucrats.
- ❖ Works performed by the local communities in the case study sites is characterized by high quality works, tendency of WUAs to respect instructions and terms and conditions in the contract, lack of profit (business) orientation, strong coordination with government agencies, competition for quality and timeliness, etc.
- ❖ There is some scope for legal and regulatory reforms of the contract approach. There is lack of legal provision for penalty and non-compliance and there exist flexibility on the use of the approved budget.
- ❖ The agency officials who supervise the construction do their parts well such as guiding them technically to start and inspecting for payment, providing advances, etc.
- ❖ The WUA has the chances to learn by doing more than one contract. In both WGIS and MLIP, for example, they could make increased profit in the subsequent contract.

As such contract approach adopted in case study sites is quite successful to empower communities to acquire the skills and knowledge to access resources and is becoming



the basis for the sustained promotion of community interest and has led to active community participation in local development issues. This approach helped poor communities to build up their social capital by helping WUAs enhancing their capability. It has appeared as a means whereby new and stronger alliances of poor and disadvantaged groups have been promoted by involving them on the creation of community infrastructure and handing over the irrigation system management to the local WUAs.

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