

**GOVERNMENT OF NEPAL
MINISTRY OF LOCAL DEVELOPMENT**

**THE REPUBLIC OF FINLAND
MINISTRY FOR FOREIGN AFFAIRS**

FINAL PROJECT DOCUMENT

RURAL VILLAGE WATER RESOURCES MANAGEMENT PROJECT

NEPAL

July 2006

FINAL PROJECT DOCUMENT

FACT SHEET

PROJECT NAME:

RURAL VILLAGE WATER RESOURCES MANAGEMENT PROJECT, FAR and MID WESTERN NEPAL

SECTOR: RURAL WATER SUPPLY AND SANITATION, IRRIGATION, MICRO-HYDRO

TYPE OF PROJECT: PHASE I

COMPETENT AUTHORITIES: THE KINGDOM OF NEPAL; MINISTRY OF FINANCE, THE REPUBLIC OF FINLAND; MINISTRY FOR FOREIGN AFFAIRS

PROJECT AGREEMENT SIGNING DATE: JULY 2006

PROJECT BUDGET CODE NUMBER: XXX

STARTING BUDGET YEAR: JULY 2006

TERMINATION BUDGET YEAR: JULY 2010

PROJECT STATUS: IMPLEMENTATION

PROJECT AREA: FAR WESTERN REGION: DARCHULA, BAITADI AND DADELDHURA DISTRICTS IN THE MAHAKALI ZONE AND BAJHANG, BAJURA, DOTI AND ACHHAM DISTRICTS IN THE SETI ZONE.

MID WESTERN REGION: DAILEKH IN THE BHERI ZONE AND HUMLA IN THE KARNALI ZONE.

PROJECT IMPLEMENTATION ORGANISATION:

GOVERNMENT OF NEPAL, MINISTRY OF LOCAL DEVELOPMENT, DISTRICT DEVELOPMENT COMMITTEES OF PARTICIPATING DISTRICTS, REPUBLIC OF FINLAND, CONSULTANT

PROJECT BUDGET:

GOVERNMENT OF NEPAL: 0.956 MILLION EUR (7.0%)

DDCs: 0.124 MILLION EUR (0.9%)

VDCs: 0.129 MILLION EUR (0.9%)

USERS IN CASH: 0.062 EUR (0.5%)

USERS IN KIND: 1.123 EUR (8.1%)

THE REPUBLIC OF FINLAND: 11.363 MILLION EUR (82.6%)

TOTAL: 13.757 MILLION EUR/1,164 MILLION NPR

(EXCHANGE RATE EUR = 92.6 NPR)

FOREIGN CURRENCY SOURCE: GRANT

STRATEGY AND APPROACH: INSTITUTIONAL CAPACITY DEVELOPMENT, HUMAN RESOURCES DEVELOPMENT, LOCAL RESOURCES MOBILISATION

COORDINATION AND SUPERVISION ARRANGEMENTS: PROJECT STEERING COMMITTEE - PROJECT MANAGEMENT AND PROJECT SUPERVISION, DISTRICT DEVELOPMENT COMMITTEES - PROJECT MANAGEMENT AND EXECUTION

TABLE OF CONTENTS

FACT SHEET.....	i
TABLE OF CONTENTS.....	ii
LIST OF ANNEXES.....	iii
LIST OF ABBREVIATIONS.....	iv
SUMMARY.....	1
1. PRESENT SITUATION.....	6
1.1 GOVERNMENTAL AND SECTORAL POLICIES	6
1.2 BACKGROUND STUDIES	11
1.3 PROBLEMS TO BE ADDRESSED	12
1.4 STAKEHOLDERS AND BENEFICIARIES	14
2 DEFINITION OF THE INTERVENTION.....	19
2.1 OVERALL OBJECTIVES.....	20
2.2 PROJECT PURPOSE	20
2.3 RESULTS	22
2.4 ACTIVITIES.....	24
3 ASSUMPTIONS AND RISKS	29
3.1 ASSUMPTIONS	29
3.2 RISKS	30
4 COMPATIBILITY AND SUSTAINABILITY	31
4.1 COMPATIBILITY WITH THE STRATEGIC GOALS FOR FINNISH DEVELOPMENT COOPERATION	31
4.2 POLICY ENVIRONMENT.....	32
4.3 ECONOMIC AND FINANCIAL FEASIBILITY	32
4.4 INSTITUTIONAL CAPACITY.....	35
4.5 SOCIO-CULTURAL ASPECTS	36
4.6 PARTICIPATION AND OWNERSHIP	36
4.7 GENDER	36
4.8 ENVIRONMENT.....	37
4.9 APPROPRIATE TECHNOLOGY	38
5 IMPLEMENTATION	40
5.1 APPROACH	40
5.2 ORGANISATION	41
5.3 TENTATIVE TIMETABLE.....	43
5.4 BUDGET	43
6 MONITORING	50
7 EVALUATION	51
7.1 INTERNAL EVALUATION	51
7.2 EXTERNAL EVALUATION	51

LIST OF ANNEXES

- Annex 1. Logical Framework Matrix
- Annex 2. List of other documentation available
- Annex 3. Job Descriptions
- Annex 4. Statistical information regarding the project area
- Annex 5. Problem Tree
- Annex 6. Organigram and flow of funds
- Annex 7. Fund Flow Mechanism
- Annex 8. Tentative Budget
- Annex 9. List of potential Micro Hydro schemes
- Annex 10. Description of the Rural Electricity Development Project (REDP)
- Annex 11. Gender situation of Far Western Development Region
- Annex 12. Arsenic Content Mitigation
- Annex 13. Solid Waste Management Approach for Rural Villages

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
ADB/N	Agricultural Development Bank / Nepal
AEPC	Alternate Energy Promotion Center
CBO	Community Based Organisation
CBWSSSP	Community Based Water Supply and Sanitation Sector Project (ADB)
CM	Community mobilisation / mobiliser
CO	Community Organisation
DDC	District Development Committee
DDF	District Development Fund
DEDf	District Energy Development Fund
DIDC	Department for International Development Cooperation (Finland)
DMC	District Management Committee
DMT	District Management Team
DOI	Department of Irrigation
DoLIDAR	Department of Local Infrastructure Development and Agricultural Roads
DTO	District Technical Office
D/SDWSO	Division/Sub Division Water Supply Office
DWSS	Department of Water Supply and Sewerage
DWRDF	District Water Resources Development Fund
EIA	Environmental Impact Assessment
EUC	Energy User Committee
EUR	Euro
FG	Functional Group
GOF	Government of Finland
HDI	Human Development Index (UNDP)
Helvetas	Swiss Association for International Development Cooperation
GON	Government of Nepal
HRD	Human Resource Development
IDA	International Development Association (World Bank)
IEE	Initial Environmental Examination
IUC	Irrigation User Committee
LDO	Local Development Officer
LNGO	Local Non-Governmental Organisation
LSGA	Local Self-Governance Act 1999
MFA	Ministry for Foreign Affairs of Finland
MH	Micro hydro
MLD	Ministry of Local Development
MOEST	Ministry of Environment Science and Technology
M&E	Monitoring and Evaluation
MG	Mothers' Group
MOE	Ministry of Education
MOHP	Ministry of Health and Population
MOWR	Ministry of Water Resources
MPPW	Ministry of Physical Planning and Works

LIST OF ABBREVIATIONS (Cont.)

NGO	Non-Governmental Organisation
NPD	National Project Director
NPR	Nepalese Rupee
NWSSC	National Water Supply and Sanitation Committee
O&M	Operation and Maintenance
PC	Project Coordinator
PCO	Project Coordinator Office
PSU	Project Support Unit
PWD	Public Works Directives
REDP	Rural Energy Development Programme (UNDP)
REDS	Rural Energy Development Section (also DDC: REDS)
RVWRMP	Rural Village Water Resources Management Project (The Project)
RWSSSP	Rural Water Supply and Sanitation Support Programme (Phase III)
SO	Support Organisation
SUC	Sector User Committee
TA	Technical Assistance
TL	Team Leader
UC	User Committee
UG	User Group
UNDP	United Nations Development Programme
USD	United States Dollar
VDC	Village Development Committee
VMW	Village Maintenance Worker
WARM-P	Water Resources Management Programme (Helvetas)
WB	The World Bank
WDO	Women Development Office
WRA	Water Resources Adviser
WUC	Water User Committee
WUMP	Water Use Master Plan

A. SUMMARY

The Ministry of Local Development (MLD) of Government of Nepal (GON) has made a proposal to the Government of Finland (GOF) for the financing of a new water sector project in rural Nepal. Following the request by the MLD, a project identification mission was carried out in Nepal in late 2001 and a project document preparation mission was carried out in November 2003. As a result of this process a new project titled *Rural Village Water Resources Management Project* (RVWRMP) has been formulated and is presented in this Final Project Document. The proposed new project will cover nine hilly / mountainous districts in the Mid- and Far Western Development Regions of Nepal with a total population of approximately 1.5 million. The proposed districts have been ranked either as “poor” or “very poor” in the United Nation’s Human Development Indexation (HDI) system. The annual per capita income varies between NPR 3400 – 5800 (EUR 40 – 69)¹, life expectancy between 42 – 58 years and literacy rate between 34 – 52% depending on the district in concern. Some 43% of the total population have access to tapped drinking water systems, but the per capita daily available water is less than 2 l/cap./day. Sanitation services are practically non existing. There is also high demand for irrigation systems development.

In the area in concern there are two other water sector projects currently ongoing, namely the UNDP financed *Rural Energy Development Programme* (REDP) since 1996, and *Water Resources Management Programme* (WARM) financed by Helvetas. The REDP is supporting micro hydro development, while the WARM project is concentrating on improving water supply and sanitation services. The World Bank (IDA) and UNDP are financing the second phase (July 2002- July 2006) of the REDP program. Cooperation will be needed with the mentioned two projects as well as with the *Community-Based Water Supply and Sanitation Sector Project* (CBWSSSP) which started in the same area by Asian Development Bank (ADB) financing in the beginning of 2004. CBWSSSP concentrates on water supply and sanitation and health improvements in 21 districts in mountainous western regions including all nine districts proposed for this project (RVWRMP). *Rural Water Supply and Sanitation Support Programme* in Lumbini Zone (RWSSSP), financed by the Government of Finland since 1989 was completed in 2006. Experiences from that Programme shall be utilized for the new project. The mission recommends joint implementation of the RVWRMP and the REDP projects, in close liaison with the CBWSSSP and WARM projects.

Since the project identification in late 2001 a lot of new developments have taken place in rural water supply and sanitation (RWSS) sector. Most important of these has been the introduction of RWSS Sector Strategy and its Action Plan in November 2003². The purpose of the Strategy is to improve RWSS facilities and service delivery in Nepal, as well as to guide GON, donor agencies, NGOs (both national and international) and the private sector to prioritise investment decisions according to a commonly agreed approach. While complete harmonisation of service delivery mechanisms may not be achievable because of the numerous sectoral support organisations, it is still helpful to take a more rationalised approach to sector development. The elements in the RWSS Sector Strategy, many of which are articulated in the section of GON’s Tenth Plan on Drinking Water and Sanitation, are intended to help to achieve that vision.

The strategies are designed to facilitate the implementation of broad sector policies as outlined in the National Water Supply Sector Policy (1998) and the Draft National Sanitation Policy (2002) and to be

¹ 1 NPR = 92.60 EUR (June 16, 2006, Nepal Rastra Bank)

² RWSS Sector Strategy and Action Plan was prepared as ADB TA-project (March 2002 - July 2003). It is available in internet: <http://nepalwater.adb.org>

responsive to the spirit of the Local Self-Governance Act of 1998 (LSGA). The LSGA post-dates current water and sanitation policy and has far-reaching implications for both national policy and local level implementation arrangements in the sector.

The RWSS Sector Strategy is comprised of the following elements:

- Policy Context and Principal Objectives
- Key Principles
- Institutional Framework; (Policy Formulation, Planning and Budgeting, Implementation Arrangements, Operation and Maintenance, Monitoring and Evaluation)
- Site selection and Coverage
- Appropriate and Affordable Technology Options
- Enhancing Participation by Gender, Caste and Disadvantaged Ethnic Groups
- Health, Hygiene and Sanitation
- Financial Aspects
- Legal Aspects; and
- Environmental Aspects

The RVWRMP shall comply with the new RWSS Sector Strategy in its project planning and implementation.

The **overall objective** towards which the RVWRMP will contribute is:

- *Improved quality of life, environmental conditions and increased opportunities to improve rural livelihoods in the Mid- and Far West regions through rational, equitable and sustainable use of water at the village level.*

The above objective will be met by means of Integrated Water Resources Management, i.e. optimal development and use of available water resources, protection of scarce resources and tapping the economic value of water for the well-being and welfare of people using these resources. Water will thus be used as means for balanced social and economic development to benefit rural communities.

The attainment of the overall objective will be verified by means of the following indicators:

- *Quality of Life indicators: Improved health conditions, improved housing conditions.*
- *Environmental Improvement indicators: Quality (and volume of water) in existing natural water bodies are maintained (or improved). Solid wastes are properly collected and disposed of (i.e., not dumped near river banks).*
- *Economic Growth and Opportunity indicators: Improvements in agricultural productivity and variety of crops (including kitchen gardens) in project villages. Presence of new income generating activities in project area.*

The **Purpose** of the RVWRMP is to contribute to the attainment of the overall objective through:

- *Increased availability of water resources with improved institutional capacity for planning, management and use of resources in the nine (9) districts.*
- *Improved access to safe drinking water supplies and sanitation services.*
- *Increased availability of irrigation services.*
- *Increased use of micro hydro (MH) power potentials.*

The project will improve quality of life and living standards of people living in the participating VDCs and villages which express an interest and a willingness to contribute (financially and in kind) to the development of water resources projects in their community (demand driven basis). The RVWRMP will support overall institutional capacity for water resources management and directly

support capital improvements for drinking water supply, irrigation and household sanitation services. In development of micro hydro (MH) facilities the priority will be given to those villages which do not have any other means of access to drinking water supply. At same time MH will be utilised to develop other income generating activities. MH development will be supported by the World Bank/UNDP-financed Rural Energy Development Project (REDP).

Key Results of the project are:

- *Water Use Master Plans (WUMPs) are established for 80 VDC's located in the 9 districts.*
- *Improved institutional capacity and coordination among local, central agencies and UG's for water resources management.*
- *120,000 people (8% of population in the project area) have access to safe drinking water supply facilities.*
- *60,000 people (4% of population in the project area) have access to hygienic sanitation facilities.*
- *15,000 people (1% of population in the area) served with small farm irrigation facilities (about 600 has. of irrigated land).*
- *6,000 people (0.4% of population in the project area) served by micro hydro facilities (5 MH plants to be installed in selected priority villages with an average capacity of 20 kW each).*

The project **approach** is based on the following key principles and tools: (i) holistic approach – comprehensive, multi-sector planning and preparation process; (ii) bottom-up approach – community mobilisation; (iii) participatory approach – ownership promotion; (iv) income generation – entrepreneurship promotion; (v) coordination – linkage with other ongoing sector projects; and (vi) multiple use of water – water resources management.

The project idea is to develop the use of water resources on the basis of comprehensive Water Use Master Plans to be prepared for selected priority VDCs, and it will be implemented by local User Committees (Community Organizations and Functional Groups) with the help of private and public support organisations. Implementation procedures and guidelines established for other ongoing water sector projects (such as Rural Water Supply and Sanitation Programme in Lumbini Zone) will be applied with adequate modification as required to suit the current prevailing situation, Government policies, rules, and regulations. The guidelines may also be amended and deemed necessary following the changes occurred in future in Government policies, rules and regulations.

All the concerned parties in the project will abide by the privilege GON bylaws, rules, regulations, norms, standards, circulars, directives and any such amendments made by the GON in future.

For financial administration a Water Resources Development Fund will be set up in each of the project district.

The main **assumptions** related to project implementation are:

- (i) Project activities not to be unduly hampered by the security issues.
- (ii) All stakeholders will accept basic integrated water resources management (IWRM) concepts.
- (iii) Partners to help implement WUMPs are available. World Bank loan proceeds for the REDP project are available on time.
- (iv) Available technical data from other central and external agencies are reasonably reliable.
- (v) Decentralization process will be vigorously pursued.

- (vi) WUMPs will strike an optimal balance between sub-sector scheme priority and their selection for implementation.
- (vii) Policies, strategies and procedures of all relevant organizations (GON, Government of Finland, UNDP/REDP, ADB and Helvetas) can be reasonably coordinated.

Risks related to the project implementation are derived from the above-mentioned assumptions as follows:

- (i) Possible political instabilities in the project area may cause delays and other problems to the project during its implementation.
- (ii) Some key stakeholders may fail to understand the implications of IWRM implementation.
- (iii) Additional external funding and technical assistance may not be available to implement other components of the WUMP.
- (iv) Existing technical data on water and land resources may be out of date; and too expensive to update.
- (v) The political will for the decentralization process may diminish because of the tremendous institutional restructuring needed.
- (vi) Demand driven sub-sector prioritisation of schemes may result into unbalanced use of financial resources from the District Water Resources Development Fund (DWRDF) and the Rural Energy Development Fund (REDF).
- (vii) Failure to harmonize policies, strategies, working procedures and guidelines of various organisations involved in the project may hamper its successful implementation.

By reducing poverty, promoting social equality and addressing local level environmental threats the RVWRMP project is fully **compatible** with the strategic goals for Finnish development cooperation.

While emphasising institutionalised management and implementation of water and sanitation facilities through decentralisation, the RVWRMP is highly relevant to the current policies and trends in GON, and would contribute to the materialisation of the Local Self-Governance Act and the National Strategy for Rural Infrastructure Development. The Tenth Development Plan emphasises the effective utilisation of local resources, objective-oriented analytical planning process, institutional strengthening of local government agencies, establishment of appropriate organisational structures, use of local skills and technologies and proper coordination between the local and central levels. All these considerations are essential strategies of the RVWRMP. Moreover, the project is highly consistent with GON's development policies and strategies related to water resources, water supply and sanitation, and hydro power development. The key sector strategies and policies are related to poverty alleviation, achieving full water supply coverage, recognising water as a limited resource, prioritising various types of water use etc.

Economic and financial **sustainability** of the project schemes will be ensured by the establishment of Operation and Maintenance funds for each scheme, contributions to which are expected from the participating families. Investments in schemes will be financed mainly by the RVWRMP and REDP projects while major part of contributions by the benefiting communities are provided in kind (labour and material). An O&M Fund will be created as revolving fund. The contribution from the participating families for operation and maintenance will have to be collected in to this O&M Fund before the start of construction activities. An initial amount of seed money will also be contributed to this Fund from the project. Also a water charge tariff will be set up and it will be collected regularly on monthly basis to the O&M Fund from the users after the construction has been completed. Various types of income generating activities are also planned and supported by the project with the help of energy and irrigation development for enhancing rural livelihoods and, thereby, alleviating poverty.

Socio-cultural and gender aspects as well as sustainable environmental development and application of appropriate technology are also essential elements of the RVWRMP implementation.

The overall tentative budget of the project is NPR 1274 million, equivalent of EUR 13.7 million. Contributions are expected from the Governments of Finland and Nepal, District and Village Development Committees and local communities. It is estimated that the external funding from GON, Finnish Government and DDCs through DWRDF – some NPR 1152 million (EUR 12.4 million) – will mobilise another NPR 122 million (EUR 1.3 million) of local contribution from VDCs and User Committees, out of which some NPR 104 million (EUR 1.1 million) in kind.

As a whole, the RVWRMP intervention will result in an investment of some NPR 599 million (EUR 6.5 million).

1. PRESENT SITUATION

1.1 Government and sector policies

Decentralisation of local governance

The Local Self-Governance Act, 1999 empowers the DDCs and VDCs to enjoy authority in sector activities in planning, programming and according the priorities as per the potential and needs of area and people in districts. The act envisages the participatory process in planning, programming and monitoring of the development activities right from the village to the district. The elected political bodies i.e. VDC and DDC are the main authorities to ensure the participatory process in all cycles of the development activities at the district and community/village level. The laws, by-laws, rules and regulations to implement the Act are in the formulation process. However, the Act lays the sufficient background about the commitment of the GON in developing the administrative and development authorities from the central to the DDC and VDC level. The Act adopts the following principles for the development of the procedures of local autonomy:

- Delegate the authority and responsibility, and make projection of the means and resources required for making the local authorities efficient and effective in local self-governance;
- Develop institutional mechanisms and build functional structure and create administrative cadre that can shoulder responsibility towards the local people and think about their needs and aspirations;
- Delegate authority to the local authorities empowering them to collect means and resources and mobilise them with a view to enabling local authorities to do works entrusted to them;
- Direct efforts to create a civil society based on democratic process, transparent dealing, accountability to the people and people's participation in course of projecting works for the local authorities;
- Develop an efficient mechanism for making the local authorities responsible towards the people of their respective areas with a view to developing local leadership; and
- Encourage the private sector's participation in local government's work of providing basic services for sustainable development.

The Act stipulates that the Village Development Council's members shall include, among others, ward chairperson of each ward committee, a female ward member, social workers of village development area, and a representative of socially and economically backward classes. Similarly, VDC and DDC members shall include, *inter alia*, a female member. According to the Act, GON may develop VDC that are backward and undeveloped by equipping them with means and resources. The VDC is allowed to levy a housing unit tax (based on the size and structure of the house), revenue or land tax (25% of the revenue of this tax has to be submitted to the DDC), tax on weekly markets and shops, vehicle tax, rent tax, advertisement tax, business tax, television and video tax, service charges on public tube well, well and water tap, handed over or constructed by the VDC, service charge on public telephone facilities, service charge on sanitation and sewerage facilities, and entry permits to the tourist areas.

The delegation of responsibilities for water supply and sanitation are defined in the Act. The duties of Ward Committees include e.g. taking care of wells, water taps, sewers etc., and assisting VDC in keeping records of ponds, lakes, wells, canals and water taps in the ward. The operation of the village level projects shall be done through the users' committee. The users' committee may collect service charges as fixed from the users who receive services from the projects. The amount of service charge received must be spent on the repair, maintenance and protection of projects.

Preparation, execution and maintenance of drinking water projects, sources protection, management of construction of sewerage are responsibilities of VDCs. Protection of fixed and floating assets owned and controlled by the village and encouragement of users groups and NGOs to carry out development and construction works fall under the responsibilities of VDCs.

Local Infrastructure Development Policy (2004) formulated by the GON is "to contribute to poverty alleviation by improving the social and economic conditions of the local people at their own initiation and participation". Similarly, the objective of the policy is "to improve the access of local people including women, disabled, backwarded, oppressed, neglected and Dalits to social services, economic opportunities and resources by means of physical and social infrastructures". To meet these goals and objectives, the Policy states four strategies :devolution of infrastructure to the local bodies; development of appropriate institutional structure and enhancement of technical capacity for local infrastructure development; adoption of appropriate working approach so as to mobilize local resources through people's participation; and effective utilization of available resources by harmonizing policies and procedures of different donor agencies.

Under the new decentralisation concept, all technical works of various line ministries implemented at the local level are carried out by the organization established at the DDCs as District Technical Office (DTO). The DDCs/DTOs are solely responsible for the overall development activities in the district. The strategy paper emphasises the need to:

- follow a single approach for planning and implementation process;
- adopt one-door system for resource mobilisation; and
- introduce a suitable technical organisation within the MLD

In line with the strategy, a Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR) within MLD has already been instituted. In the district level DTOs under DDCs have been established in 2002.

Water Resources

According to the Water Resources Act, 1992 the ownership of all water resources belongs to the State, and private ownership is disregarded. It also states that water resources can not be utilised by any person for commercial use without obtaining a licence. This, however, does not apply for domestic (small-scale) use, such as for one's own drinking, irrigation, running a water-mill etc. Licensing of hydropower development is regulated by the Electricity Act, 1992.

The Water Resources Act mentions that Water Users Associations have to be formed and registered to make use of water resources for collective benefits on an institutional basis. One of the intentions of registration of Users Associations is to verify the applicator's right for the use in concern. The Act also provides a priority of order on utilisation of water resources: (a) drinking water, (b) irrigation, (c)

agricultural uses such as animal husbandry and fisheries, (d) hydroelectricity, (e) cottage industry, industrial enterprises and mining uses, (f) navigation, (g) recreational uses and (h) other uses.

The Water Resources Regulation, 1999 sets procedures for formation of consumers' associations, licensing and resolving disputes regarding use of water resources, fixation of service charges and compensation related to the acquisition of houses and land. The relevant authority at district level is the District Water Resources Committee established in each district.

Water Supply

The Tenth Development Plan aims at achieving 85% water supply coverage by the end of the Plan period in 2007. It is the policy of the Government to emphasize on the effective utilization of local resources, objective-oriented analytical planning process, institutional strengthening of local government agencies, establishment of appropriate organisational structures, use of local skills and technologies and proper coordination between the local and central levels.

The Plan aims to target the backward classes, ethnic groups and other poor communities and intends development initiatives to be implemented with their active participation. Mobilisation of NGOs, CBOs and the private sector as the partners in the development of water supply and sanitation sector, and the role of Users' Committees in planning and O&M is emphasised.

The water supply policy approved by the GON in 1998 reflects modern approaches adopted in a number of countries and by the international community. The policy states that the provision of convenient, safe and adequate drinking water is the declared commitment of GON, which recognises that the development of water supply and sanitation sector bring in enhanced socio-economic benefits and public health improvements. A recent approach has been a shift from traditional role of GON as a provider or implementer to that of a supporter or facilitator by making users more accountable and involved with initiation, implementation and O&M of water supply and sanitation projects with active support of NGOs, donor agencies, community-based organisations and communities themselves.

The national objectives for water supply are:

- increasing water supply coverage to 85% by 2007 in commensurate with the philosophy "Some for all rather than more for some";
- accelerating decentralised administration of the sector services through effective devolution of authorities and responsibilities to local authorities and community based organisations;
- mobilising adequate community participation in terms of local resources, initiatives and skills;
- enhancing capability of local organisations through appropriate human resource development programme and establishment of adequate institutional framework;
- recognising fresh water as limited resource and priority to be given to demand management and reduction of unaccounted-for-water in preference to the traditional "new source" approach; and
- attaining financial viability through proper administrative and financial management, appropriate tariff structure, efficient debt collection and quality service to consumers.

Sanitation

The sanitation policy of GON has been published in a document called “Nepal National Sanitation Policy & Guidelines for Planning & Implementation of Sanitation Programme” by the Ministry of Housing and Physical Planning, Department of Water Supply and Sewerage (DWSS), July 1994. The policy seems to have essentially adopted the key elements of guiding principles of international initiatives, statements and declarations relevant to the sanitation sub-sector. The policy directives state that effort will be directed towards improving and sustaining the quality of life and health of the people through:

- changing people’s unhygienic sanitary behaviour and practice related to personal, household and environmental hygiene through environmental health education, information and mobilisation of community ;
- ensuring community involvement, in particular women’s involvement in water management, hygiene education, and other sanitation promotion activities ; and
- encouraging the participation of non-governmental organisations and volunteers as partners in development.

The policy objectives emphasise the links between sanitation and public health, the integration of investments in sanitation into wider awareness and behavioural change programmes, and the need to ensure that all water supply programmes include sanitation as an integral component and vice versa.

The strategies comprise general elements as well as specific topics. The specific topics include: involvement of women, appropriate technology, knowledge and awareness creation, community participation, resource mobilisation, legislation, coordination and integration and institutional arrangements.

Some of the strategic points are highlighted below:

- Sanitation would be one of the priority programmes of the national development plan with its incorporation into the related sector programmes like water, health, education and the local development.
- The Sanitation Programme will be implemented at the national level with an emphasis on awareness creation and adoption of sanitation practices. In selected areas more intensified integrated innovative programmes will be attempted using the limited resources effectively for greater impact.
- The involvement of NGOs will be encouraged specifically for trial of innovative strategies.
- Membership of women in village level User Committees would be made mandatory, with up to 50% or more female members.
- In all sanitation training and awareness creation activities special focus will be given to addressing and involving women at the community level.
- All concerned personnel of responsible organisations and committees at national, district and village levels will be given appropriate training to train, coordinate and monitor the sanitation promotion activities.

- In all stages of planning, implementation and monitoring of the Sanitation Programme, participation of the community through appropriate forums will be ensured to ensure ownership feeling.
- All strata of the community, particularly the disadvantaged sections, should be given equal opportunity for participation.
- No programme will be 100% subsidised and beneficiary contribution should be designed according to socio-economic strata for activities like construction, operation and maintenance and motivation efforts.
- Existing functionaries of various development programmes and their networks in the field will be utilised rather than creating parallel structures.

At district level, the District Technical Office (DTO) will coordinate with field staff from the health and education sectors and will be called District Water Supply and Sanitation Committee (DWSSC) under supervision guidance of the National Water Supply and Sanitation Committee (NWSSC).

Irrigation

On the basis of the Water Resources Act, Irrigation regulation, 2000 has been established. This, however, concerns only major irrigation systems developed and operated by Government of Nepal. Also an Irrigation Policy (dealing mainly with issues related to the development of large-scale irrigation projects) has been established in 1992 (with amendments in 1993).

It is the current understanding that after the cancellation of the government's subsidy system through the Agricultural Development Bank (ADB/N) for small-scale irrigation systems the development of such systems has collapsed dramatically. Currently, the government seems to provide subsidies for irrigation schemes with a minimum size of 25 ha in Terai and 10 ha in the hills, thus excluding all small-scale irrigation systems from the subsidies. Consequently there seems to be high demand for small-scale irrigation development. Loans are still available through ADB/N, but this possibility is not widely used.

Electricity

Micro hydro power development is governed by Electricity Act, 1992. There is also a Hydro-Power Development Policy, 1992. Referring to the electricity demand projections until 2001, the policy paper mentions that: "It is also necessary to construct new small hydro electric projects to meet the demand of those hilly and remote Himalayan regions where the national electricity system has not been extended or would not be extended in the near future."

The policy paper sets objectives for hydro power development as follows:

- To supply electricity as per the demands of the people in urban and rural areas through the development of the high potentiality of the water resources that exists in the country.
- To enhance the development of hydro-power to meet the energy needs required for the industrial development in the country.
- To motive the national and foreign private sector investment for the development of hydroelectric power.

- To render assistance in the conservation of environment by supplying clean energy through the development of hydroelectric power.

The policies are as follows:

- To carry out hydro power projects of various standards and capacities to meet the interim and long term electricity requirements.
- **To give emphasis to the programme of rural electrification in order to render assistance in the development of agricultural production and cottage and small scale industries in the Hill and the Terai (low land) regions.**
- To give emphasis to the development of transport system to be run by hydroelectric power in order to substitute the petroleum products.
- To utilise the indigenous labour, skill and resources as well as foreign investment and technology for the development of hydro power.
- To export hydroelectricity produced in excess to the national demand.
- **To extend the use of electricity for making the minimum utilisation of fuel wood and to render necessary assistance in the conservation of forest and environment.**
- To diversify the utilisation of electricity.
- To make the supply and distribution of electricity regular and reliable.
- To have maximum control in the leakage of electricity.
- To make electricity sufficiently available to the people and to make the rate of electricity tariff more practical.

1.2 Background studies

The Rural Village Water Resources Management Project (RVWRMP) will draw experience, especially from the following ongoing successful water sector projects in Nepal:

- ▶ Rural Energy Development Project (REDP) financed by the United Nations Development Programme (UNDP);
- ▶ Rural Water Supply and Sanitation Support Programme (RWSSSP) financed by the Government of Finland;
- ▶ Water Resources Management Programme (WARM-P) financed by the Swiss Association for International Development Cooperation (Helvetas); and
- ▶ Rural Water Supply and Sanitation Fund Development Board (RWSSFDB) supported by the International Development Association (IDA).

The above projects have produced a number of studies providing useful background information for the formulation of The Project. A list of these and other relevant studies is presented in Annex 2.

1.3 Problems to be addressed

A detailed problem analysis for the proposed new project is based on various meetings and field visits of the mission. The results of these discussions are reflected in Annex 5 – Problem Tree.

The core problem is stated as follows:

Deteriorating quality of life among people and environmental conditions and limited opportunities to improve rural livelihoods in the Mid- and Far West regions of the country.

This is due to various reasons, principally:

- *Low availability of water resources due to ineffective planning, management and use of available water resources in the nine (9) districts.*
- *Generally poorer quality of life and limited opportunities for development in the nine (9) districts.*

Although the country generally enjoys abundant water resources, the people, particularly in the Mid- and Far West suffer from limited availability (and accessibility) to the resource for various reasons. Due to its remoteness and difficult working conditions, the overall development of infrastructure (and their maintenance) has lagged far behind those in other regions. Arsenic problems have also been reported in the region. In addition, the indiscriminate dumping of solid wastes along natural water bodies has caused a serious water pollution affecting downstream users. Opportunities to produce energy from micro hydro are not fully taken advantage of. Water resources have not been fully utilized to the benefit of the population in the regions.

The poorer quality of life among the population in the area is due, in part, to the lack of adequate access to potable drinking water, hygienic sanitation in the households, water for irrigation of small farms and absence of a reliable supply of electricity for domestic and economic activities.

In water and sanitation sectors the main problems are the inadequate coverage and low service level. The coverage of reasonable rural water supply is 76% (at the end of Ninth Plan) at the national level and the sanitation coverage, in terms of access to latrines, is 25%.

In the proposed RVWRMP area, the accessibility of water is the main problem. Estimates indicate that substantial population are yet to be served with water supply. Some statistics estimate that only 43% of population have access to tapped drinking water in the Far-Western Region. However, the water available for consumers is estimated only at some 2.0 l/c/d.

In the micro-irrigation sector, the limiting factor for further development seems to be the present government policy excluding small farmers almost totally from government subsidies. Support is given only for irrigable areas larger than 10 has. in the Hills and 25 has. in the Terai.

The fundamental problems for the current situation are:

- Capacity Issues: Inadequate institutional and human resources capacity at village and district levels;
- Structural Issues: Un-implemented coordination, planning, implementation and monitoring processes; slow pace of decentralization;
- Resource Issues: Inadequate financial and physical resources;
- Social Issues: Limited participation of women and other marginalized groups (castes), poverty; and

- Technical Issues: Rugged terrain; poor transportation and communication facilities.

Capacity Issues: The institutional and human resources capacity at village and district levels is a key element in the delivery of services to the communities. The capacity issues may be summarized, as follows:

- *Inadequate institutional capacity at DDC and VDC level for water project planning and implementation and monitoring.*
- *Limited opportunities for continuous training and development of DDC, VDC, UG and central level staff.*
- *Frequent staff relocation. Lack of staff willing to work in remote regions.*

Structural Issues: Institutional and individual inefficiencies involve a wide variety of issues, such as inadequately defined roles and responsibilities at various levels, tendency to create new or parallel institutions, inadequate support capacity, non-delivery of adequate technical support and assistance (from central and regional levels to districts and from districts to villages, especially in O&M), weak participatory planning process, lack of sector coordination in districts, overly rigid processes and bureaucracy, inadequate monitoring and evaluation at all levels, and inappropriate incentive policies and mechanisms.

Human resource constraints are further explained by several issues, including the inadequate participation and involvement of women (also a social issue) in all aspects of development, inadequate opportunities for skills development, inadequate technical resources within DDCs, and inadequate availability of competent resources to be hired. The human resource constraints are exacerbated by inefficient use of existing resources due to lack of coordination and poor cooperation. The structural issues may be summarized, as follows:

- *Decentralization still in transition stage; differences between central and local level about the pace and extent to decentralization; conflicting interests.*
- *Poor coordination among central and local authorities for water project planning and implementation.*

Resource Issues: Another fundamental problem – The inadequate financial and physical resources and financial management issues – may be explained by two major factors: inadequate, lacking or insufficiently mobilised, resources at village level, and inadequate resources at district level.

There are various reasons for the problems at the village level. These include: idling of O&M funds, extreme poverty (of the poorest social groups), lack of safety nets and cross-subsidisation mechanisms at the village level and below, total reliance on government financing, partly unaffordable technologies, and inadequate access to formal credit mechanisms.

The factors contributing to the problems at the district level include: almost non-existent revenue generation specially in the hills, insufficient allocations from the central budget to the water and sanitation sector activities in districts, inefficient targeting of disadvantaged sectors for subsidies and lack of coordination and cooperation among the line offices and DDC, inadequate financial planning and management mechanisms and practices, reliance on financing from external sources, and lack of political determination specially at the district and central levels to adopt policies that are realistically based on available resources and do not mislead the communities' expectations of GON capacity.

The resource issues may be summarized, as follows:

- *Limited financial resources availability.*
- *Lower household financial capacity and demand to sustain the facilities.*

- *Resource allocation decision not based on user demand.*
- *Mismanagement of available resources.*

Social Issues: Due to its remoteness and more difficult economic circumstances, the social structures with the villages in the hills area tend to be more rigid and conservative. The key social issues include:

- *Lower sense of community cooperation in the project area; seasonal labour out-migration.*
- *Household incomes are lower, not regular and unwisely spent.*
- *Caste system is strictly followed; participation and empowerment of low-income, lower caste people is more difficult. Women's social status very low.*
- *Limited access of household to micro-credit facilities.*

Technical Issues:

The inadequacy of facilities and logistics account for many of the technical difficulties in project planning, implementation and monitoring. The problems are more acute at the district level. The issues include:

- *Inaccessibility of villages (poor transportation and telecommunication).*
- *Higher development and implementation costs.*
- *Poor quality of locally available construction materials.*
- *Simple, proven indigenous technologies not promoted.*
- *Low priority on O&M.*
- *Inadequate post-construction monitoring and technical support (including spare parts availability).*

1.4 Stakeholders and beneficiaries

Several Government line agencies are involved in the use and development of water resources of Nepal, such as:

- Ministry of Local Development (MLD) and its Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR)
- Ministry of Physical Planning and Works (MPPW) and its Department of Water Supply and Sanitation (DWSS)
- Ministry of Health and Population (MOHP)
- Ministry of Water Resources (MOWR) and its Department of Irrigation of (DOI)
- Ministry of Environment Science and Technology (MOEST) and Alternate Energy Promotion Center (AEPC) under MOEST
- Agricultural Development Bank (ADB/N)

Based on the Local Self-Governance Act, 1999, the Ministry of Local Development is the agency in charge of community based development projects, while the other ministries deal with major development projects and activities throughout the country.

The stakeholders and beneficiaries of RVWRMP include the District Development Committees, district and village level administrative institutions charged with responsibility for water sector

activities (drinking water supply, sanitation, irrigation, energy etc.), the users of the water services in the participating districts and the private organisations and individuals providing support services to the communities.

A. Executing Agency –*Stakeholder and beneficiaries*

The District Development Committees are responsible for developing the use of water resources to benefit the population of each district. As the executing agency of the district investment programmes, each DDC with support from DWSO, DDC:REDS and other line agencies and MLD will update existing district plans for water use (drinking water, irrigation, micro hydro) and sanitation. These plans will be based on community level participatory and gender sensitive planning. The plan will be implemented by the relevant User Groups / User Committees.

B. Support Agencies/Organisations –*Government line agencies, Village Development Committees (VDCs), Support Organisations (SOs), RVWRMP/PSU, UNDP/REDP*

Government line agencies:

The Local Development Officers (LDO) are the main representatives of the MLD at the district level. The LDO together with other MLD staff, serve as the secretariat for the DDC. The LDO also supervises the work of the Planning Officer, Engineer, Administrator, Accountant and Women Development Officer employed by the MLD. LDO, on behalf of DDC, has to coordinate between MLD and other sector district offices. However, coordination with district offices is not as strong due to its vertical accountability relationship with their parent organisations. The recent Local Self-Governance Act, 1999 bestows the authority of planning and prioritisation of all the sector activities at the district level on DDC. The Act provides that an Integrated Plan Formulation Committee, chaired by DDC Chairperson, review all plans to be endorsed by District Council before implementation. The implementation of the activities is done by the functionaires of respective sector agencies based at the district and is coordinated by the LDO on behalf of DDC. The same process is followed in case of the activities to be implemented by DDC itself. However, the management of funds and its accountability rests on LDOs. Since RVWRMP will be a DDC undertaking, the management of funds will be done by LDOs and accountability will be on them.

DDC: DTO is incharge of the technical matters of the district and responsible for monitoring of the technical matters and providing support to the communities.

DoLIDAR will liaison with other government agencies for the support to RVWRMP. It will discharge various government policies, rules and regulations, directives, guidelines, circulars to RVWRMP and monitors their applications. Budget programming and releasing the fund to the respective districts, reviewing progress of the schemes and the project, approval of RVWRMP staff appointment (local and expatriate), conducting steering committee meetings, monitoring and various administrative aspects of RVWRMP are the functions of DoLIDAR. In addition, processing for approval and required visas for expatriates engaged in RVWRMP and their families will also be done by DoLIDAR. A National Project Director (Technical) will be nominated by GON. The NPD will be stationed in DoLIDAR. The NPD will facilitate the planning, budgeting, progress review and monitoring at the central level.

Other stakeholders representing government line agencies, to list some, are such as; Division/Sub-Division Water Supply Office, District Health and Population Office, Women's Development Section, District Education Office etc.

Village Development Committees (VDC)

The Village Development Committees comprise of representation from the wards, and are the executing bodies of the Village Councils. Every ward elects five representatives, including at least one woman, to the Council. Each village is made of nine wards, and thus making 53 members of the Village Council. The District Council is made of all the Village Council representatives and the number of representatives varies according to the number of VDCs in a district.

The Village Development Committee is one of the main stakeholders in water use and sanitation development and has an important role in the implementation of the schemes at village level. VDCs have the following roles and responsibilities:

- Prepare a Water Use Master Plan, with focus on water use and sanitation development, reflecting the existing (and potential) water sources and the resources available for implementation of schemes.
- Collect and assess the requests for schemes, including willingness-to-contribute to planning, implementation and O&M, from the communities and recommend them to the DDC in the order of priority.
- Coordinate with DDC and other sector agencies for water use development in its area.
- Contribute cash for schemes.

RVWRMP/PSU

RVWRMP Project Coordinator's Office (PCO) coordinates the project activities in the districts. It oversees the application of various government rules and regulations in the implementation of the project. It monitors and reviews the progress of the schemes and advises on remedial measures, as and when deemed necessary. RVWRMP Support Unit (PSU) supports Districts to improve their institutional capacity to decentralise the implementation and management of water use and sanitation development activities at the village level. The Unit will assist in planning and executing RVWRMP activities with necessary back-up services to the Investment Programmes to achieve the stipulated objectives of RVWRMP. The RVWRMP/PSU of the consultant will report to the Project Coordinator of their activities. A senior officer of under secretary level (Technical) of DoLIDAR will be the project coordinator. The Project Coordinator will conduct the steering committee meetings. The Project Coordinator's Office (PCO) will be established in the RVWRMP project office. The project office is proposed to be located in Dhangadhi allowing close cooperation with Helvetas and ADB projects which also have their offices located in Dhangadhi.

The District Development Committees (DDCs) are the executing agencies of RVWRMP sub-projects in the respective districts. The DDC: DTOs discharge the responsibility of RVWRMP sub-projects. The DDCs are responsible for developing the use of water resources that benefit the population of each district. The DDCs will update existing district plans for water use (drinking water, irrigation, and micro hydro) and sanitation. These plans will be based on community level participatory and gender sensitive planning. The plan will be implemented by relevant user groups (Community Organisations and Functional Groups). The plans are required to be endorsed by the District

Development Council." In each district there will be a District Management Committee (DMC), led by DDC Chairperson. The other members of the DMC will be the DDC secretary, head of the DDC/DTO and WRAs. The DMC meets at least once in a month to review the progress of sub-projects and other relevant matters. It also does pre-qualifying work for the selection of suppliers / manufacturers for the purchase of needed materials and equipment.

UNDP/REDP

UNDP's Rural Energy Development Programme (REDP) has been ongoing since 1996. The REDP is currently operating in 15 districts in the country, and the number has been increased by 10 through the World Bank-financed Power Development Project. REDP is active in the nine districts of RVWRMP and will be the one of the main partners for RVWRMP for community mobilization process and project preparation stage for micro hydro projects. REDP has established a Rural Energy Development section DDC/REDS in all districts.

However, in the present context DDC: District Technical office (DTO) has been established in all districts to carry out all technical matters in the district. Water Resources Advisors (WRA – water supply / sanitation and irrigation) assist in the planning, implementation and monitoring of the schemes. The Project Coordinator (PC) will coordinate with REDP to launch a coordinated approach for use of water resources (water supply, irrigation and micro hydro) and sanitation.

Support Organisations (SO):

Support Organisations are required to form and register User Committees and User Groups and to facilitate in managing and implementing the schemes. Their main role is to act as community mobilisers (CM). Both public agencies and private organisations, such as local NGOs, consulting firms, local clubs etc. can be engaged. Selection criteria will be defined in order to assure adequate qualifications and capabilities of the SO's. Selection will be based on pre-qualification and competitive bidding.

Private sector suppliers, particularly in case of micro hydro schemes, will also provide technical support to the communities.

C. Implementing Agencies – User Groups (UG) / User Committees (UC)

User Groups (UG)/ User Committees (UC)/ Community Organisations (CO) are the actual implementing agencies of this project. The Local Self-Governance Act requires institutionalisation of these groups before legal rights and responsibilities can be established.

Water/Irrigation/Energy User Committees (WUCs / SUCs / IUCs / EUCs)

The Sector User's Committees (Functional Groups) are established as the main managerial bodies for the schemes. They are responsible for community involvement at all stages of preparation and construction, and are responsible for the continued operation and maintenance after completion. In addition, they manage the O&M Funds to which all users contribute. They are registered as per the prevailing GoN rules and regulations.

The Functional Group (FG) has the responsibility of scheme implementation, operation and maintenance. Funds for implementation of schemes should be directly provided to the FG. The FG is responsible for managing the implementation funds (purchase of construction materials, transportation and payment for labour). The FG should purchase only construction materials and equipment which meet the detailed technical specification established by RVWRMP and from pre-qualified suppliers / manufacturers and quality certified by the DTO. The pre-qualification process for the suppliers /

manufacturers of construction materials will be made by the District Management Committee (DMC). Competitive bidding will be followed, as per GoN financial rules and regulations. The DTO in liaison with PCO may assist in the procurement of construction materials. The DTO will follow the Public Works Directives (PWD) in the implementation of the schemes.

User Groups (UG)

User Groups are established for the implementation of the schemes. REDP has developed a very gender sensitive method for the formation of these groups. Each participating household will have to nominate one man and one woman to participate in a user group, but not in the same group. Such smaller groups will then be combined to form “functional groups”. The method ensures equal representation of male and female members. Similar approach can be applied for RVWRMP as well.

2 DEFINITION OF THE INTERVENTION

The **project area** covers altogether nine hilly/mountainous districts in the Far- and Mid Western Regions of Nepal, namely:

Far Western Region: Darchula, Baitadi and Dadeldhura districts in the Mahakali Zone and Bajhang, Bajura, Doti and Achham districts in the Seti Zone.

Mid Western Region: Dailekh in the Bheri Zone and Humla in the Karnali Zone.

The total population in the project area is about 1.5 million (1.2 million in the Far-West and 0.3 million in the Mid West) and the elevation varies between 305 (Doti) and 7337 (Humla) meters above mean sea level; much of the area is located in the mid-hills elevation (below 3000 m). Access is difficult to many of the villages of the RVWRMP area, particularly to the villages located in the Humla district in the high Himalayas (population some 40,000). Statistical information regarding the project area is presented in Annex 4.

The main reasons for selecting this particular area as the focal point of the RVWRMP activities are the following:

- The districts in concern are among the poorest and least developed in Nepal. According to UNDP's Human Development Index (HDI) the districts in concern are ranked either poor or very poor. Life expectancy in the selected districts varies between 42-58 years, adult literacy rate between 34-52% and annual per capita income between 3400 - 5900 NPR.
- There are currently a few major donors active in the project districts; Helvetas in Dadelhura, Doti, Achham and Dailekh; and the World Bank with its Rural Water Supply and Sanitation Fund Development Board in the Dailekh district. ADB will start in the beginning of 2004 a Community-based Water Supply and Sanitation Sector Project that will cover all project districts.
- UNDP's Rural Energy Development Project (REDP), cooperation partner to this project, has been active in the region since 1997 and has already established activities and offices (DDC:REDS) in Baitadi, Dadeldura, Achham, Bajura and Dailekh districts, and will establish similar activities in the remaining Doti, Bajhang, Darchula and Humla districts once the World Bank (IDA) financed Power Development Project becomes operational.
- The political situation in the project districts is unstable at the moment.

2.1 Overall objectives

The **overall objective** towards which the RVWRMP will contribute is:

Improved quality of life, environmental conditions and increased opportunities to improve rural livelihoods in the Mid- and Far Western regions through rational, equitable and sustainable use of water at the village level.

This general objective will be met by means of **Integrated Water Resources Management** which includes not only optimal development and use of available water resources for various purposes, such as water supply, irrigation, energy production etc., but also activities related to the protection of scarce resources as well as tapping the economic value of water for the well-being and welfare of people using these resources. Protection of water resources will be done by means of village level watershed management (source protection, bioengineering etc.) and adequate and appropriate sanitation services, while living standards will be raised by improvements in agricultural productivity and creation of other income generating activities currently not existing in the remote rural villages. Peoples' well-being will be further fostered by improvements in overall health situation as a result of better hygienic conditions and availability of more variable diet. Precondition for the success of the project is the availability of safe water for development in all selected villages including those not in the reach of gravity-fed systems. Besides other benefits availability of energy through micro hydro development will make possible equal use and development of water resources regardless of unfavourable location of some villages. Altogether, water will be used as means for balanced social and economic development of the benefiting communities.

The attainment of the overall objective will be verified by the following indicators:

- Quality of Life indicators: Improved health conditions, improved housing conditions.
- Environmental Improvement indicators: Quality (and volume of water) in existing natural water bodies are maintained (or improved). Solid wastes are properly collected and disposed of (i.e., not dumped near river banks).
- Economic Growth and Opportunity indicators: Improvements in agricultural productivity and variety of crops (including kitchen gardens) in project villages. Presence of new income generating activities in project area.

2.2 Project purpose

The purpose of the RVWRMP is to contribute to the attainment of the overall objective through:

- *Increased availability of water resources with improved institutional capacity for planning, management and use of resources in the nine (9) districts.*
- *Improved access to safe drinking water supplies and sanitation services.*
- *Increased availability of irrigation services.*
- *Increased use of micro hydro (MH) power potentials.*

The indicators for the measurement of the accomplishment of the first purpose on increased water availability with better water management include:

Sustainable Water Use indicators:

- Availability and quality of water at sources not declining.
- Water production increasing.
- Communities are able to manage water resources effectively.

Planning Capacity indicators:

- Utilisation of all water resources is based on comprehensive VDC level Water Use Master Plans which reflect priorities from the users' point of view and appropriate technical consideration of options.

Implementation Capacity indicators:

- Districts have increased capacity to implement decentralised water and sanitation sector facilities, including support to the users in operation and maintenance, and to facilitate the full use of available financial and other resources

Resource Use indicators:

- District Water Resources Development Funds (DWRDF) are efficiently and effectively mobilised and utilised.

Social Participation Indicators:

- Users take responsibility for planning, implementing and maintaining local water resources activities and facilities.
- New methods, technologies and systems are developed to ensure better sustainability and easier access to service also for the poor and deprived consumer groups.

The main elements of Integrated Water Resources Management at local level can be summarised as follows:

- Planning of efficient water source usage where the use is agreed upon by all the stakeholders, including women and marginalised groups within the community;
- Conservation and protection of the water sources and the catchment areas;
- Water being recognised as having an economic and social value;
- Capacity building of individuals and groups involved, including educational programmes fostering legal knowledge and awareness.

Water resources management at local level integrates four technical fields: water supply and sanitation, irrigation and drainage, environment and ecology, and others such as energy. The four fields are linked together through a strong supportive social and educational component which sustains activities in all areas. Possible activities in the above mentioned four technical fields are presented in the table below.

<p>Water Supply and Sanitation Source improvements Environmental sanitation Water supply (gravity schemes, rainwater harvesting and wells, incl. arsenic content mitigation) Repair and rehabilitation</p>	<p>Irrigation and Drainage Proper drainage of waste/overflow water Micro-irrigation for kitchen gardening Drip, sprinkler and canal irrigation Canal improvement</p>
<p>Environment and ecology Source conservation Forest management Stream bank stabilisation Terrace improvement Village solid waste management</p>	<p>Others Electricity generation Water for cottage industries Fishery Biogas utilisation</p>

The indicators for the measurement of the accomplishment of the second purpose on service improvements in drinking water supply, sanitation, irrigation and micro hydro include:

- 120,000 people served by water supply facilities (i.e. 8% of the population residing in the area).
- 60,000 people served by sanitation facilities (i.e. 4% of the population residing in the area).
- 15,000 people served with small-farm irrigation facilities, i.e. some 600 ha of irrigated land (i.e. 1% of the population residing in the area).
- 6,000 people served by micro hydro facilities, i.e. 5 MH plants to be installed in selected priority villages with average capacity of 20 kW each (i.e. 0.4% of the population residing in the area).

2.3 Results

The project is envisaged to have six (6) key results (or components). The results, and their corresponding indicators, follows:

- A. Result 1: Integrated water resources management (IWRM) concepts and management systems implemented at the district and village levels.
- Eighty (80) VDC's have formulated comprehensive Water Use Master Plans which are endorsed by the DDC's for implementation.
 - Clear responsibilities at DDC and VDC levels on the management and regulation of use of water resources. Central level roles are defined.
 - Community is well informed about water and environment policies.
 - More multi-purpose water resources projects are considered, proposed and implemented.
 - System and guidelines for regular updating of the WUMP established.
 - Systems for water resource data accumulation, analysis, storage and retrieval is established (in coordination with GIS system of the CBWSSP/ADB).
- B. Result 2: Improved institutional capacity and coordination among central agencies, DDC, VDC and UG's on water resources issues.
- District Water Resource Committee (or equivalent) is fully functioning at the District level.
 - Formal system for accepting, reviewing and approving water permit applications is in place and enforced.
 - Linkages and coordination established on a regular and ongoing basis with central level agencies on water issues – Department of Irrigation, MPPW, DOLIDAR, MLD, etc.
- C. Result 3: Service Improvement – Water Supply
- Effective Use, as indicated by:
Optimal use (Number and characteristics of users, Quantity of water used and purposes, Time taken to use facilities, Management of water resources), Hygienic use (Water quality at home, Water transport and storage practices, Home practices to improve water quality, Site and home cleanliness, Personal hygienic practices) Consistent use (Pattern of daily use, Pattern of seasonal use)
 - Sustainability, as indicated by:
Reliability of systems (Number of facilities in working order, Maintenance)
Human capacity development (Management abilities, Knowledge and Skills, Confidence)
Local institutional capacity (Autonomy, Supportive leadership, Systems for learning and problem-solving)
Cost-sharing and unit costs (Community contribution, external contributions, Unit costs)
Collaboration among organizations (Planning, Activities)
 - Replicability, as indicated by:

Community ability to expand services (Additional water facilities built, Upgraded facilities, New development activities initiated), Transferability of Project strategies (Proportion and role of specialized personnel, Established institutional framework, Budget size, Documented administrative/implementation procedures, Other special/unique conditions)

D. Result 4: Service Improvement – Sanitation

- Effective Use, as indicated by:
 - Optimal use (Number and characteristics of users, Quantity of water used and purposes, Time taken to use facilities, Management of water resources)
 - Hygienic use (Water quality at home, Home practices to improve sanitation, Site and home cleanliness, Personal hygienic practices)
 - Consistent use (Pattern of daily use, Pattern of seasonal use)
- Sustainability, as indicated by:
 - Reliability of systems (Quality of water at source, Number of facilities in working order, Maintenance)
 - Human capacity development (Management abilities, Knowledge and skills, Confidence)
 - Local institutional capacity (Autonomy, Supportive leadership, Systems for learning and problem-solving)
 - Cost-sharing and unit costs (Community contribution, external contributions, Unit costs)
 - Collaboration among organizations (Planning, Activities)
- Replicability, as indicated by:
 - Community (or household) ability to expand facilities (Additional sanitation facilities built, Upgraded facilities, New development activities initiated)
 - Transferability of Project strategies (Proportion and role of specialized personnel, Established institutional framework, Budget size, Documented administrative/implementation procedures, Other special/unique conditions)

E. Result 5: Service Improvement – Irrigation

- Effective Use, as indicated by:
 - Optimal use (Number and characteristics of users, Quantity of water used and purposes, Time taken to use facilities, Management of water resources)
 - Consistent use (Irrigation and other farming practices, Pattern of seasonal use)
- Sustainability, as indicated by:
 - Reliability of systems (Quality of water at source, Number of facilities in working order, Maintenance of canals and flow control structures)
 - Human capacity development (Management abilities, Knowledge and skills, Confidence)
 - Local institutional capacity (Autonomy, Supportive leadership, Systems for learning, conflict-resolution and problem-solving)
 - Cost-sharing and unit costs (Farmers' contribution, external contributions, Unit costs)
 - Collaboration among organizations (Planning, Activities)
- Replicability, as indicated by:
 - Community ability to expand services (Additional irrigation facilities built, Upgraded facilities, New development activities initiated)
 - Transferability of Project strategies (Proportion and role of specialized personnel, Established institutional framework, Budget size, Documented administrative/implementation procedures, Other special/unique conditions)

F. Result 6: Service Improvement – Energy

- Effective Use, as indicated by:

Optimal use (Number and characteristics of users, Quantity of energy produced used and purposes, Management of water resources)

Consistent use (Pattern of daily consumption, Pattern of seasonal use)

- Sustainability, as indicated by:
 - Reliability of systems (Quality of power produced, Number of facilities in working order, Maintenance, Spare parts availability, Reliability of water supply)
 - Human capacity development (Management and technical abilities, Knowledge and skills, Confidence)
 - Local institutional capacity (Autonomy, Supportive leadership, Systems for learning and problem-solving)
 - Cost-sharing and unit costs (Community contribution, external contributions, Unit costs)
 - Collaboration with other institutions (Planning, Activities)
- Replicability, as indicated by:
 - Community ability to expand services (Additional facilities built, Upgraded facilities, New development activities initiated)
 - Transferability of Project strategies (Proportion and role of specialized personnel, Established institutional framework, Budget size, Documented administrative/implementation procedures, Other special/unique conditions)

In the service improvement results indicators above, effective use refers to the optimal, hygienic and consistent use of water and sanitation facilities to maximize benefits and minimize negative consequences over an extended period of time. Sustainability is the capacity to maintain service and benefits, both at the community and agency levels, without detrimental effects on the environment, even after “special assistance” (managerial, financial and technical) has been phased out. Replicability is the capacity to duplicate the processes and benefits of a set of development activities in new locations after their effectiveness has been demonstrated in limited geographic areas.

2.4 Activities

To achieve the intended results and the project purpose, the following project interventions will be needed:

A. Integrated water resources management (IWRM) concepts and management systems implemented at the district and village levels.

According to Helvetas District Development Plans have recently been prepared by the District Water Supply Offices for most of the districts concerned. They have been prepared following the model developed by the RWSSSP in Lumbini Zone, and provide useful background information, such as maps, statistical data, existing water resources and their current use, hardship classifications etc. These documents should provide sound basis for prioritising VDCs for the project purposes. However, it is foreseen that updating of some information is required to be carried out by RVWRMP before selection of VDCs for detailed analysis can take place. It is expected that RVWRMP will produce detailed Water Use Master Plans (WUMP) for about 80 priority VDCs. The WUMPs will be the basic documents for overall water use and sanitation planning and identifying communities' priority needs classified by various use categories, such as drinking water supply, irrigation, energy production etc. At this stage, potential collaborators and support organisations (SO) will also be identified. The plans will be prepared following a participatory process, thus fully involving and committing the local communities in the prioritisation and selection of schemes for implementation.

Helvetas has already prepared in their respective districts WUMPs for some priority VDCs, and has indicated willingness to share their experience. ADB will also soon mobilise their project in some districts so it is important to have a dialogue with them when working in parallel in the same areas. Coordination in this respect is required to harmonise procedures and to avoid duplication of efforts.

Project activities may include the following:

- 1.1 Discuss with and facilitate DDC-VDC agreement for preparing the WUMP.
- 1.2 Set-up appropriate institutional responsibility for water management at the village level (e.g., Village Water Resource Management Committee); train staff.
- 1.3 Establish institutional links; gather available technical information on water resources in the district and villages.
- 1.4 Conduct social assessment; consult with and agree on water resources needs and priorities of the people.
- 1.5 Identify urgent (and simple) water source protection measures.
- 1.6 Assess the social, technical and economic demands for water resources; draft WUMP; draft investment and action plan to conserve water resources and the environment.
- 1.7 Conduct review consultations leading to formal adoption of the WUMPs.

Local technical experts and NGO's (which have the confidence of the communities) will be selected to facilitate WUMP consultation and preparation processes as Support Organizations.

B. Improved institutional capacity and coordination among central agencies, DDC, VDC and UG's on water resources issues.

Community mobilisation

Efficient and well organised mobilisation of communities is a key for successful implementation of the RVWRMP. Support organisations (SO), which are normally local LNGOs, are engaged for this task in each district. The SO assigns one community mobiliser (CM) for each project VDC for the implementation of the community mobilisation process. The SO personnel will be trained on mobilisation for water resources development in particular and community mobilisation in general. The CMs will help communities in organising themselves for scheme preparation, implementation and O&M. In this process Users' Committees and User Groups will be established and registered, accounts opened etc.

Capacity building at Community/VDC/DDC levels

This component will include all technical, environmental & health and sanitation training, as well as institutional development and capacity building at community / VDC / DDC levels, required for the preparation, implementation and O&M of the intended schemes. Particular attention will be given at the beginning of the project to the delivery of a strong and effective health and sanitation promotion campaign. Given the current low literacy rate (about 30%) in the project area, literacy campaigns should also be included.

Income generation activities

Energy and irrigation schemes will bring along potential for income generating activities. Communities may not be readily aware of such possibilities and will therefore have to be encouraged to actively seek opportunities. REDP has already been actively promoting economic activities within the beneficiary communities with good results. The thrust is to make each and every household, which are connected to the MH-generated electricity, able to pay for the electricity consumed purely from the additional income. In case of irrigation schemes the promotion of income generation activities is even more important, because these schemes are purely intended for production. Therefore, an

awareness building and training campaign will be designed for the purposes of this project to promote the potential for using the irrigation land for profitable agricultural production of various types.

Conservation of environment

Issues related to environmental conservation play an important role in integrated water resources management. Micro-level watershed management, including various types of source protection activities, should be an integral part of planning any kind of rural water use and disposal of wastes. To gain results in environmental conservation, changes in people's behaviour and attitudes are required rather than considerable external financial inputs. A lot can be done with locally available resources (labour and materials). The objective of this component is to build awareness among communities about the linkage between environmental protection and availability and quality of water resources. It will include awareness campaigns on establishing nurseries, plantation of trees for the protection of catchment areas, environmental sanitation, health aspects and bioengineering. Bioengineering activities include for example landslide and stream bank protection works, terrace improvements etc. to prevent negative impacts on the water resources.

Solid Waste Management

The purpose of the Solid Waste Management (SWM) component in the project is described below:

- To identify the magnitude of Solid Waste hazard existing in the rural communities,
- To develop a Pilot Program comprising of:
 - An innovative approach that would be pragmatic and acceptable to the local communities in rural areas,
 - Assistance to VDC/DDC for development appropriate SW infrastructure,
 - Assistance for capacity building of VDC/DDC through providing training to SW Workers and Volunteers,
 - Improved access to capacity building sources, and appropriate technology and knowledge sources
 - Improved access to financial support for implementation of the proposed SWM activities, and establishment of SWM fund at district level, and
- To develop mechanism for monitoring and evaluation of Solid Waste Management.

A separate concept paper as a guideline for a Solid Waste management Approach for Rural Villages has been produced as an annex to this report. Pilot landfills will be designed and constructed in some of the selected villages (4 nos.) by the RVWRMP and based on the experience can be multiplied at later stages of the project.

Project activities may include the following:

- 2.1 Establish DDC & VDC responsibilities for IWRM (integrated water resource management).
- 2.2 Assess local development needs for IWRM; consult and identify appropriate institutional arrangements for water resources management at the local level.
- 2.3 Train and advise staff on application of specific IWRM concepts, methods and tools.
- 2.4 Establish and implement appropriate IWRM policies, tools and systems at the DDC and VDC levels.
- 2.5 Monitor and adjust implemented systems, tools and procedures for water resources management.

Project will provide local experts to advise communities and local authorities and to facilitate coordination with central authorities. Through a series of consultation meetings, the Project will assess, design and implement relevant methods and systems for improved IWRM.

C. Service Improvement – Water Supply

Project activities may include the following:

- 3.1 Based on the WUMP, mobilize community; re-establish the benefits and the demand (including willingness to contribute) to better drinking water services; set-up UG.
- 3.2 Identify/study feasible technical options and cost implications to users.
- 3.3 Consult with beneficiaries and agree on final scheme, O&M and user fee arrangements.
- 3.4 Complete the technical studies.
- 3.5 Train UG on O&M of water supply facilities.
- 3.6 Arrange for and monitor construction of facilities.

Project will engage the services of Support Organizations (NGO's and to advise communities and local authorities. Through a series of consultation meetings, the Project will assess and design affordable and sustainable systems consistent with sector policies.

D. Service Improvement – Sanitation

Project activities may include the following:

- 4.1 Based on the WUMP, mobilize community; re-establish the individual and communal benefits and the demand (including willingness to contribute) for sanitation; set-up UG.
- 4.2 Identify/study feasible technical options and cost implications to users.
- 4.3 Consult with beneficiaries and agree on final scheme, O&M and user fee arrangements.
- 4.4 Complete the technical studies.
- 4.5 Train UG on O&M of sanitation facilities.
- 4.6 Arrange for and monitor construction of facilities.

E. Service Improvement – Irrigation

Project activities may include the following:

- 5.1 Mobilize community; establish UG.
- 5.2 Identify/study feasible technical options and cost implications to users.
- 5.3 Consult with beneficiaries and agree on final scheme, O&M and user fee arrangements.
- 5.4 Complete the technical studies.
- 5.5 Train UG on O&M of irrigation facilities.
- 5.6 Arrange for and monitor construction of facilities.

F. Service Improvement – Micro hydro Power

Project activities may include the following:

- 6.1 Based on District Energy Report (REDP), select and mobilize community.
- 6.2 Set-up MHFG and UG.
- 6.3 Identify/study feasible technical options and cost implications to users.
- 6.4 Consult with beneficiaries and agree on final scheme.
- 6.5 Establish community energy fund.
- 6.6 Complete the technical studies.
- 6.7 Train UG on O&M of MH plants.
- 6.8 Arrange for and monitor construction and installation of facilities.

The above Service Improvement Components (C through F above) should demonstrate application of proper water resources planning and management. At the same time, it will provide tangible benefits

of improved water supply, sanitation, energy and small-scale irrigation services to the local communities. Local communities will be mobilised with assistance provided by the support organisations, particularly local NGOs, for the preparation, implementation and O&M of the priority schemes selected by the communities and approved ultimately by the DDCs for implementation under the project.

Majority of water supply schemes will be gravity schemes or rain water harvesting (RWH) schemes, but availability of micro hydro (MH) energy in some villages will create an opportunity to pump water to areas currently out of the reach of gravity-fed systems, thus providing services to “marginalised groups” as well. Typically, people living in the hilltops do not benefit of water development schemes either at all, or only up to limited extent. Rainwater harvesting schemes will be considered in areas where gravity schemes are not feasible. RWSSSP in Lumbini Zone and Helvetas in Far West, have developed new concepts and ideas for rainwater harvesting (e.g. a jar type reservoir) and RVWRMP will adopt concepts from these experiences.

Arsenic mitigation will be one of the activities of the RVWRMP. To launch an arsenic mitigation program, it is vital to know the extent of arsenic contamination in all the tube wells of the effected area. To make community aware about the problem a mass campaign should be launched, which is reflected in the National Interim Policy Document of the country. The Information and Education Campaign (IEC) materials prepared by National Arsenic Steering Committee (NASC) should be distributed among the population. Training program should be launched to train the local NGOs, Health Workers, Teachers, Women Groups, Clubs, etc. show that the program is sustained in long-run and local people take responsibility themselves. Health survey must be carried out of all the effected population. Appropriate technology should be identified. For the pilot program, Euro 200,000 has been allocated. The details should be worked out at the time of implementation in the district.

According to the sanitation policy of GON all water supply programmes have to include sanitation as an integral component. Consequently, the RVWRMP will support the construction of simple pit latrines for households and sulabh (pour-flush) type of latrines mainly for institutional purposes.

Small-scale irrigation schemes will also be developed under the project. Currently, most of the irrigation schemes are rain-fed, thus providing only one crop in a year. Majority of irrigation schemes to be constructed as part of the project will be gravity-fed, but pumping schemes are also not excluded in villages benefiting of a micro hydro scheme.

UNDP’s REDP project will be in charge of the development of MH schemes in the project area with financial support provided by the World Bank. The size of a typical MH scheme is 20 kW, which is enough to support 200 households (1200 population) with 100 W each (just enough for one bulb and a radio). Development of MH schemes will provide not only opportunities for pumped water / irrigation schemes, but will create excellent possibilities to develop various income generating activities in the villages, such as saw mills, agro-processors, bakeries, incense stick production, soap making, nurseries, poultry, pig and goat rearing and off season vegetable farming. This project will support MH development (some 5 schemes) in close cooperation with the UNDP/REDP project. As an integrated water resources development project, **only such micro hydro schemes where drinking water / irrigation and sanitation systems are developed and implemented simultaneously with energy systems, thus supporting each other, can be accepted for the financing by the RVWRMP.**

In all developments, priority should be given to rehabilitating existing systems when feasible rather than concentrating on the development of new schemes.

3 ASSUMPTIONS AND RISKS

3.1 Assumptions

The decentralisation process is underway upon the enactment of the Local Self-Governance Act, 1999. The by-laws, rules and regulations to implement the Act are yet to be fully implemented – although steps in this direction have been initiated. There are still many uncertainties about the full implementation of the Act. Opinions differ on the meaning, the speed and the extent of decentralization and there is still some resistance particularly from institutions whose responsibilities and authority may diminish as a result. Decentralisation is thus expected to be a long process. This project will be implemented in the midst of this transition process and may encounter unclear procedures and policies on how to proceed.

The main focus of RVWRMP is on strengthening DDCs and VDCs to respond to the demand from villagers for supporting their initiatives to enhance livelihoods and to improve water supply and sanitation. DDCs and VDCs will need to generate funds and technical support to effectively plan and monitor the sector. Prioritisation among the sub-sectors water and sanitation (improving the quality of life), and irrigation and energy (enhancing rural livelihoods) may turn out difficult in the communities, as needs, expectations and wishes may compete with each other. Failure in this respect may result in unbalanced use of funds in the Water Resources Development Fund and the Energy Development Fund. Water Use Master Plans and awareness campaigns are expected to address this, but incentives may be required to make water and sanitation schemes more attractive to the communities. The application of IWRM concepts requires a much broader view of water resources beyond the current sector- or use-based projects. It will need a good understanding of the economic benefits and value of various competing water use options.

The World Bank loan for the financing of the UNDP/REDP project has been approved and launched successfully in July 2002, and that it will continue until July 2006. Particularly in case of income generating activities (irrigation and energy followed by end-use promotion activities) RVWRMP will be rather dependent on the UNDP/REDP project, at least during the first 2-4 years of the project. However, the organisational structure should allow separation of the two projects, should this for any reason turn out necessary during the implementation of the RVWRMP.

It is assumed that out of the total 80 VDCs some 50% will be the same for both of the projects (RVWRMP and UNDP/REDP). This will allow synergy benefits in community mobilisation, awareness building and human resources development activities. The budget calculations for the “soft” components have been prepared on the basis of this assumption. Nevertheless, these costs are rather low when compared with the actual investments in schemes and changes can thus easily be adjusted in the budget, if required.

Policies, strategies and procedures of all independent organisations (GON, Government of Finland, UNDP/REDP, ADB and Helvetas) have to be matched together for the purposes of the RVWRMP. Working cultures and practices (and salaries!) may differ from one organisation to the other. It is assumed that, while finalising the “project design” policies, step-by-step-procedures and other implementation and O&M guidelines can be adequately harmonised. Starting point for the discussions will be the guidelines and procedures established by the RWSSSP programme in the Lumbini Zone.

Availability of adequately trained and skilled LNGOs to act as community mobilisers may turn out difficult in the proposed project area. Prolonged training to be provided to the support organisations may delay the commencement of the actual works in the villages. According to Helvetas and the

Rural Water Supply and Sanitation Fund Development Board this should not, however, be a major problem.

Finally, it is assumed that the GON, DDCs, VDCs and communities are willing to contribute financially to the project. Estimates of local contributions have been prepared in the budget calculations on the basis of available budgets etc. to these organisations, but it has not been possible to verify this information or confirm the real possibilities or willingness of the parties in concern to provide their contributions.

The main **assumptions** related to the project implementation may be summarized, as follows:

- (i) Decentralization process will be vigorously pursued.
- (ii) Project activities not to be unduly hampered by the security issues.
- (iii) All stakeholders will accept basic integrated water resources management (IWRM) concepts.
- (iv) Partners to help implement WUMP's are available. The World Bank loan proceeds for the REDP project are available on time.
- (v) Available technical data from other central and external agencies are reasonably reliable.
- (vi) WUMPs will strike an optimal balance between sub-sectoral scheme priority and their selection for implementation.
- (vii) Policies, strategies and procedures of all relevant organizations (GON, Government of Finland, UNDPREDP, ADB & Helvetas) can be reasonably coordinated.

3.2 Risks

The mobilisation and implementation of the RVWRMP is subject to a number of risks. Some of the risks are critical for the successful execution of the project. The risks related to the project implementation are derived from the above-mentioned assumptions as follows:

- (i) Possible political instabilities in the project area may cause delays and other problems to the project during its implementation.
- (ii) Some key stakeholders may fail to understand the implications of IWRM implementation.
- (iii) Additional external funding and technical assistance may not be available to implement other components of the WUMP.
- (iv) Existing technical data on water and land resources may be out of date; and too expensive to update.
- (v) The political will for the decentralization process may diminish because of the tremendous institutional restructuring needed.
- (vi) Demand driven sub-sectoral prioritisation of schemes may result into unbalanced use of financial resources from the Rural Water Resources Development Fund (RWRDF) and the Rural Energy Development Fund (REDF).
- (vii) Insufficient institutional capacity, particularly at the local level, poses a risk to the implementation of the Project. Weak local NGO capacity and capability in remote and poorer districts could make it difficult to mobilise qualified NGOs there.

4 COMPATIBILITY AND SUSTAINABILITY

4.1 Compatibility with the strategic goals for Finnish development cooperation

The Cabinet of Finland released the Decision-in-Principle on the Development Cooperation in September 1996. It reconfirms the validity of the strategic goals and means defined by the Ministry for Foreign Affairs in 1993, while addressing recent global issues and emphasising and prioritising certain policies and sectors. According to the strategy approved in 1993, the goals of Finnish development cooperation are to:

- (i) alleviate widespread poverty in the developing countries;
- (ii) combat global environmental threats by assisting developing countries in solving environmental problems; and
- (iii) promote social equality, democracy and human rights in the developing countries.

The project aims at rationale, equitable and sustainable use of water resources in rural areas of nine districts in Far Western and Mid Western Regions. The strategy of the RVWRMP emphasises institutionalisation of sector development through decentralisation, thus promoting democracy and good governance (see iii above), prioritisation of areas in the highest demand for water services, thus improving their living conditions, promoting income generating activities and thereby reducing poverty (see i above), and targeting the financial support at the poorest households who have restricted access to micro-lending institutions, thus promoting social equality (see iii above). RVWRMP particularly addresses sustainability in its all senses, essentially including environmental sustainability, with clear focus at local (village) level on environmental threats (see ii above).

RVWRMP particularly contributes to the implementation of the following aims of the Government of Finland described in its Decision-in-Principle on the Development Cooperation:

- channel assistance expressly into the development of the human resources and independent capabilities of developing countries. The main role of Finland's support will be to act as a catalyst for development ;
- step up action aimed at strengthening the participation of women in social and economic activity, e.g. by seeking to encourage the provision of more extensive basic education to women and girls;
- emphasise the importance of environmental considerations in all activities with a view to forestalling threats and creating conditions conducive to prosperity based on the sustainable use of natural resources ;
- practice and further develop procedures which emphasise the independent decision-making authority and participation of the partner in cooperation ;
- in all projects supported by it (the Government of Finland), establish and promote decision-making procedures and participation arrangements furthering attainment of the goals, and supporting projects specifically aimed at attaining them ; and

- in all contexts, promote implementation of the Programme of action of the Beijing IV World Conference on Women to improve the status of women and girls, and to encourage equal participation by women in society and production.

4.2 Policy environment

While emphasising institutionalised management and implementation of water and sanitation facilities through decentralisation, RVWRMP is highly relevant to the current policies and trends in GON, and would contribute to the materialisation of the Local Self-Governance Act and the National Strategy for Rural Infrastructure Development. Moreover, the project is highly consistent with the national water and sanitation policies and strategies as well as with those of the hydro power development. .

The Tenth Development Plan of GON (2002-2007) recognises poverty alleviation as the prime objective of GON. The Plan aims at increasing access to drinking water for 85 % of the population at the end of the Plan period. RVWRMP will contribute to the achievement of this objective as well.

The Tenth Plan emphasises the effective utilisation of local resources, objective-oriented analytical planning process, institutional strengthening of local government agencies, establishment of appropriate organisational structures, use of local skills and technologies and proper coordination between the local and central levels. All these considerations are essential strategies of RVWRMP.

4.3 Economic and financial feasibility

4.3.1 Project rationale

- The objective of the RVWRMP project is to improve quality of life, environmental conditions and to increase opportunities to improve rural livelihoods in the Mid- and Far Western regions through rational, as well as equitable and sustainable use of water at the village levels. From economic perspective, failure of the market to provide the citizens of the region with adequate income generation possibilities, and on the other hand lack of financial resources of GON to give sufficient social support in order to finance the necessary investment locally, give rise to join domestic and foreign public sector resources to reach the objective.
- Alternatives to RVWRMP are similar foreign aid programmes. ADB, UNDP and Helvetas are either already operating in the region or plan to do so simultaneously with RVWRMP. During the coming four years, the four projects can jointly cover some 44% of the population in the region (see Table 5-1). Assuming that an efficient coordination between the projects will be executed, no wastage of resources through overlapping activities should occur. GON's consistent policy since 1999 to implement local self-governance will strengthen the efficient use of resources as responsibility for the coordination is given to DDCs.

4.3.2 Macroeconomic and sectoral context

In economic terms RVWRMP can be divided into two categories: (a) non-income generating activities (water supply and sanitation) and (b) income generating activities (irrigation and energy).

Investments in gravity water schemes, rainwater harvesting and latrines (sulabh-type) are expected to be financed mainly from external sources (Governments of Finland and Nepal, DDCs, VDCs). It is, however, an essential precondition that the communities contribute about

20% in kind and 1% in cash in order to raise the sense for ownership of the schemes. O&M costs are expected to be covered totally by the beneficiaries of the schemes through (monthly / annual) contributions to the O&M funds to be established for each scheme. Ability to pay for the services, however, is yet to be demonstrated.

Income generating activities are planned for enhancing rural livelihoods with the aim of helping in poverty alleviation. It has already been demonstrated by the UNDP/REDP project that micro hydro has given a way out to the rural communities to think of gearing up their economic activities with the newly emerged opportunities through the energy intervention. The holistic development initiative has helped to increase the gross rural production at large. The REDP believes that, during the course of the times, the households connected to the micro hydro generated electricity are able to pay for the electricity consumed purely from the additional income and savings in fuel wood, kerosene etc.

In RVWRMP, the communities are expected to contribute a minimum of 10% in kind and 1% in cash for micro hydro investment schemes. O&M costs are purely to be paid by the communities through contributions to the O&M funds.

There is currently very little economic information available on the irrigation schemes, but it is expected that these would be self-financing once the farmers are trained for efficient farming methods. Subsidies for the investments may be required at the initial stage, but there seems to be willingness to take loans from local financing institutions as well for financing investments in irrigation schemes.

Cross-subsidisation mechanisms within villages should be developed to support the poorest, who might be left aside of the services in the absence of ability to pay for water and sanitation services. Assessing the need and working out the modalities of cross-subsidies should be the task of VDCs and user groups. RVWRMP's role in this respect should be limited to giving support through social support organisations hired by the project.

4.3.3 Cost-effectiveness and Economic Rate of Return

Economic analysis of the impact of RVWRMP has been limited to evaluating carefully the cost levels of the investment schemes. Cost and output information has been gathered from many sources including Finnish Government's on-going project in the Lumbini zone, other foreign aid programmes and ministries of GON. Therefore, the investment cost levels can be assumed to be reliable and realistic. Only technology that is affordable and appropriate for the conditions of the target region will be used. As far as possible, local labour and materials will be utilised. Training component of RVWRMP will help in escalating the local input component and thus increasing the the cost-effectiveness of the project.

On the other hand, statistics on the income levels of the people in the target region show that they have no sufficient financial means to implement the investment schemes without financial support from outside. Even though the cash generation activities are extremely scarce in the project region, the inhabitants can and should participate in the investment cost by providing in-kind labour and construction materials. Strong commitment of user-beneficiaries by contributing in-kind input to the project is an essential pre-condition for the economic success and sustainability of the project outputs.

While preparing the CBWSSSP project, the ADB has studied in detail five water supply and sanitation core subprojects, which are similar to the ones planned in RVWRMP. Therefore, it

can be assumed that the findings of ADB are to a large extent applicable to RVWRMP, too. ADB concludes, based on the analysis of sample projects, that the estimated EIRR for the CBWSSSP as a whole is about 90%. The figure is considered by ADB to be conservative, as it does not include benefits derived from sanitation improvements and health benefits.

4.3.4 Financial sustainability

One of the key elements in RVWRMP is the participation of the user-beneficiaries from the beginning of the implementation and a complete take-over of projects after the investments have been completed. Operation and Maintenance Funds will be established for each investment scheme, where the users themselves contribute money over the operating life of the equipment. A small seed money is granted by the RVWRMP at the establishment of the funds. By collecting user charges, the O&M Funds will be effectively revolving funds. Various types of income generating activities are planned and supported by the project with the help of energy and irrigation development in order to alleviate poverty and to make the project investments sustainable.

Currently operating water, sanitation and micro hydro projects show that a very good level of sustainability can be reached in Nepal as the users generally take a good ownership of the projects from the beginning and are willing to contribute considerable input to implementing, operating and maintaining the schemes. Even though the cash contribution possibilities of people in the Mid- and Far Western parts are somewhat lower than in Central and Eastern parts of Nepal, where most of the earlier projects have been active, it can be assumed that in-kind contributions will be at same level and sufficiently high to secure strong commitment to the schemes.

4.3.5 Administration of funds

A District Water Resources Development Fund (DWRDF) will be set up in each district as a channel to finance the implementation of the investment schemes. The financial management and procurement of the DWRDF will be carried out according to the prevailing GON rules and regulations and the guidelines approved by the Steering Committee. The fund will be audited by the Auditor General's Office and additionally by independent external auditors according to bilateral agreements. Since project schemes to be financed from the fund fall under a number of legislation depending on the type of the scheme in concern (water/sanitation, irrigation, energy), different rules and disbursement procedures may need to be formulated for each sub-sector.

The World Bank's Country Financial Accountability Assessment (CFAA)³ concludes on Nepal:

“The Government is serious and committed to improving public and private sector financial management. Reforms in financial management are now critical and should be approached in an integrated way covering planning, budgeting, accounting, internal control, internal audit, external audit and oversight. ... The failure to comply with the impressive legal and regulatory fiduciary framework that exist makes fiduciary risk in Nepal “High” by the standards of that same framework ... fiduciary risk in Nepal is at a level similar to that found in many developing countries. Various actions, including capacity building, aimed at systemic improvements in both public and private sector financial accountability still leave a large gap between precept and practice. Further capacity building recommended in the Development

³ July 5, 2002.

Action Plan is designed to close this gap, and introduce international accounting and auditing standards in both the public and the private sectors.”

Even though there is a lot of good will and effort from GON to equip the DDCs with capable staff in all functions, it is necessary that RVWRMP will employ an experienced accounting manager to liaise closely with the nine DDCs and help them in setting up and managing the DWRDFs. Accounting and reporting capacity building in DDCs will be one of the key tasks particularly in the beginning of the project.

4.3.6 Economic and financial risks, and means of mitigation

First, additional external funding and technical assistance may not be available to implement all components of the WUMPs. To mitigate the risk, close cooperation with co-ordination between RVWRMP, ADB/CBWSSSP, UNDP/REDP and Helvetas is essential.

Second, possible political instabilities in the project area may cause delays and other problems to the project during its implementation. In the worst case, the project has to be abandoned in the middle of implementation resulting in considerable financial losses. The mitigation of this risk is beyond the means of the project. A careful assessment of the political and physical safety situation should be made before starting the project.

Third, the political will for the decentralization process may diminish because of the tremendous institutional restructuring needed. To mitigate this risk, RVWRMP's capacity building component will include all technical, environmental, health and sanitation training, as well as institutional development and capacity building at community / VDC / DDC levels, required for the preparation, implementation and O&M of the intended schemes.

Fourth, demand driven sub-sectoral prioritisation of investment schemes may result into unbalanced use of financial resources from RWRDF and REDF. Again, the mitigation of this risk is open and continuous dialogue between the two projects as soon as RVWRMP becomes operative.

4.4 Institutional capacity

GON is in the process of instituting significant changes in the area of rural development in anticipation, and as a result of the decentralisation strategy. The new policies and institutions of the decentralisation strategy will establish increased autonomy in the process of decision-making regarding development management and administration at the level of districts.

The Project strongly supports this change by focusing on institutional capacity strengthening at central, DDC and VDC levels. It is fundamental to this project that its activities be integrated in the GON institutions to ensure their sustainability and replicability.

The institutional capacity building strategies of the project will in particular target the following areas in which current capacity is weak, or non-existent:

- capacity for local level planning
- capacity for information collection and management
- capacity for gender sensitive and participatory planning, implementation and monitoring

- capacity for transparency in financial management
- capacity for technical support

4.5 Socio-cultural aspects

Nepal is a country of multi-caste and multi-ethnic groups of people. The differences in lifestyle of these people, in aggregate reflect varieties in culture. The culture, festivals, food habits, clothing and languages of people differ from place to place. Hence the social activities as well as cultural practices of the dwellers of the mountains differ to those of the Terai to a great extent. The farming practice and produce and consequently the food habitat are also very different between these two types of people. Throughout the country, several languages are spoken as major tongue, major of them are Nepali, Maithili, Bhojpuri, Newari, Tharu, Tamang, Gurung, Magars. Nepali is the national and official language of the country.

Nepal is very rich in arts and culture. Various festivals are celebrated throughout the year. Nepal is a secular country by religion, where 86.5 % of the total population is Hindu followed by 7.8 % of Buddhists and 3.5 % of Muslims. Caste-wise, the Bhramins, Chhetries, Vaishyas and the Backwards reside in the country. This also has an influence in their culture, occupation and the lifestyle. The division with caste and ethnicity has remained an important part of the culture of the country, which is also taken as the key factor for social inequalities widely prevalent in the country. Besides, these differences have implications to community development initiatives, mobilisation of the people of the grass-roots, the gender roles in the communities, status of women in society, communication among the groups and economic situation, among others.

Besides the gender aspect, there are two main socio-cultural aspects that need to be considered. The needs and resources of the Terai and the Hills in the Project area are different. It is obvious that in Terai area, the concern is with the water quality (es. arsenic content) rather than the coverage whereas in the Hills the coverage is the prime issue. Furthermore, there is a need to integrate sanitation programme to all the initiatives of education and awareness creation.

The needs are distinct as they are based on geography, hence also lead towards differences in social order. During implementation of programmes like water supply and sanitation, special attention has to be paid so that the poorest and the most disadvantaged group of the society are not excluded to reap the fruit of development.

4.6 Participation and ownership

To increase ownership and sustainability, communities, assisted by support organisations, will plan, design, implement, operate and maintain their schemes. RVWRMP will thus be implemented by beneficiary communities represented by User Committees, with support from support organisations (local NGOs and private sector). The community-based approach to scheme identification, design, construction, operation and maintenance moves the emphasis from physical infrastructure to community development activities in order to increase beneficiary participation in decision-making, in implementing its decisions, and in sharing its benefits.

4.7 Gender

Gender issues have to be addressed since the very beginning viz. the planning phase. In Nepal, the Rural Energy Development Programme has a successful experience of addressing gender related issues, which could be replicated to other community initiated development activities. The basic tool for this is the Community Mobilisation Process adopted by the programme and the gender sensitive planning at every level. The REDP CM process envisages for the separate Community Organisations at the grassroots for male and female. But at the time of undertaking any initiatives, specific Functional Groups are formed, where there is equal participation of both male and female. As the Functional Group are the decision making bodies, both male and female representing for all the beneficiary COs can have a stake in the decision for implementation. Furthermore, it is also very important to have gender disaggregated data for gender sensitive planning.

Among the various development interventions in the community, water supply and sanitation programmes are the classic examples of activities that are almost exclusively carried out by women. Water supply and sanitation sector is gender sensitive, hence gender sensitive planning should be carried out so as to address gender issues. The prevalent decision-making system is dominated by men whereas the key actors in determining water use in households and sanitation related activities are the female.

As in all culture, gender and its social explanation is an important aspect in the whole national culture. Such type of existence is perceived between the castes, ethnic groups, people of different ages and places, geographic locations etc. However, there is distinct prevalence of socially made norms and understandings that has established anti-female social, economic and political structure. Establishment of hereditary, patriarchal distribution of property could be considered as the principal basis for the aforementioned disparities and unjust social establishments. Likewise, the desire to have son in the family, the more exposure and mobility of men to women, women's engagement in household chores that are supposed to be unproductive have also widened these disparities. A more detailed review on existing gender situation of Far Western Region is presented in Annex 11.

4.8 Environment

According to the Environment Protection Act, 1997 (and related Rules) Environmental Impact Assessments (EIAs) or Initial Environmental Examinations (IEEs) are not mandatory for small sized water supply, sanitation, irrigation, energy etc. schemes to be implemented as part of the project. Nevertheless, EIAs or IEEs (as appropriate) will be included in pre-feasibility and feasibility studies to be prepared for all schemes. Thus, environmental and social impacts will be identified and mitigation measures for possible negative impacts designed.

Environmental integration will result from well balanced planning, implementation and monitoring stages of water resources utilisation. Equal considerations of all environmental sectors (natural, social and economic) are required for adequate integration of energy, irrigation, water supply and sanitation schemes.

Where appropriate, environmentally sensitive conditions will be pointed out in the preparation of the Water Use Master Plans.

Natural environment: Impacts on land uses, aquatic environment, forest resources, watershed areas, wild life, river flow dynamics, water quality, landslides, and erosion, etc. have to be considered.

Socio-cultural environment: Considerable public education is required for sustainable water supply, sanitation and other water uses development. Since long established socio-cultural practices need to

be changed, which may induce a negative impact on the existing socio-cultural environment, such as population movements and non-stabilisation of communities.

Economic environment: Changes in watercourse and amounts of water in the river may change the daily livelihood of the community relying upon the fisheries, and other water based economic activities. Population growth and movement may create uncontrollable micro-economic activities in the community level.

The project is expected to have a net positive effect on the environment. Scheme pre-feasibility and feasibility studies will be carried out prior to construction and will include an environmental assessment. Eligibility criteria for scheme funding will require that scheme proposals include adequate provisions to mitigate any identified adverse environmental impact.

Rural water supply, sanitation, irrigation or energy schemes are expected to save women and children's time and energy because there will be less need for them to fetch water, improving family health and giving women opportunities to use the time saved productively. Water will be used more efficiently for bathing, washing, cleaning, kitchen gardening etc. Rural women are expected to have fewer children because of reduced death and disease rates for children and babies. Hygiene and sanitation practises, and family health are expected to improve. The environment will be less contaminated because of controlled disposal of human wastes, and environmental management and catchment protection are expected to improve. Finally, communities will be more self-reliant and independent.

Rural water schemes may also have potential negative environmental impacts. Sources may dry up due to over-exploitation, or may get polluted. Reservoirs or other components may overflow and cause erosion and water logging. Increased water use without adequate wastewater disposal may cause pollution problems. Inappropriate sanitation units may pollute groundwater. In the absence of effective treatment, bringing contaminated surface water closer to households and using polluted sources may have adverse effects on health. Increasing one type of use may deny future users its other type of uses. Expansion of settlement areas because of improved water and electricity services may lead to congestion and environmental pollution. Finally, quarrying and use of access roads may cause erosion where undertaken.

Many of the potential adverse impacts can be mitigated or avoided by activities planned under the project. The most critical issue related to source security is the source capacity of gravity schemes and possible over-exploitation resulting in drying-up of these sources in exceptionally dry years or even more frequently. The issue will have to be addressed by integrating the monitoring of water yields in the O&M, and enforcing demand management mechanisms when necessary.

4.9 Appropriate technology

The issues related to the sustainability of technologies mainly relate to affordability, availability of technical know-how and skills for O&M, availability of spares, and source security.

The technology to be adopted for this project is simple and well tested by the ongoing water/sanitation, irrigation and energy projects. Experience will be drawn from these projects for appropriate technological solutions.

Availability of energy in some villages will bring along more sophisticated technology, such as motor-driven pumps. Procedures adopted for the UNDP/REDP programme will be adopted for the installation and operation & maintenance of such components. Training programmes will be designed

to facilitate transfer of know-how to the Village Maintenance Workers in charge of the O&M of such schemes.

5 IMPLEMENTATION

5.1 Approach

The project approach is based on the following key principles:

- Holistic approach – comprehensive, multi-sectoral planning and preparation process
- Bottom-up approach – community mobilisation
- Participatory approach – ownership promotion
- Income generation – entrepreneurship promotion
- Coordination – linkage with other ongoing sector projects
- Multiple use of water – water resources management

The core thrust of RVWRMP will be to support the District and Village Development Committees of the participating districts in decentralised planning, implementing, monitoring and evaluating water supply, sanitation, irrigation and energy development activities and to build up their institutional capacity in line with the Local Self-Governance Act. Establishment of community managed sustainable water, sanitation, irrigation and energy systems is the key strategy. The project will provide technical, financial and management support for establishment of sustainable facilities on demand driven basis. The project will follow a participatory and gender sensitive approach and will support communities to move towards self-reliance in providing water sector services.

The **project approach** will be based on *integrated water resources management* concept in which sub-sectoral investment plans (water, sanitation, irrigation, energy etc.) are prepared simultaneously and then implemented on the basis of priority needs of the benefiting communities defined through a participatory process. A holistic approach will be adopted, in which the whole chain of linkages between various activities will be kept in mind, and support will be given to the whole chain. For example implementation of an irrigation scheme must follow training provided to the farmers on new farming methods and marketing the products in order to be sustainable. Similarly, there is a clear linkage between the components of the chain - planting of trees – source protection – availability and quality of water supply – health, which people must understand. Understanding will be built up through involving the communities from the very beginning of the planning work and throughout the scheme implementation cycle.

By providing support to the revenue generating components communities will be assisted to slowly build up self-reliance of the non-revenue generating components (water, sanitation). Communities might at the beginning be tempted to give priority to revenue generating schemes, but incentives can be introduced to maintain an optimal balance in the selection of non- and revenue-generating activities for implementation.

RVWRMP idea is to develop the use of water resources of the Far- and Mid Western regions of Nepal on the basis of comprehensive Water Use Master Plans to be prepared for selected priority VDCs. The project will be implemented in close cooperation with the ongoing Rural Energy Development Programme (REDP) financed currently by the UNDP. International Development Association (IDA) of the World Bank provides financial support for the second stage of the REDP programme. Step-by-step preparation and implementation procedures and guidelines established for the Rural Water Supply and Sanitation Support Programme in Lumbini Zone will be taken as reference to produce qualitative implementation procedures and guidelines for the project. The documents will be made in such a manner that it follows the current prevailing situation, Government policies, rules, and regulations and it is harmonised and synchronized with the procedures of the REDP and the Water Resources Management Programme (WARM) of Helvetas, which are already under implementation

partly in the same districts as this project. The mobilisation of a new ADB financed Community-based Water Supply and Sanitation Sector Project (CBWSSSP) will coincide with the start-up of RVWRMP. Close cooperation is needed between the two new projects when setting-up plans and strategies for project implementation.

The project will support the process of decentralisation of planning, implementation and decision-making to district and village level.

A District Water Resources Development Fund (DWRDF) will support the implementation of the schemes. The DWRDF will be managed as per the prevailing GON rules and regulations. The fund will be audited by the Auditor General's Office. Since project schemes to be financed from the fund fall under a number of legislation depending on the type of the scheme in concern (water/sanitation, irrigation or energy), different rules and disbursement procedures may need to be formulated for each sub-sector. Contributions to the funds are expected from the Governments of Finland and Nepal, DDCs, VDCs and communities. Also other sources need to be identified.

5.2 Organisation

RVWRMP will comprise of nine independent “sub-projects” (one in each district), each of which consists of a number of individual water use and/or sanitation schemes. Capacity building of sector partners will take place through working for the schemes, enhanced by a training programme.

The competent authorities of RVWRMP are the Ministry of Finance, Nepal, and the Ministry for Foreign Affairs of Finland.. The Executing Agency of RVWRMP will be the District Development Committees of the participating districts.

MLD/DoLIDAR is responsible for the provision of all necessary technical and managerial support to local governing institutions, as well as coordination of all infrastructure development activities undertaken at present within the framework of MLD and gradual transfer of the coordination responsibility to local institutions.

The planning and execution of RVWRMP activities will be the responsibility of each DDC, which will be supported by the DoLIDAR and RVWRMP.

An organigram (and flow of funds) is presented in Annex 6.

A National Project Director (Technical) will be nominated by GON. The NPD will be stationed in DoLIDAR. The NPD will facilitate the planning, budgeting, progress review and monitoring at the central level. A senior officer of under secretary level (Technical) of DoLIDAR will be the Project Coordinator (PC). The PC will be supported by two engineers and an accountant. The PC's Office (PCO) will be established at the RVWRMP project office. The Consultant's team will be headed by the Team Leader (TL). The TL will report to the PC. In addition to administrative staff, a Project Support Unit (PSU) will be established in RVWRMP project office to support the district sub-projects. The project office is proposed to be located in Dhanghadi in Kailali District located in Terai south of the project area.

The staffing of the PSU will be the following:

Main office:

- Team Leader (expatriate)
- Adviser / specialist (expatriate)
- Field Specialist (Junior Expert, expatriate)
- Engineer (local)
- Overseers, appropriate no, (local)
- Health promoters, appropriate no (local)
- Other local staff as required
- DDC: DTOs
- Water Resources Advisers (WRA), two (2) for each district (local, water supply /sanitation and irrigation/agriculture)

The staffing of the PSU will be adjusted to a minimum and its pattern will be flexible to meet with the existing demand. Existing training institutions, NGOs, LNGOs and private sector firms will be used to provide the services as much as possible.

At the district level there will be a District Management Committee (DMC) in each district, led by DDC chairperson. The other members of the DMC will be the DDC secretary, head of the DDC:DTO and WRAs. The DMC meets at least once in a month to review the progress of sub-projects and other relevant matters. The DDC:DTOs will be responsible for the daily operation and execution of all RVWRMP sub-projects activities. WRAs will facilitate in such matter.

There will be two Water Resources Advisors (water supply/sanitation and irrigation/agriculture) to be attached to the DDC:DTO's of each district. The WRAs will assist the DDCs to plan, coordinate and monitor the water resources activities. S/he will also provide support, to the extent possible, to other sector partners and coordinate relevant sector schemes.

The standard structure of RVWRMP monitoring will have a Steering Committee (SC) and a Supervisory Board (SB) as instructed in the guidelines of the Ministry for Foreign Affairs, Finland. To utilise the existing structures in Nepal, and to adjust the monitoring into the prevailing practice in Nepal, the functions of the SB and the SC will be combined under the name of **the Steering Committee**. SC will meet at least twice a year. The meeting place should rotate in the districts to familiarise the members with the local conditions and the activities in the field. One of the tasks of the SC will be to review and amend the Project Document as and when deemed necessary.

The members of the Steering Committee comprise (at least):

- | | |
|--|---------------|
| - Secretary, Ministry of Local Development | (chairperson) |
| - Director General , DoLIDAR | (member) |
| - National Project Director, DoLIDAR | (member) |
| - Representative, DWSS | (member) |
| - Representative, AEPC | (member) |
| - Representative, DoI | (member) |
| - Representative, Ministry of Finance | (member) |
| - Representative, National Planning Commission | (member) |
| - Representative, Embassy of Finland | (member) |
| - Representatives of district sub-projects | (member) |
| - Team Leader | (member) |

- Project Coordinator (member-secretary)

The Project Coordinator's office and Team Leader's office will serve as the secretariate to the Steering Committee.

The district sub-projects will be supervised by the permanent structures of the districts, namely the **District Councils** annually and the **DDC body meetings** monthly and by the **Supervision and Monitoring Committee** provisioned in the Local Self-Governance Act, 1999 on four-monthly basis. The role of coordination among the institutions involved in Water Resources development will be done by DDC. Special mention of this role is also underlined in Local Self-Governance Act.

The Finnish supporting services will be provided by a consulting company to be assigned once the agreement between the governments of Nepal and Finland has been signed.

Financial performance of the DWRDF will be audited as per the prevailing rules and regulations of GON. Regarding the expenditures incurred from the Finnish Government contribution (except the fund in DWRDF), audit will be performed annually as per Finnish Government's rules and regulations, however, a separate financial statement of expenditures will be submitted to Auditor's Generals's Office through PCO and DoLIDAR.

5.3 Tentative timetable

The project will cover a period of four years from September, 2006 through August 2010. The period will be consistent with the fiscal calendar of GON on an annual basis.

5.4 Budget

The project is expected be financed jointly by the governments of Nepal and Finland, and through sharing the costs with District Development Committees, Village Development Committees, communities and User Groups.

The overall tentative budget of the RVWRMP is NPR 1,164 million, equivalent to EUR 13.7 million. The financing of the budget is planned as follows:

Contribution	NPR million	EUR million	%
Government of Nepal	88	1.0	7.0%
DDCs and VDCs	24	0.2	1.8%
Communities and User Groups	110	1.1	8.6%
Government of Finland	1052	11.4	82.6%
TOTAL	1274	13.7	100%

Finnish Government contribution

The budget items involving Finnish contribution include investments, water use master plans, conservation of environment, community mobilization, training and human resource development, technical assistance, running costs, project administration and contingencies.

Investments will be financed through DWRDFs of each district. The funds will be managed under the rules and regulations of GON by the concerned authorities at DDC level and at central level.

The Finnish contribution will be channeled to DWRDFs or DDFs through the RVWRMP as direct funding to the DDCs. The direct funding will be reflected in the GON annual budget books (Red Book). Separate accounts under DWRDFs will be kept for money allocated to investments (joint funding) and for other project costs (Finnish funding only).

Water Use Master Plans (WUMP) will be prepared for all 80 target VDCs. WUMPs will be the essential basis and starting point for implementation plans. Local consultants will be hired to prepare the WUMPs in cooperation with the PSU staff. During the WUMPs preparation, small investments will be made to protect water sources and to build demonstration latrines. This will motivate the villagers to take interest and initiative already in the preparation phase of the project.

Conservation of environment component includes training and training materials related to awareness building on nurseries, plantations, bioengineering etc.

Community Mobilisation component includes salaries and allowances of the Community Mobilisers and related running costs and stationary etc. Majority of training activities as well as community mobilisation will be directly funded through DWRDFs as part of investment schemes.

Training and Human Resources Development component includes mainly training and experience sharing activities (local and external), capacity enhancement of the DTOs at district level and DoLIDAR staff at central level, and provision for training materials. Under this heading, various kinds of training will be organised for Central, DDC and VDC level partners, and village level technical manpower. Training related to income generation is also included into this component.

Technical Assistance covers the expatriate staff and 18 Water Resources Advisers (2 for each district) to be employed by the consultant. Expatriate staff will include three long-term advisers. In addition a provision is made for short-term consultancies and home office back-up services.

Running costs consists of local staff, office expenditures and operational costs of RVWRMP/PSU/PCO, vehicles, computers, and expatriates housing. NPD at DoLIDAR will also be supported with one no. of Four-Wheel Drive vehicle.

Project administration covers costs related to MFA/DIDC monitoring missions, mid-term and final evaluations etc.

Contingency is estimated at 8% of the total expenditure excluding Project Administration.

GON contribution

GON will provide NPR 88 million (EUR 1.0 million) as direct grant for the financing of the investment schemes. GON will also provide personnel at central, project, and district levels as required.

Sufficient administrative budget for the execution of the work will be allocated for central, district, village and project levels.

For RVWRMP purpose, office space will be provided in each district by the concerned DDCs.

DDCs contribution

DDCs (9 in total) are expected to contribute NPR 12 million (EUR 0.1 million) as cash grant for the investment schemes from their own annual budgets over the four year project period.

VDCs contributions

VDCs (80 in total) are also expected to contribute NPR 12 million (EUR 0.1 million) as cash grant from their own annual budgets to investment schemes over the four year project period.

Local resources mobilisation

Strong commitment and involvement of local communities and user groups is essential for the successful implementation of RVWRMP. Therefore, they are expected to contribute some NPR 110 million (EUR 1.1 million) to the investment schemes. 95% of the sum will be in kind contributions, i.e. unskilled labour, construction materials etc. Part of the cash contributions may be covered by loans to be taken by the user groups from local financing institutions.

Total Resources Mobilisation by RVWRMP

It is estimated that the external funding from GON, Finnish Government and DDCs through DWRDF – some NPR 1152 million (EUR 12.4 million) – will mobilise another NPR 122million (EUR 1.3 million) of local contribution from VDCs and User Committees, out of which some NPR 104 million (EUR 1.1 million) in kind.

As a whole, the RVWRMP intervention will result in an investment of some NPR 599 million (EUR 6.5 million). Master plans for VDCs, conservation of environment, community mobilization, Training & HRD, Technical assistance, running costs of PSU and PCO, project administration and contingency are excluded from these figures. At the completion of RVWRMP all the remaining assets (vehicles, equipments, materials, fund, etc.) will be managed at the discretion of DoLIDAR.

Contributions of other foreign aid programmes closely related to RVWRMP:

UNDP/REDP/IDA⁴

GON, UNDP and the World Bank (WB) have agreed to implement the Rural Energy Development Programme (REDP) II Phase as a joint initiative in 25 districts following the same approach and

⁴ Source: Rural Energy Development Programme, Nepal, Annual Report 2002.

implementation modalities as established by the earlier REDP. The WB will provide the grant assistance of USD 5.5 million to GON as the Micro hydro Village Electrification component of the Power Development Project for implementing the district level programme activities during 2002-2006. UNDP has allocated USD 800,000 to fund the technical assistance component, including the costs of the REDP head office in Kathmandu and the costs of the expert staff attached to each district (DDC: REDS, subsequently DDC:DTO)

REDP II will be implemented in 25 districts and 125 to 150 VDCs. REDP will be operated in all nine RVWRMP districts and approximately in 40 out of the 80 VDCs to be included in RVWRMP. REDP II will cover all HRD costs in VDCs benefiting from a micro hydro scheme. HRD costs in other VDCs will be covered by the RVWRMP.

The REDP II budget will be appropriated in the name of the AEPC / MoEST as a government grant, and will be released directly to AEPC. The AEPC will be responsible for the management of this grant, and for onwards release of the grants to the District Energy Funds. REDP II has been operative since April 2003.

ADB – COMMUNITY BASED WATER SUPPLY AND SANITATION SECTOR PROJECT⁵

ADB's CBWSSSP project will provide rural water supply and sanitation facilities and services to improve community health and provide opportunities for income generation to about 1,200 communities in 21 districts. These will cover all nine districts of RVWRMP. CBWSSSP project will also facilitate the capacity building of local authority institutions (DDCs, VDCs), reflecting GON's commitment to decentralised decision making.

The estimated project cost is USD 35.7 million, of which 67% will be financed by the ADB, 22% by GON, 1% by DDCs and VDCs, and 10% by beneficiaries. ADB will provide a loan equivalent of USD 24 million to GON for 32 years, including a grace period of 8 years. The interest rate charge is 1% during the grace period and 1.5% thereafter.

Project management unit will be established in Kathmandu and will be headed by a Project Director to be appointed by the Ministry of Physical Planning and Works (MPPW). MPPW will delegate implementation responsibilities to Department of Water Supply and Sewerage (DWSS).

The project will be implemented over 6 years, starting in the first quarter of 2004 with the institutional component. Hence, both the implementation timetable and geographical coverage coincide with RVWRMP, close cooperation between the two projects will be necessary to avoid duplication of efforts and waste of resources.

Helvetas⁶

The Swiss NGO Helvetas has supported drinking water and sanitation schemes in Nepal since 1976. Based on long experience, Helvetas shifted focus to Mid- and Far Western regions in 2000 under Water Resources Management Programme (WARM-P). WARM-P covers four⁷ out of nine districts of RVWRMP, hence close cooperation with Helvetas is essential. Helvetas expressed strong willingness to cooperate with RVWRMP in order to use scarce resources efficiently.

⁵ Source: Asian Development Bank, loan proposal to the Board of Directors, 9 September 2003.

⁶ Source: Helvetas, Nepal. Discussions during mission in November 2003.

⁷ Dadeldhura, Doti, Achham and Dailekh.

WARM-P facilitates village-level governments (VDCs) and communities to prepare Water Use Master Plans (WUMP). These incorporate all possible use of the existing water sources. So far, Helvetas has participated in 22 WUMPs, each taking in total about seven months to prepare. Based on WUMP, WARM-P supports communities to implement prioritised drinking water and sanitation projects. Other Helvetas-supported projects may support, for example, initiatives, which enhance the use of water for agricultural production.

The annual budget of WARM-P is about EUR 800 000.

Summary of aid programmes in the 9 districts of RVWRMP

Table 5-1 summarises the estimated coverage of the main foreign aid programmes in the nine districts of RVWRMP from 2006 to 2010. About 44% of the villages and some 640 000 people in the project area would be covered by jointly implementing the four programmes.

It has to be noted that REDP concentrates on the micro hydro component, and that Helvetas has very limited financial resources to implement more than just a few drinking water schemes in a year. Therefore, efficient coordination is called for in order to implement all potential components – water, sanitation, irrigation, solid waste and micro hydro - within the villages in a sensible and “seamless” way.

Table 5-1. Estimated coverage of the main foreign-aid programs in the project districts during the 4-year implementation period of RVWRMP

Program	Program Budget	Coverage Districts	Villages	Population	%
	Million EURO				
RVWRMP	13.7	9	80	284,474	20%
UNDP/REDP	1.3	5	40	142,237	10%
ADB/CBWSSSP	8.6	9	50	177,796	12%
HELVETAS	1.6	4	10	35,559	2%
TOTAL	25.2	9	180	640,067	44%

Assumptions:

- Similar population coverage versus budget spending is assumed for RVWRMP and ADB projects;
- ADB project extends over 6 years, hence 4/6 of total budget is assumed to be spent during RVWRMP project;
- REDP operates in 25 districts, therefore the 5 RVWRMP districts are assumed to get 5/25 of the total budget;
- ADB will operate in 21 districts, therefore the 9 RVWRMP districts are assumed to get 9/21 of the total budget;
- Half of Helvetas’ annual budget is estimated to be allocated to RVWRMP target districts.

Table 5-2 presents the figures for donor funding, no. and names of districts, activities and cooperation opportunities with other donor programs in the Project area.

Table 5-2. Cooperation opportunities with other donor programs in the Project area

Name of the Program/Project	External financial support	Overall no. of districts/communities	Names of project districts included in RVWRMP	Main activities carried out by programs/ projects	Cooperation opportunities
Rural Energy Development Program – REDP (2 nd phase 7/2002-6/2006)	UNDP/WB - 0.8 mUSD for TA from UNDP - 5.5 mUSD grant from WB	25/125-150 Baitaidi, Dadel-dhura, Achham Bajura, Dailekh Pyuthan, Baglung, Myagdi, Parbat, Tanahu, Kavre, Sindhupalchok, Dolakha, Okhaldhunga, Tehrathum	(5/9) Baitaidi Dadeldhura Achham Bajura Dailekh	- rural energy development - income generation - capacity building	-selection of five (5) villages for MH development for WS or irrigation - combine capacity building and institutional strengthening activities - utilisation of district development plans (used by REDP) for WUMP preparation - share the time and knowledge of WRAs in districts
Community-Based Water Supply and Sanitation Sector Project – CBWSSSP (1 st phase; 1/2004-12/2009)	ADB - 24 mUSD loan from ADB	21/1200 Bajhang, Dolpa, Mugu, Achham, Humla, Rolpa, dailekh, Doti, Dadelhura, Jajarkot, Baitadi, Bajura, Puythan, Kalikot, Rukum, Darchula, Salyan, Jumla, Kapilbastu, Dang, Gulmi	(9/9) Darchula, Baitaidi, Dadeldhura, Bajhang, Doti, Achham, Bajura, Dailekh, Humla	- rural water supply and sanitation - community health improvement - income generation - capacity building	- co-operate in site selection methods - combine capacity building and institutional strengthening activities - agree on responsibilities in project districts* and villages - share the time and knowledge of WRAs in districts
Water Resources Management Program - WARM-P (2002 → continues)	Helvetas - 0.8 mEUR grant	9(?): Dadelhura, Doti, Achham, Dailekh, Jajarkot, Tanahu, Parbat, Syangja, Kaski	(4/9): Dadelhura, Doti, Achham, Dailekh	- rural water supply and sanitation - irrigation and drainage - environment and ecology - capacity building	- utilise WUMPs already prepared by WARM-P (22 WUMPs prepared) - combine capacity building and institutional strengthening activities - share the time and knowledge of WRAs in districts

* e.g. one takes care of the implementation of projects in certain no. of villages in one district or one takes care of the whole district, and the other one takes full care of the other district

The 'added value' of the Finnish Government financed RVWRMP project to water sector in Nepal and its relation to other foreign donor funded major sector projects

The participation of the Finnish Government in the RVWRMP has several unique inputs to the sector. The proposed RVWRMP will be the first technical assistance project to be designed following the principles and policies enunciated in the Rural Water Supply Sanitation Sector Strategy for Nepal (2003). As such, it has the potential for “modeling” the sector technical assistance and investment approaches in the future.

The proposed project will focus on and demonstrate integrated and efficient planning of water resources at the local level, including arrangements for settling potential conflicts and disputes related to allocation of water resources among different sub-sectors or interest groups. Broader consideration for the water resources needs of “downstream” users will be given, particularly in resource-scarce areas. This multi-purpose approach to development of water and sanitation related rural development projects will foster community and inter-community sharing of limited resources.

At the moment Mid- and Far Western regions are having less donor assistance programs than elsewhere in Nepal even if the people in the areas are the poorest, illiterate and living in harsh mountainous conditions. So far Helvetas is the only active organisation in water sector in those areas but its resources are scarce and limited and are mainly concentrated on rain water harvesting and small piped water supply schemes. A new ADB financed CBWSSSP will operate in the same areas but it can neither bring water supply and sanitation services to satisfy all the demand. UNDP/REDP supports micro hydro development which helps people to develop other activities (e.g. small farm irrigation, village electrification, etc.) to generate more income and improve their living conditions and communication systems. Micro hydro development plays, however, minor role in the RVWRMP but will supplement the achievements of UNDP/REDP projects. Village level solid waste management (pilot project in RVWRMP) is not at all included as a part of any other donor financed programs and Finnish Government financed program in Lumbini zone has been as a “fore-runner” in arsenic content mitigation in tube wells and this activity is planned to be continued in the RVWRMP.

Based on the above facts there will be plenty of need for the implementation of the Finnish Government financed RVWRMP especially in the field of water supply and sanitation. Effective coordination between the donor agencies will ensure that people in Mid- and Far Western regions will get the greatest benefits from all active programs. Coordination and cooperation will also help to utilise the scarce human resources in the best way and will reduce the operation costs of all programs by combining the efforts. There are not any risks of “over –assistance” in the program districts as total value of the overall assistance is still limited considering the vast geographic area in concern.

6 MONITORING

Monitoring and Evaluation (M&E) of RVWRMP will emphasise two-way dialogue and experience sharing by all partners. Preparation of community plans will enable M&E to be undertaken by communities. In the community plans, communities prepare their vision of their development for an agreed period. During the planning process indicators are developed, including gender indicators, for ongoing monitoring of the process. Monitoring is a management tool. In RVWRMP users of water supply, sanitation, irrigation and energy services are expected to manage these services and related facilities. Monitoring of the project needs to be based on sets of indicators identified by the various stakeholders to review project progress from the perspective of their involvement.

The achievement of results and changes in RVWRMP environment that may have an impact on assumptions related to these results should be continuously monitored utilising mutually agreed upon indicators. DDC, DTO and WRAs need to be involved in this process. Sub-project activity monitoring needs to involve VDCs, Users and SOs.

District sub-projects will report to DDCs.

While the project will prepare quarterly progress reports, quarterly financial reports, an annual report (for a Gregorian year), and monthly, quarterly, and annual report in prescribed NPC format and semi-annual report in the format prescribed by the Finance Ministry (for Nepalese fiscal year). Written reports should be minimised at sub-project and scheme levels. The collection and management of written information at sub-project and scheme levels should be integrated in the local level planning process. Instead, RVWRMP should facilitate the sub-project meetings of the District Management Committee and attended by representatives (women and men) of VDCs, SOs, functional group members and relevant district level organisations to monitor progress, changes difficulties and activities.

A combined team of representatives from MLD and DoLIDAR will independently monitor and evaluate RVWRMP activities at least twice a year by field visits to the project area. The team will then report to the Steering Committee through DoLIDAR. Summary of aid programmes in the 9 districts of RVWRMP

7 EVALUATION

7.1 Internal evaluation

Users' Group level: Evaluation by users will be institutionalised as a part of the community level participatory planning process. Evaluation by users will be an important contributor to monitoring the sustainability of RVWRMP.

VDC level: Participating VDCs evaluate the performance of UCs and their own role in scheme implementation. Two evaluations can be done; (i) mid-term during the implementation, and (ii) after the completion of the scheme. The purpose of the evaluation will be to provide feedback to the implementers (UCs and other agencies involved) and identify learning useful to the VDCs in terms of project management. A VDC may decide to use the experience of the UCs of a completed scheme to educate other UCs to be organised in the VDC area. VDCs need external assistance in evaluation skills in the beginning. The DDC needs to monitor, participate and assist the VDCs in properly exercising their duties and functions as an evaluator.

DDC level: DDCs will review the sub-project performances on an annual basis. The ultimate purpose of the review will be to provide feedback to all stakeholders of the RVWRMP and identify learning points useful to the DDC in terms of project management. The DDC will have to be assisted by external facilitators (independent or PSU/WRA) for a couple of years. In any case, the PSU/WRA must participate in the reviews.

RVWRMP/REDP teams level: Internal sub-project evaluations by the RVWRMP team will take place semi-annually, carried out by a team led by a member of RVWRMP team, and participated by DDC officials. The ultimate purpose of the review will be to provide feed-back to the responsible implementers of RVWRMP and identify learning points useful to the Project and sub-project management. Ideally, this should precede internal evaluation by the DDC.

Steering Committee: Just before the mid-term and final evaluations, review of each of the district sub-projects' performance should be carried out and presented. The purpose is to provide relevant information to the mid-term evaluator, and at the same time identify issues for better project management.

7.2 External evaluation

Mid-term assessment of the Project will take place by an external evaluation after two years of the commencement of the project. Approval will be contingent on RVWRMP being able to demonstrate achievement measurable by indicators established in this proposal for project purpose and results. The mid-term assessment may consider the possible extension of RVWRMP activities into new districts.

Final evaluation will be carried out at the end of the project period.