Document of
The World Bank

FOR OFFICIAL USE ONLY

Report No: 35464-IN

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 83.5 MILLION
(US$120 MILLION EQUIVALENT)

TO THE

REPUBLIC OF INDIA

FOR THE

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

August 7, 2006

Infrastructure and Energy Sector Unit
India Country Management Unit
South Asia Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective July 21, 2006)

Currency Unit	=	Indian Rupees (INR)
INR 1	=	US$0.021
US$1	=	INR 47

FISCAL YEAR
April 1 ï March 31

ABBREVIATIONS AND ACRONYMS

AG	Auditor General
ARWSP	Accelerated Rural Water Supply Program
BPL	Below Poverty Line
CAG	Controller Auditor General
CAS	Country Strategy
CAT	Catchment-Area Treatment Study
CCDU	Capacity Development Unit
CDD	Community-Driven Development
DDW	Department of Drinking Water
DEPR	Detailed Environmental Project Report
DPMU	District Program Management Unit
DWSC	District Water and Sanitation Committee
DWSM	District Water and Sanitation Mission
EA	Environmental Assessment
EC	Environment Coordinator
EMF	Environmental Management Framework
ERR	Economic Rate of Return
FC	Habitation categorized as fully covered by water supply services
FD	Forest Department
FM	Financial Management
GO	Government Order
GoI	Government of India
GoUA	Government of Uttaranchal
GP	Gram Panchayat
HESA	Hygiene and Environmental Sanitation Awareness
ICR	Implementation Completion Report
IDA	International Development Association
IEC	Information, Education, and Communication
M&E	Monitoring and Evaluation
MDG	Millennium Development Goal
MIS	Management Information System
MoU	Memorandum of Understanding
MTP	Medium-Term Program
MVS	Multi-Village Scheme
MVSLC	Multi-Village Scheme-Level Committee
NC	Habitation categorized as not covered by water supply services
NGO	Nongovernmental Organization

O&M	Operations and Maintenance
PC	Habitations categorized as partially covered by water supply services
PMU	Program Management Unit
PRA	Participatory Rural Appraisal
PRI	Panchayati Raj Institution
RTI	Regional Training Institution
Rs	Indian Rupees
RWSS	Rural Water Supply and Sanitation
SA	Support Agency
SARAR	Self-esteem, Associative in strength, Resourcefulness, Action plan, Responsibility
SC	Scheduled Caste
SEE	Sustainability Evaluation Exercise
SIS	Sector Information System
SO	Support Organization
ST	Scheduled Tribe
SVS	Single Village Scheme
SWAp	Sector-Wide Approach
SWSM	State Water and Sanitation Mission
TA	Technical Assistance
TSC	Total Sanitation Campaign
ToR	Terms of Reference
UDWDP	Uttaranchal Decentralized Watershed Development Project
UJN	Uttaranchal Peyjal Nigam
UJS	Uttaranchal Jal Sansthan
UWSSC	User Water Supply and Sanitation Committee
VWSC	Village Water and Sanitation Committee
WDI	Womenôs Development Initiative

Vice President:	Praful Patel
Acting Country Director:	Fayez S. Omar
Sector Manager:	Sonia Hammam
Task Team Leader:	Midori Makino / Smita Misra

INDIA

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

PROJECT APPRAISAL DOCUMENT

SOUTH ASIA

SASEI

Date: August 7, 2006	Team Leader: Midori Makino / Smita Misra
Acting Country Director: Fayez S. Omar	Sectors: Water supply (80%); Sanitation (20%)
Sector Manager: Sonia Hammam	Themes: Rural services and infrastructure (P)
Project ID: P083187	Environmental screening category: B
Lending Instrument: Specific Investment Loan	

Project Financing Data

[ ] Loan [X] Credit [ ] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Total Bank financing (US$million): 120.0 IDA Credit
Proposed terms: Standard IDA terms, with a 35 year maturity, including a 10 year grace period

Financing Plan (US$m)

Source	Local	Foreign	Total
BORROWER/RECIPIENT	104.00	0.00	104.00
INTERNATIONAL DEVELOPMENT ASSOCIATION	115.00	5.00	120.00
Total:	219.00	5.00	224.00

Borrower: Government of India

Responsible Agency: Government of Uttaranchal, Department of Drinking Water

Estimated disbursements (Bank FY/US$m)

FY	2007	2008	2009	2010	2011	2012			
Annual	7.5	23.6	35.9	29.8	19.2	3.9			
Cumulative	7.5	31.1	67.0	96.8	116.0	120.0			

Project implementation period: Five years
Expected effectiveness date: January 1, 2007
Expected closing date: June 30, 2012

Does the project depart from the CAS in content or other significant respects? ***Ref. PAD A.3***	[ ]Yes [X] No
Does the project require any exceptions from Bank policies? ***Ref. PAD D.7***	[ ]Yes [X] No
Have these been approved by Bank management?	[ ]Yes [ ] No
Is approval for any policy exception sought from the Board?	[ ]Yes [X] No
Does the project include any critical risks rated ñsubstantialò or ñhighò?	[X]Yes [ ] No

Ref. PAD C.5	
Does the project meet the regional criteria for readiness for implementation? ***Ref. PAD D.7***	[X]Yes [ ] No

Project development objective ***Ref. PAD B.2, Technical Annex 3***
To improve the effectiveness of rural water supply and sanitation (RWSS) services through decentralization and the increased role of the Panchayati Raj Institutions and the involvement of local communities in the state of Uttaranchal.

Project description *[one-sentence summary of each component]* ***Ref. PAD B.3.a, Technical Annex 4***
Component A: RWSS Sector Development (US$5 million) will support the state's sector reform process by establishing and enhancing its institutional capacity to implement, manage, and sustain the state's medium-term sector development program through the following subcomponents: (i) capacity-building and strengthening programs; (ii) information, education, and communication; (iii) sector information system, water quality, and water source discharge monitoring programs; (iv) modernization of public procurement and procurement reforms; and (v) sector studies.

Component B: RWSS Infrastructure Investments (US$197 million) aims to improve service and sustainable access to RWSS services by financing the following investments: (i) new investments in water supply schemes and catchment-area protection works; (ii) community mobilization and development activities; and (iii) sanitation programs.

Component C: RWSS Program Management Support and M&E (US$22 million) will support: (i) operational and administrative costs associated with the implementation of the sector-wide approach basket of the state's medium-term sector program; and (ii) monitoring and evaluation.

Which safeguard policies are triggered, if any? ***Ref. PAD D.6, Technical Annex 10***
Safeguard policies that are triggered are Environmental Assessment (OP/BP/GP/4.01) and Forests (OP/BP 4.36).

Significant, nonstandard conditions, **if any**, for:
Ref. PAD C.7
Board presentation: None
Loan/credit effectiveness: None
Key covenants applicable to project implementation:

(i) By December 31, 2006,
a. A system is established to ensure that funds for all Project-financed MVS to be carried out under the Project and costing up to Rs 20 lakhs flow through the relevant DWSM; and
b. Project monitoring and evaluation system is established, fully operational, and thereafter maintained.

(ii) By September 30, 2007,
a. Seventy-five percent of Batch One investment schemes have entered the implementation cycle of activities in accordance with the provisions set forth in the Operations Manual; and
b. All of the Batch Two investment schemes have been identified in accordance with the provisions set forth in the Operations Manual.

(iii) By March 31, 2009,
a. The staff of the UJN and UJS engaged in rural water supply schemes report to the relevant PRI; and
b. An assessment is carried out on the progress of the funds flow for all Project-financed MVS carried out under the Project and such assessment sets forth appropriate recommendations on the progress of the flow of funds through the relevant DWSM up to an amount of Rs 50 lakhs.

(iv) The number of RWSS sector investment schemes that are prepared and implemented outside of the

SWAp Basket is reduced during the period of Project implementation, and the total expenditures for such schemes that fall outside of the SWAp basket will not exceed Rs Crores 550.

(v) Institutional mergers of (a) the PMU with the SWSM and (b) the DPMUs with the relevant DWSMs will be implemented by the end of the Project period.

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

CONTENTS

Map(s): IBRD 34969 ï General Map of Uttaranchal

A. STRATEGIC CONTEXT AND RATIONALE

1. Country and sector issues

1. **Government of India's Sector Reform Program:** Since 1999, India has embarked on a significant reform program in the rural water supply and sanitation (RWSS) sector in recognition of the need to move away from a target-based, supply-driven model that has failed to adequately deliver services to a demand-based approach where users get the service they want and are willing to pay for. The Government of India (GoI) has developed the Swajaldhara guidelines, which spell out the basic principles for reform in the RWSS sector, which include community participation in the planning, implementation, operation, and maintenance (O&M) for the schemes of its choice, and the changing role of the government from that of a service provider to a facilitator. This decentralized service delivery approach is consistent with the 73rd constitutional amendment of 1992, which introduced devolution of financial and decision-making powers to the three-tier local governments, called the Panchayati Raj Institutions (PRIs).

2. **RWSS Sector Performance in Uttaranchal**: The Uttaranchal state, which bifurcated from Uttar Pradesh in November 2000 has a population of 8.48 million as per the 2001 census, of which 6.4 million (75 percent) live in the rural areas, spread over the 7,562 village-level local governments called the Gram Panchayats (GPs), in 16,623 villages and 39,967 habitations. According to the survey of drinking waterï supply status in rural habitation initiated by Rajiv Gandhi Drinking Water Mission of GoI in 2003, only half of the habitations in the state were categorized as fully covered[1] (FC) with functioning water supply schemes, 38 percent as partially covered (PC), and about 12 percent as not covered (NC)[2]. 75 to 80 percent of the rural population does not have access to sanitary latrines. Water-related diseases are a major health problem for the rural population, particularly for infants and children.

3. Water scarcity is another issue faced by the state. Data from existing water supply schemes indicate that nearly 30 percent of the schemes suffer from a decrease in the availability of water, especially during the summer months, because of depletion of water sources. This also causes some of the villagers to spend considerable amount of time collecting water for domestic use, averaging one to three hours per day; even more time is spent in hilly locations. The problem is aggravated by water supply systems which have outlived their design life, and inadequate O&M.

4. Present RWSS service delivery does not adequately serve the requirements of user communities as they are often located at sites without consideration of community needs or preference. Planning of RWSS services also takes place without due attention to resource availability or quality, and the schemes are rarely financially viable. The end result is a government-dominated and target-driven service that has become unsustainable.

5. **Sector Institutional Framework in Uttaranchal:** The current institutional setup is centralized with the two large public utilities, Uttaranchal Peyjal Nigam (UJN) that mainly constructs, and Uttaranchal Jal Sansthan (UJS) that mainly operates and maintains most of the existing water schemes. The exception to this are the 1,146 schemes built and operated by the village water and sanitation committees (VWSCs) under the first World Bankï funded Uttar Pradesh and Uttaranchal Rural Water Supply and Environmental Sanitation Project (Swajal) and about 2,448 single-village schemes (SVSs) which have been transferred to the GPs. Most of these 2,448 schemes transferred to the GPs, however, are facing serious problems that require some sort of rehabilitation or augmentation as well as proper hand-over arrangements to ensure that O&M can be managed by the GPs. It is a huge challenge for the GPs to take over the RWSS schemes

[1] The GoI definition of coverage refers to ñaccess to water,ò defined as 40 liters per capita per day within a distance of 1.6km from the center of the village and 100 meters height.

[2] Survey results of drinking water supply status in rural habitation initiated by Rajiv Ghandhi Drinking Water Mission of GOI in 2003 are attached in Annex 1.

in addition to the other rural service delivery functions as per the 73rd constitutional amendment, as their capacity is limited.

6. **Government of Uttaranchal's Sector Vision:** The Government of Uttaranchal (GoUA) has prioritized RWSS as a key area of its development agenda in its Tenth Plan (2003ï 07). GoUA envisages universal coverage of safe and potable water and sanitation by the end of its Eleventh Plan (2008ï 12). The vision also delineates the renewed institutional structure of the state as: *"the rural local government in partnership with rural communities, shall plan, design, construct, operate, and maintain their water supply and sanitation schemes; so that they get potable water and attain health and hygiene benefits; GoUA and its sector institutions shall act as supporter, facilitator, and co-financier and as per need shall provide technical assistance, training and cater for bigger construction works and sectoral contingencies. The institutional, legal, and financial changes will be brought in by 31st March 2007 and ultimate realization of the VISION will be expected in year 2012."*

7. **GoUA Plans to Scale up Reforms:** The Swajal project has demonstrated the success of demand-driven community participatory approach, through piloting such models by forming and empowering the communities to plan, construct, operate, and maintain their own RWSS schemes in the stateôs 857 villages. In addition, GoUA has implemented three GoI-sponsored programs involving similar reform principles: (i) the Sector Reform Project which was launched in the district Haridwar and has so far implemented 103 water supply schemes in 89 GPs and 2 forest villages; (ii) Swajaldhara program, which has implemented 19 water supply schemes (of which 6 are under implementation); and (iii) Total Sanitation Campaign (TSC), which was launched statewide in 2003, emphasizing information, education, and communication (IEC), human resource development, and capacity-building activities to increase awareness and generate demand for sanitary facilities and through monetary incentives for individual household sanitary latrines of Rs 500 for below poverty line (BPL) households. Thus far TSC has promoted construction of more than 82,000 individual household latrines in the state.

8. Although there are ongoing programs, such as the GoI-led Accelerated Rural Water Supply Program (ARWSP) being implemented according to the old supply-driven mode, GoUA recognizes the need to scale up the sector reform principles across the state on a sector-wide basis, along with the required institutional capacity building of sector stakeholders. Given the multiplicity of different policies and approaches for the ongoing programs, significant coordination and commitment from GoUA is required to implement a consistent policy for the sector program. GoUA has issued its RWSS sector policy in a series of government orders (GOs)[3]. The key elements of the policy are described in Annexes 1 and 6.

[3] The relevant Government Orders include:
(i) Devolution of administrative, executive, and financial power to the Panchayats, October 29, 2003.
(ii) Devolution of administrative, executive, and financial powers/responsibilities to the three tier local governments, PRIs,, August 17, 2004.
(iii) Adoption of the sector reform policies in RWSS sector in Uttaranchal as per guidelines of GOI, August 18, 2004.
(iv) Formation of district level steering committee for monitoring and coordination of Swajaldhara and TSC funded by GoI, January 16, 2004.
(v) District level institutional arrangement for the implementation of GoI/state government/externally aided projects adopting the SWAp in drinking water supply and sanitation sector May 31, 2005.
(vi) Apex level institutional arrangements for adoption of SWAp in water supply and sanitation sector, May 31, 2005.
(vii) Regarding the policy arrangements at the state level for adopting the SWAp for reforms in water supply and sanitation sector, May 31, 2005;
(vii) Adoption of sector reform principles in drinking water and sanitation sector, December 5, 2005.
(viii) Adoption of the Sector Wide Policy for the Water and Sanitation Sector under the World Bank Assisted Rural Water Supply and Sanitation Program, March 25, 2006.
(ix) Establishment of cells within Uttaranchal Peyjal Nigam and Uttaranchal Jal Sansthan for implementation of reforms in the Water and Sanitation Sector under the Sector Wide Approach (SWAp) Program, March 25, 2006.
(x) Formation of Secretariat of State Water and Sanitation Mission for World Bank Assisted Rural Water Supply and Sanitation Program, March 25, 2006.
(xi) Creation of Four New District Units under the Project Management Unit, Swajal Project, March 27, 2006.
(xii) Adoption of Sector Wide Approach (SWAp) policies regarding procurement of works / consultancy services / goods by all institutions of Water Sector under the World Bank Assisted Rural Drinking Water and Sanitation Sector, July 26, 2006.

2. Rationale for Bank involvement

9. The Swajal project that closed in 2003 has been favorably received by the participating communities, and earned praise of government officials and sector specialists from other parts of India and the world. It also received satisfactory performance ratings in the implementation completion report (ICR). GoUA has also shown commitment to implement a sector-wide approach (SWAp) and adopt a consistent policy for RWSS service delivery statewide and sector-wide in accordance with the revised guidelines for engagement, formed as part of the Bankôs Country Strategy (CAS) for India. The Bankôs involvement would deepen the partnership with GoUA in implementing its key reform activities.

10. GoUAôs commitment to RWSS sector reform is demonstrated through the stateôs vision and RWSS sector policy outlining the reform principles, and by being the front runner in developing the Memorandum of Understanding (MoU) with GoI that spells out its intention to scale up Swajaldhara and TSC principles. GoUA has also established the state water and sanitation mission (SWSM) and so far nine of the 13 district-level water and sanitation missions (DWSMs) are functional and will be responsible for implementing the policy guidelines and reform principles for the RWSS sector.

11. Demonstrated success of reform in Uttaranchal would contribute to replication of such models in other states, leading to the formulation of a central government level program for mainstreaming Swajaldhara principles countrywide, which the Bank could support in the form of centrally sponsored national programs.

3. Higher-level objectives to which the project contributes

12. The Bankôs CAS for India strives to scale up the impact of Bank operations and to help improve the quality of life for some of the worldôs poorest citizens and help India move closer to achieving the millennium development goals (MDGs). The proposed project will contribute to achieving goal seven of the MDGs, ñensuring environmental sustainability,ò and its subcomponents of halving by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation. The indirect outcomes resulting from the project, including improved health and hygiene practices and womenôs increased participation in rural communities, would also contribute to achieving other MDGs related to gender equality and reduction of disease and child mortality.

B. PROJECT DESCRIPTION

1. Lending instrument

13. The proposed instrument is a Specific Investment Credit of $120 million, which will support GoUAôs medium-term program (MTP) for the sector. A SWAp has been chosen to implement a consistent policy for all new[4] investment irrespective of the sources of financing. The financing partners that consist of IDA, GoI, and GoUA have agreed on their financial contribution to GoUAôs MTP and on common policy rules and guidelines, referred to as SWAp principles[5].

2. Program objective and phases

14. GoUAôs vision is to achieve 100 percent coverage of habitations categorized as NC/PC in the survey conducted in 2003. While GoUA had an ambitious target of achieving this goal by 2012 with the required investments totaling $600 million, the Bank assesses that a five-year program size of $350 million would

[4] The definition of new investments is described in section 4, project components.
[5] The key elements of the SWAp principles are spelled out in GoUAôs RWSS policy, and detailed in the projectôs Operations Manual.

be a more realistic scenario, given the past sector investment trends and the capacity of the state[6]. Therefore, the project would be implemented according to the $350 million size of the five-year program, assessed collectively by GoUA and the Bank. However, if GoUA implements the full $350 million program in a shorter time period and exhausts allocated IDA resources, it could seek funding through a request for additional financing or a repeater project.

3. Project development objective and key indicators

15. The projectôs development objective is to improve the effectiveness of RWSS services through decentralization and increased role of PRIs and involvement of local communities in the state of Uttaranchal. The project is also expected to bring associated benefits, including improved health resulting from reduced water-borne diseases, environmental sustainability through protection and management of water catchment areas, time savings in fetching water would enhance the rural population, especially women. The project envisages upgrading no or partial coverage of water supply to full coverage with sustainable service, benefiting at least 1.2 million people, or 20% of the rural population. The project will also improve sanitation in about 30% of rural communities, to be declared free of open defecation.

16. The key outcome indicators are listed below:

- Evidence of institutional effectiveness in the sector (via reports from independent technical and social audit teams), such as the behavior change among stakeholder, timely completion of the program, and the cost effectiveness and sustainability of the service provision.
- Increase in the number of population having access to improved water supply services.
- High satisfaction level in participating communities.
- Increase in the number of households adopting improved hygiene and sanitation practices in the state.
- Improved financial performance of the water supply schemes (SVS, 100% O&M cost recovery through tariffs and Multi Village Schemes (MVS), in accordance with GoUAôs cost-sharing policy for RWSS sector).

17. The key results indicators for Component A include: (i) achievement of the envisioned decentralized institutional framework for the RWSS sector; (ii) full establishment of SWSM and DWSMs; and (iii) implementation of the sector information system, water quality monitoring program, and source measurement programs. For Component B the key indicators are; (iv) number of SVS constructed and operated according to SWAp principles; (v) number of MVSs constructed and operated according to SWAp principles; (vi) percentage of habitations covered under FC/PC/NC categories; and (vii) percentage of GPs and habitations declared open defecation free. For Component C, the key indicators are; (viii) establishment of a comprehensive M&E system for the sector; and (ix) expenditure for supply-driven schemes as a percentage of total sector expenditures. Detailed arrangements for results monitoring are spelled out in Annex 3.

4. Project components

18. As noted above, the MTP projects the sector investments for the next five years to be around $350 million. Of this, $224 million (64 percent) will be for the new investments that fall under the SWAp basket, and $126 million (36 percent) will be for the ongoing investments that fall outside of the SWAp basket. The new investments would include all SVSs identified after March 31, 2006 and all MVS identified after November 30, 2006. The project would support these new investments as well as the SVSs and MVSs currently being operated by UJN or UJS, and in the process of being devolved to the

[6] Rationale for the program size of $350 million is summarized in Annex 6.

responsibility of the appropriate PRIs. In addition, the ongoing schemes identified prior to the pre-defined dates that have demonstrated to have followed the SWAp principles could be eligible for Bank funding through retroactive financing.

19. The SWAp basket would include the following components: (A) RWSS sector development; (B) RWSS infrastructure investments; and (C) Program management and monitoring and evaluation (M&E). Details of the MTP and the subcomponents are described in Annex 4.

Component	SWAp Basket (US$m)	% of Total	Bank-financing (US$m)	% of Bank financing	% of GoUA contribution
A RWSS Development					
A-1 Capacity building and strengthening programs	2.25				
A-2 Information, education, and communication	1.07				
A-3 Sector info, water quality, and sources programs	1.05				
A-4 Establishment of E procurement at state level	0.12				
A-5 Sector studies	0.51				
Sub-total	**5**	**2%**	**5**	**100%**	**100%**
B. RWSS Infrastructure Investments					
B-1 Water supply schemes	172.22				
B-2 Community development	9.6				
B-3 Sanitation and hygiene	15				
Sub-total	**196.82**	**88%**	**103.4**	**53%**	**77%**
C. Program Management Support and M&E					
C-1 Program management support	15.11				
C-2 Monitoring and evaluation/audit/FM	7.07				
Sub-total	**22.18**	**10%**	**11.6**	**53%**	**77%**
Total	**224**	**100%**	**120**	**54%**	**78%**

Figures may not add up due to rounding

Component A: RWSS Sector Development (US$5 million)

20. The objective of this component is to support the stateôs sector reform process by establishing and enhancing its institutional capacity to implement, manage, and sustain the MTP. Key elements of the sector reform would include transfer of RWSS service delivery from UJN and UJS to the PRIs, and transformation of the governmentôs role from service provider to facilitator. The component would include activities to improve the stateôs capacity to carry out sector planning, programming, and M&E.

A1. Capacity-Building and Strengthening Programs: Proposed activities derive from a comprehensive capacity-building plan developed by GoUA and include detailed and programmed training modules for: (i) SWSM and Program Management Unit (PMU); (ii) DWSMs and District Program Management Units (DPMUs); (iii) change management and community-development skills for UJN and UJS; (iv) general training activities for PRIs; and (v) training of regional training institutions (RTIs), support organizations (SOs), and support agencies (SAs).

21. While the plan covers the whole MTP period, details of the annual program will be updated every year based on the revised expenditure projections and lessons learned from the early batches. In addition, coordination and cross-learning will be ensured with the capacity-building activities conducted by the PRI department of GoUA as well as the Bank-financed Uttaranchal Decentralized Watershed Development Project, which has components that are relevant to the proposed project**.**

A2. Information, Education, and Communication (IEC): IEC aims at supporting and facilitating the sector program by disseminating the relevant information amongst all stakeholders. Under this subcomponent, the communication strategy developed during project preparation will be implemented. Specific activities would include radio, TV, mass media events, materials, equipment, evaluation studies, etc.

A3. Sector Information System (SIS), Water Quality, and Water Source Monitoring Programs: This subcomponent would support the establishment of computerized SIS, water quality monitoring program, and source discharge measurement program for better planning of the sector investments.

A4. Modernization of Public Procurement and Procurement Reforms: This component includes consultancy assignments for carrying out studies, preparation of standard bidding documents, provision of necessary equipment and training needs, etc. of the key state entities with the view of strengthening the capacity in procurement processes of state institutions and agencies. It also includes a comprehensive plan to introduce e-procurement system to UJN and UJS as pilot project, which can be rolled out to other procurement entities of the state. The component, amongst others, covers development of Performance & Complaints Databases and M&E systems for procurement for the stateôs various programs and schemes and to meet its management information system (MIS) needs for effective implementation and financial controls.

A5. Sector Studies: To improve the state level efforts toward sector development, technical and economical sector studies will be carried out, including time-saving studies, cost-effectiveness indicators, appropriate technologies, institutional models for service provision, and other studies.

Component B: RWSS Infrastructure Investments (US$197 million)

22. This component aims to improve service and sustainable access to RWSS services by financing the infrastructure and software investments. All new water supply investments would be made in an integrated manner, with catchment-area management, health, and hygiene awareness promotion, and incentives for construction of individual household latrines. The new investments would include building or rehabilitating water supply facilities, including source-strengthening measures, which the communities plan, implement, and manage by themselves. In the case of large MVSs, O&M responsibility of the communities would be only for intra-village distribution. The inter-village facilities would be constructed by UJN and operated by UJS according to the MoU signed by the multi-village scheme-level committee (MVSLC), sector institution, and the relevant implementing agency. Expenditures eligible for Bank reimbursement would comprise works, goods, and services for the following subcomponents:

B1. Investments in Water Supply Schemes and Catchment-Area Protection Works: This subcomponent would include all new investments, including rehabilitation and reorganization of existing schemes, WSS to rural public institutions, and micro catchment-area protection. The five-year MTP envisages to include 7,324 schemes in 3,347 GPs and 17,741 habitations. The investments are grouped in the following three categories: (i) SVSs and simple MVSs that are technically and institutionally feasible to be carried out by DWSM; ii) larger MVSs to be carried out by UJN and some MVSs requiring reorganization by UJS; and (iii) devolution of existing schemes (mostly SVS) currently under UJS and UJN to the PRI. Detailed investment guidelines, scheme-selection criteria, and scheme cycles are described in Annex 13.

B2. Community Mobilization and Development Activities: A significant amount of community mobilization, community development, and capacity building needs to be carried out at the village level at all stages of the project cycle. This subcomponent would support such activities, including establishment and operationalization of User Water Supply and Sanitation Committees (UWSSC) and MVSLCs, as well

as related workshops, information campaigns, health and hygiene, women development initiative (WDI), and participatory community action planning training, etc.

B3. Sanitation Programs: This subcomponent will contribute to the stateôs implementation of the GoI-supported TSC program. In accordance with the TSC guidelines, the program would focus on ñtotal sanitationò through collective behavior change. The component would finance: (i) the IEC at the village level; (ii) habitation-level rewards for achievement of open-defecation free status; (iii) rewards for the cleanest GP in the state/district/block; and (iv) limited incentives toward latrine construction for BPL households. The project envisages achieving at least 30 percent open-defecation free GPs and habitations by the end of the five-year period (GoI is targeting 100 percent open-defecation free GPs by 2012).

Component C: RWSS Program Management Support and M&E (US$22 million)

C1: Program Management Support: This would include implementation costs of the SWAp basket during the period 2006/7ï2011/12, and finance operational and administrative costs associated with the SWSM/PMU, UJN, UJS, and DWSMs/DPMUs.

C2: M&E: This will support the development, establishment, and operation of the financial management (FM) system and the M&E system for the sector program. M&E will also be carried out through: (i) periodic review; (ii) sustainability evaluation exercise (SEE); and (iii) community monitoring, described under the section on M&E. This subcomponent will fund the above consultant services, software, and computer equipment as well as audit expenses incurred at the state (SWSM), district (DWSM, sub-divisional committees), and the community level (GPs and UWSSCs).

5. Lessons learned and reflected in the project design

23. The Bankôs engagement in the regionôs RWSS sector and lessons learned from the last six Bank-funded RWSS operations (Kerala, Karnataka II, Maharasthra, Sri Lanka, Bangladesh, and Nepal II) have contributed to the design of the proposed project. Experience with these projects has underscored that the major challenge of sustainability is best addressed by emphasis on beneficiary involvement and empowerment, institutional reform and capacity building of state/local governments and communities, and promotion of cost recovery. Experience from Kerala, Karnataka, and Maharasthra has also demonstrated that empowerment of the PRI institutions is a viable and sustainable option for scaling up the decentralized service delivery model.

24. Lessons are also drawn from the numerous SEEs carried out in the Swajal project communities and the Swajal project ICR. One issue that affected the implementation and impact of Swajal was the existence of different policies for capital cost sharing, O&M responsibilities, and cost recovery, depending on the implementing agency for the schemes. The proposed project would implement a consistent policy for all new investments throughout the state, irrespective of the sources of financing.

25. In Swajal, the PRIs had limited involvement, risking reduced sustainability in case of community disputes and scheme breakdown. The proposed project would ensure commitment and ownership of the PRIs, GPs in particular, to be promoting the project at the village level through supporting and motivating the communities to plan, construct, and operate their own water supply schemes.

6. Alternatives considered and reasons for rejection

26. The option of developing a repeater project was considered given the successful outcome of the Swajal project. However, this was rejected because of the need to introduce new elements to the existing approach, including the involvement of the PRIs and institutional reform to restructure the sector

institutionsô role from service provider to facilitator. A simple repeater project would not have promoted fundamental sector reforms that are required for longer-term sustainability.

27. Given the challenge of the new elements introduced, scaling up SVSs only while piloting 12ï15 MVSs to learn lessons from various institutional modalities was considered. However, it was decided that MVSs would be included in the scope of SWAp because: (i) studies revealed that almost 80 percent of the schemes involved more than one village; and (ii) it would have postponed full-scale reform for a second phase. In this context, piloting of some urban water schemes was considered but rejected due to: (i) the difference in the nature of reforms and institutional arrangements; and (ii) the complexity of involving additional implementing agencies.

28. Support for a larger and more ambitious MTP size using GoUAôs original projections of $600 million was considered. However, the projected program size was reduced to $350 million to better reflect: (i) the capacity of the implementing agencies (refer to Annex 6); (ii) historical trends in sector expenditures; (iii) limited IDA envelope; and (iv) lessons learned from other RWSS projects that experience slow disbursement in the initial years due to the time-consuming nature of the demand-driven community participatory approach.

C. IMPLEMENTATION

1. Partnership arrangements

29. There are no other international agencies involved at this point. Future participation of other international agencies is not excluded.

2. Institutional and implementation arrangements

30. The key institutions that will play a significant role in implementing GoUAôs MTP will be at the state, district, and village levels.

State Level:

(a) State Water and Sanitation Mission: SWSM will be the highest policy-making body in the sector. SWSM will be chaired by the Honorable Chief Minister, the Minister in charge of the Department of Drinking Water (DDW) will be the Vice Chairman, and all concerned senior Secretaries will be the members.

(b) Secretariat of State Water and Sanitation Mission: A separate cell will be established at the DDW, GoUA which shall act as the Secretariat of SWSM. This cell will be responsible for overseeing the reform/SWAp principles in the activities of UJN, UJS, and the PMU. Specifically, the role of this Secretariat will be to: (i) oversee, disseminate, and monitor the implementation of policy decisions undertaken by SWSM; (ii) implement the stateôs MTP; (iii) monitor the physical and financial progress of various schemes as per the MTP; (iv) monitor, record, and report the fund-flow arrangements for the MTP; (v) submit utilization certificates to GoI and submit reimbursement claims to Bank; (vi) compile, review, and approve the annual plan and budget allocation for the sector for monitoring MTP; (vii) appraise and approve high-cost MVSs that are beyond the prescribed limit of DWSM; and (viii) conduct SWAp process audit for ensuring implementation of reform principles in the sector.

(c) Department of Drinking Water: DDW will be the nodal agency for the sector and implement the sector development component of the project by coordinating with the sector stakeholders, including

UJN, UJS, PMU, and other sector ministries and departments such as health, education, PRI, and watershed management.

(d) Program Management Unit: The PMU / Swajal Directorate, assisted by the DPMUs, will: (i) coordinate and implement the new capital investments for SVSs and small MVSs; (ii) undertake IEC campaigns and the capacity-building activities through the Capacity Development Unit (CCDU); (iii) prepare a budgetary plan for the schemes to be implemented by PRIs in the SWAp basket; (iv) carry out independent audits of the schemes in the SWAp basket; (v) collect, compile, and consolidate the monthly physical and financial progress from the DPMUs; and (v) coordinate with UJN, UJS, and DPMUs for the implementation of the MTP and submit utilization certificates and reimbursement claims to the SWSM cell.

(e) Uttaranchal Peyjal Nigam and Uttaranchal Jal Sansthan: UJN and UJS, along with their district agencies will: (i) continue to implement the ongoing investments that fall outside of the SWAp basket; (ii) plan, construct, (other than for intra-village investments) operate, and maintain the new MVS according to the MoU; (iii) prepare budgetary plan for the schemes to be implemented by UJN and UJS in participatory mode in the SWAp basket; (iv) provide technical support to the PRIs and the UWSSCs for SVS, if desired by the latter; (v) transfer the SVS to the GPs following the SWAp principles; and (vi) coordinate with the DPMUs/PMU for the implementation of the MTP and submit utilization certificates and reimbursement claims to the SWSM cell.

District Level:

(a) District Water and Sanitation Mission: DWSMs will be established in each of the 13 districts and report to the SWSM. DWSMs will: (i) review the implementation of the MTP; (ii) guide the District Water and Sanitation Committee (DWSC) in planning, designing, and implementing O&M of water supply schemes as per the MTP; (iii) approve the annual budget related to WSS in each district, proposed for district level UJN, UJS, and DPMUs; (iv) channel funds to GPs and UWSSCs; (v) assist GPs/UWSSCs in procurement and construction of simple MVSs[7]; and (vi) provide dispute resolution mechanism for GPs.

(b) District Program Management Units: DPMUs will be established in all 13 districts to act as the secretariats of DWSMs. Staff from UJN and UJS will be deputed progressively to the DPMUs to provide technical guidance and assistance to the UWSSCs according to the SWAp principles.

(c) District Water and Sanitation Committees: The DWSCs will be established in each of the 13 districts for appraising the SVSs and MVSs up to a certain prescribed limit (as per decisions taken by the state government), being responsible for the selection of GPs, SOs, and carrying out M&E. The committee will be given technical support by the DWSM.

(d) District Level UJN and UJS: For implementation of works inside the SWAp basket, UJN and UJS will provide engineers to the DPMU. In addition, the dedicated district SWAp cell of UJN and UJS will carry out the works mandated under the SWAp basket. These district-level officers shall provide technical guidance and assistance to the UWSSCs according to the SWAp principles and will report to the DWSMs.

[7] Simple MVS is defined as a technically feasible gravity scheme covering up to three GPs/villages/ habitations, which can be handled by the respective GPs/UWSSCs collectively with mutual consent.

Village Level:

(a) Gram Panchayat: The GP will mobilize and support the formation of UWSSC to ensure participatory approach. It will empower and provide capacity support to the UWSSC; ensure O&M and cost recovery of the scheme; and be responsible for fund flows, scheme approval, accounts management, auditing, M&E, and conflict resolution.

(b) User Water Supply and Sanitation Committee: UWSSC will be formed for each water supply scheme and for each village in the case of MVS, consisting of beneficiaries of the scheme. The UWSSC will be responsible for scheme planning, designing, procurement, construction, O&M, tariff fixation and revision, community contributions (capital and O&M), accounts management, and auditing. The UWSSC will be responsible for procurement and construction of SVSs (including simple MVSs).

(c) Multi Village Scheme Level Committee: For larger MVSs covering more than one GP, the MVSLC will be formed consisting of representatives from each UWSSC. Responsibilities of the MVSLC will be similar to those of the UWSSCs, but they are most likely to be subcommittees of Block Panchayats or Zilla Panchayats.

Implementation Arrangements

31. DDW and the Secretariat of SWSM will be responsible for implementation of the project and for overseeing the overall GoUA sector program. For software and hardware investments in component B, there will be three implementing agencies: (i) PMU and its DPMUs for SVSs and simple MVSs; (ii) UJN and UJS and their district-level agencies for larger MVSs; and (iii) UJS and its district-level agencies for transfer of schemes currently operated by UJS. Each agency will implement the schemes in four batches. As described above, all SVSs identified after March 31, 2006 and all MVSs identified after November 30, 2006 will follow the common investment guidelines and appraisal procedures, including the following activities.

i. **Preparatory Steps**: This includes dissemination of the sector program in the state and compilation of existing water sources database, and institutional mobilization to implement the MTP.

ii. **Scheme Selection**: Schemes to be covered under various categories are identified and basic data to conduct pre-feasibility studies are collected. The broad principles for resource allocation are under first priority to NC habitations, and second priority to PC habitations.

iii. **Agreement by the constituting GPs**: The GPs constituting an SVS/MVS confirm to go ahead with either of the scheme. Appraisal checklist for the schemes would have non-negotiables, including: (i) capital cost sharing and 100 percent O&M according to the GoUA Policy; (ii) integration of water supply, sanitation, and catchment-area management; (iii) commitment to achieving open-defecation free; (iv) formation of UWSSCs; (v) priority to renovation of existing schemes; and (vi) proposed sources to be undisputed, perennial, etc.

iv. **Implementation of the Project Cycle**: Planning and Implementation of the schemes, following a set of defined activities and involving the community**.** The cycle consist of four phases: (i) preplanning (2ï 3 months) phase; (ii) planning (5ï 6 months) phase; (iii) implementation (6ï 30 months depending on the complexity and size of the schemes) phase; and (iv) O&M (4ï 5 months) phase.

v. **Post-Implementation Support**: Support to the GPs post-implementation to monitor sustainability.

32. **Fund-Flow and Approval Arrangements:** Key elements of the fund flows are summarized below and detailed in Annex 7.

- Funds for SVSs and simple MVSs will flow to SWSM/DWSMs, while funds for large MVSs will flow directly to UJN.
- All SVSs will be approved by DWSM. MVS approval will follow common procedures: scheme size up to Rs 50 lakhs[8] by DWSM; scheme size between Rs 50 lakhs and Rs 1[9] crore by SWSM Secretariat; and scheme size between Rs 1 crore to 5 crore by the DDW and the Department of Finance; and schemes greater than Rs 5 crores by the Expenditure Finance Committee.
- For MVSs, releases of the fund flow will take place according to the MoUs signed among the MVSLC, sector institution (UJN or UJS), and DWSC.
- For SVSs, the funds will flow down to the GPs, to the Gram Nidhi account (for MVSs this will be the funds for intra-village works). GPs will be responsible for allocating these funds to the concerned UWSSCs. Separate capital and O&M bank accounts will be opened and operated by each UWSSC.
- The audit of the SWAp process and financial audit will be carried out once a year within six months of the year end to monitor and ensure that the investments categorized as the SWAp basket have followed the SWAp policies and guidelines.

3. Monitoring and evaluation of outcomes/results

Four types of M&E will be carried out during the sector program implementation:

i. **Sector M&E** system that consolidates sector data at the state level to monitor the progress of the performance indicators with regard to sector-policy implementation and program outcomes. This will be linked to the SIS developed under the technical assistance (TA) component.
ii. **Periodic review,** through targeted process and impact evaluation to learn from the field experience and suggest strategic inputs for further strengthening of the sector program design and strategies, for effective delivery of inputs at the GP level. This would include audits by independent financial and technical auditors of randomly selected schemes.
iii. **Sustainability monitoring and evaluation** to track the long-term technical, financial, institutional, social, and environmental sustainability prospects of the schemes and assets created during the project lifecycle of sample schemes.
iv. **Community monitoring** to help community members track the progress of their schemes in all the phases of the project, for continuous use after scheme completion. The system would contain a set of suggested participatory monitoring tools.

33. In addition to using the results of the habitation coverage survey conducted in 2003 by Rajiv Gandhi Drinking Water Mission of GoI, village-level, and scheme-wise baseline information will be collected as soon as the GPs are identified in the preplanning phase of the project cycle. Specific indicators and monitoring framework have been developed.

34. The Secretariat of SWSM will be responsible for monitoring the sector program and to undertake sector M&E not only for the SWAp program, but also to use the information in making future policy decisions and investment planning. The 13 DWSMs and their Secretariats will be responsible for the periodic review and sustainability M&E of their respective districts. DWSMs will also provide physical and financial data inputs to the state-level sector database managed by SWSM.

[8] 1 lakh corresponds to 100,000.
[9] 1 crore corresponds to 10,000,000.

35. Significant capacity building would be required for the SWSM, DWSM, and PRI institutions to undertake data collection, consolidation, and management. Such capacity-building needs are taken into account in the sector development component A.

36. **Bank Supervision:** Milestones and target indicators will be set for each review period to monitor and evaluate the progress of the program. The Bank would carry out three major reviews, the first at the end of the first year of project implementation, the second at mid-term review, and the third at project completion.

4. Sustainability

37. As described in the previous sections, the key ingredient for sustainability, which is GoUAôs commitment and ownership of its sector program, has been demonstrated through issuance of its 2012 vision statement, a series of GOs, cabinet approvals that support RWSS sector policy, and establishment of the SWSM/DWSMs. The other factors that are critical to the sustainability are: (i) timely implementation of the envisaged institutional framework with new roles and responsibilities of the sector players; (ii) sufficient awareness and capacity building of the PRIs and UWSSCs to take over the responsibilities of RWSS service delivery; (iii) appropriate change management efforts to shift the mindset of the sector institutions from service provider to facilitator; (iv) proper monitoring to ensure implementation of a consistent policy for all new investments; and (v) coordination with various departments to ensure integrated approach to RWSS service delivery.

5. Critical risks and possible controversial aspects

Risks	Risk Mitigation Measures	Risk Ratio with Mitigation
To project development objective		
Slow progress in sector restructuring due to UJN and UJSô reluctance to change from a provider to a facilitator.	Upfront work in designing the new institutional setup and establishing a realistic timeframe and ways to cope with the transition requirements, including: (i) consultation with UJN and UJS; (ii) TA for change management and community development training; and (iii) covenant to phase out the ongoing scheme construction following the supply driven mode over five years.	S
Weak compliance of SWAp principles and failure to fully introduce new institutional modalities in MVS due to lack of experience or proven institutional modalities for MVS.	(i) Development of proper investment guidelines and appraisal procedures; (ii) periodic review and close monitoring of the first batches, to learn lessons for the future batches; (iii) significant capacity building for the sector institutions to implement SWAp; (iv) broad marketing of the SWAp principles and concepts to sector stakeholders; (v) thorough affordability study carried out for development of cost-sharing policy; and (vi) establishment of a proper M&E system.	M
To component results		
Slow implementation in initial years due to capacity constraints of DWSMs, source disputes, or the time it takes to carry out community mobilization and consultation activities, etc.	(i) Larger MVSs to be implemented by UJN in initial years, with the district-level sector institutions reporting to DWSM; (ii) significant capacity building; (iii) batch one preparation prior to initiation of the MTP to speed up implementation in the initial years; and (iv) conservative disbursement estimates for the initial years.	S
Inadequate fund flows from GoI	Legal document includes a clause to mitigate the risk of slowing down the implementation of MTP in case of problems with GoI fund flows.	M

Risks	Risk Mitigation Measures	Risk Ratio with Mitigation
Source depletion or scheme breakdown due to natural calamities	(i) Catchment-area protection and management will be fully integrated with the WSS scheme construction; (ii) coordination will be ensured with watershed and forest directorate; and (iii) insurance against natural calamities.	M
Overall Risk Rating		**M**

6. Loan/credit conditions and covenants

38. The following covenants have been agreed for project implementation:

(i) By December 31, 2006,
a. A system is established to ensure that funds for all project-financed MVS to be carried out under the project and costing up to Rs 20 lakhs, flow through the relevant DWSM; and
b. Project monitoring and evaluation system is established, fully operational, and thereafter maintained.

(ii) By September 30, 2007,
a. Seventy-five percent of Batch One investment schemes have entered the implementation cycle of activities in accordance with the provisions set forth in the Operations Manual; and
b. All of the Batch Two investment schemes have been identified in accordance with the provisions set forth in the Operations Manual.

(iii) By March 31, 2009,
a. The staff of the UJN and UJS engaged in rural water supply schemes report to the relevant PRI; and
b. An assessment is carried out on the progress of the funds flow for all project-financed MVS carried out under the project and such assessment sets forth appropriate recommendations on the progress of the flow of funds through the relevant DWSM up to an amount of Rs. 50 lakhs.

(iv) The number of RWSS sector investment schemes that are prepared and implemented outside of the SWAp Basket is reduced during the period of project implementation, and the total expenditures for such schemes that fall outside of the SWAp basket will not exceed Rs Crores 550.

(v) Institutional mergers of (a) the PMU with the SWSM and (b) the DPMUs with the relevant DWSMs will be implemented by the end of the project period.

D. APPRAISAL SUMMARY

1. Economic and financial analyses

39. The cost-benefit analysis has been carried out for a sample of schemes using representative technology options: gravity (spring and gadhera source); tube well; hand-pump; and a mix of the above technologies. A representative household sample survey covering 89 villages for SVSs and 60 villages for MVSs has been used for the cost-benefit analysis. The following benefits have been quantified: (i) time saved in water collection; (ii) benefits from incremental water supply; (iii) savings on recurring and capital costs; and (iv) health benefits from reduction in gastroenteritis and diarrheal diseases. The average unit cost of capital investment per habitation for SVS and MVS is about Rs 6 lakhs and Rs 9.19 lakhs respectively. The estimated latrine cost is Rs 4,800 per household and the software costs are Rs 1,554 per capita. A wide variation in cost is expected across villages, depending on the number of households in the village, new schemes provided, and the extent of augmentation of existing schemes. The O&M cost

depends on the type of scheme and varies from Rs 10 to Rs 144 per capita. The above costs are extrapolated for the entire state, based on the proposed phasing of schemes.

40. The proposed MTP is justified on the basis of direct benefits to more than 464,160 households and 2,847,664 rural population. The economic rate of return (ERR) of the program is estimated to be 20 percent. Sensitivity tests based on assessed risks indicate that the program is able to absorb negative impacts and still generate positive ERR. A 66 percent increase in total costs or a 36 percent decrease in total benefits, or a combined 23 percent increase in total costs and decrease in total benefits reduces the program ERR to 12 percent. If all villages are able to realize only 65 percent of time saving from water collection and households latrines, the program ERR would fall to 12 percent.

41. **Affordability and Willingness to Pay:** A survey covering 2,500 representative households has been carried out to get information on the household water budget, affordable contributions, willingness to pay, and the socioeconomic profile of the villagers. Water-related expenditures incurred by the bottom 30 percent of households were used to assess the affordable contributions for water supply schemes. Willingness to pay has been estimated through contingent valuation. The analysis indicates that the households would be able and willing to contribute about Rs 600 toward capital cost of water and sanitation schemes and about Rs 55 per month for O&M of a private connection and Rs 10 per month for standpost[10]. The existing practice of charging higher amounts from households that have more than one tap in the house would continue, with the ceiling level of payment for a connection with two taps to be about 20 percent more than the ceiling (cap) given above; for a connection with three taps to be about 70 percent more; and for a connection with four or more taps to be about 100 percent more.

42. **Cost-Sharing Principles**: Communities will bear 10 percent of the cost of all new investments, which should not exceed the affordable ceiling as defined by the affordability analysis. O&M cost for new investments will be fully recovered from user charges within the affordability ceilings estimated above. Charges will be defined separately for standpost users (shared connections) and users with household connections. However, there could be a small number of high cost schemes, whose O&M cost would exceed the affordability ceilings and therefore be subsidized by the state in a transparent manner. The affordability ceilings will only be applied for schemes with a reasonable share (at least 20-30%) of households opting for private connections to ensure that a large part of O&M cost is recovered. In case these ceilings need to be applied to MVS, charge revenues will be first applied for intra-village scheme and the residual amount within the ceiling limits could be used for payment towards the bulk water supply tariff (inter-village infrastructure). The cost sharing arrangements could be revisited to reflect any agreed changes among GoI, GoUA, and the Bank.

43. **Policies for SVSs:** Community contribution toward capital cost shall be 10 percent of the capital cost against the service level of 40 lpcd, subject to a maximum of Rs 600 (cap) for private connections and Rs 300 (cap) for standposts. This contribution may be 2 percent cash and remaining in the form of cash or labor, as decided by the user communities. The community contribution for the Scheduled Caste (SC) / Scheduled Tribe (ST) households shall be 5 percent, subject to a maximum of Rs 300 (cap) for private connections and Rs 150 (cap) for standposts, out of which 1 percent shall be in cash and the remaining in the form of cash or labor, as decided by the communities. Water charges in all the SVSs under UJS, UJN, or GPs shall be a minimum of Rs 5 per household per month for handpump and for standposts and Rs 45 per household per month for private connections, subject to a maximum (cap) of Rs 10 for handpumps/standposts, and Rs 55 for private connections. The water charges collected by the GPs/UWSSCs shall be deposited in the bank accounts and used solely for activities related to water supply.

[10] It may be difficult to immediately impose a charge of Rs 10 per household per month given that the charge of Rs 5 per household per month for standpost has been recently reinstated. Hence in the course of next two years the charge for standposts are expected to be gradually raised to Rs 10 per month.

44. **Policies for MVSs:** Community contribution for capital investments will follow SVS guidelines for intra-village water supply works. Although the principle of 10 percent capital cost contribution holds for high-cost MVSs, it may be difficult to collect them on the lines of the SVS. The beneficiary contribution should be first used for meeting the capital cost of the intra-village scheme, and the balance should be used to meet the capital cost of the bulk water supply system, subject to a maximum of Rs 600 (Rs 300 for SC/ST) contribution by a household. The capital cost contribution to be collected from the beneficiaries of MVS should maintain parity with the SVS. As for the O&M costs, the ceiling (cap) levels recommended above also applies to the MVS. The revenue collected from inhabitants of a village belonging to an MVS should first meet the intra-village O&M cost and the balance should be used to meet the O&M cost of the bulk water system, subject to a maximum of Rs 55 per month per household for both intra-village and bulk water supply. For high cost MVS, the O&M requirements in excess of the affordable level by the communities should be transparently provided through state subsidy.

2. Technical

45. Uttaranchal has developed a variety of RWSS technologies tested over the years, including in the Swajal project. The proposed SWAp will continue to offer the choice of appropriate technology options to the communities. Though no major technical issues are envisaged in the course of this project, refinements and introduction of new or different technologies will be explored during implementation of each batch. Other technical issues such as source availability, contamination, and drainage will also be addressed. To mitigate damage from natural disasters, the selection of technical options would critically evaluate possibilities of such disasters and integrate mitigation measures. The insurance of schemes piloted earlier under Swajal would also be continued. The project links its activities with the stateôs watershed management programs to enhance sustainability of water sources and to have a broader impact on water resources on an integrated basis (details in section E.5). The MVS implemented under the MTP will meter the bulk water supply to estimate the usage of each intra-village UWSSC. The key indicators that ensure effective and sustainable WSS systems are: (i) continuous operation of the water supply system; (ii) availability of facility for proper meter calibration and repair system; (iii) a professionally designed pricing policy; and (iv) a suitable metering policy for bulk water supply, including a suitably designed meter reading, billing, and collection system.

46. A comprehensive technical manual has been prepared for planning of both SVSs and MVSs in a demand-responsive manner, so that the schemes would meet the needs and desires of the communities. The manual covers the guidelines and detailed procedures for: (i) pre-feasibility studies; (ii) feasibility studies; (iii) survey, design, cost estimation, and construction works; (iv) preparation of detailed project report and implementation completion report; and (v) O&M aspects of the feasible RWSS systems. The technical manual also includes different innovative and cost-effective technologies. The selection and prioritization of schemes would be done by using objective and transparent eligibility criteria based on economic cost per household, social, and needs assessment, according to the manual prepared by GoUA. The investments guidelines, appraisal/approval procedures, scheme-selection criteria, and scheme cycles for both MVSs and SVSs are described in Annex 13.

47. Currently the MVSs are said to account for more than half of all schemes in the state, often because of lack of adequate water sources and the geographically dispersed rural habitations. However, because MVSs entail higher costs and are more complex to manage, operate, and maintain, the GoUA policy clearly states that under the SWAp, MVSs would be constructed only when SVSs are not feasible. The technical manual also includes detailed criteria and a methodology for deciding/justifying when to construct MVS instead of SVS solutions.

3. Fiduciary

48. **Implementation Arrangements for Procurement:** The three main levels of institutions under DDW that will be vested with the responsibility for implementation of the project are: SWSM, UJN, and UJS at the state level; DWSM at district level; and GPs and UWSSC at the village level.

49. **Procurement:** Under the MTP the bulk of the procurement is expected to be under MVS, and the UJN and UJS will be responsible for their implementation. Procurement by these sector institutions will be carried out following their procurement rules and procedures, with certain specific requirements to make these procedures consistent with practices acceptable to the Bank. These procedures and specific requirements have been incorporated in the procurement manual prepared by the SWSM/ PMU. SVS will be implemented by the GPs/UWSSCs and the procurement manual, prepared by the GoUA, describes the procedures and requirements/formats to be followed by these agencies.

50. Procurement arrangements are more elaborately discussed in Annex 8.

51. **Financial Management:** The FM system proposed for the project is adequate to meet the requirements of project management as well as satisfying the fiduciary requirements of IDA, as per the Financial Management Manual.

52. The program envisages a sector-wide approach to implementation, following common principles and guidelines for financial management. The FM systems have been integrated as far as possible with the governmentôs own systems for budgeting, transfer of funds, internal control, financial reporting, and audit. A consolidated set of financial statements will be prepared for the sector, including a statement of actual expenditure broken down by major components, a program-wise analysis showing expenditure under each GoI- and GoUA-financed program, and a source and application of funds statement.

53. FM arrangements are captured in the Financial Management Manual, which sets out the detailed procedures to be followed at state, district, and GP levels. FM arrangements build on the earlier successful Swajal project, which devolved financial responsibility to village level. Scaling up the program requires a significant investment in capacity building, including accounting staff at all levels and enhancements to computerized accounting systems. FM arrangements are designed to promote greater involvement of the GP and disclosure of financial information.

54. **Funds Flow:** The funds-flow arrangements for the program have been designed to facilitate the transition from a mix of supply and demand driven to a demand-driven approach to investment in the sector, at the same time making use of existing funds-flow arrangements in the sector and the state Treasury system.

55. The main innovation brought about by the project is to change the fund-flow mechanism whereby the PRIs and communities exercise choice over technology and have control over the flow of funds for the implementation of individual schemes. For very large and more complex schemes, funds flow will be managed at the state level and for the completion of ongoing schemes, UJN and UJS will continue to receive funds directly from GoUA and the GoI.

56. Rather than creating a separate structure of project bank accounts, money will flow through the state Treasury to the districts and sector institutions, and funds for UWSSCs will be routed through the bank account of the GP.

57. **Audit:** The consolidated accounts of the RWSS program (SWAp), prepared by the SWSM, will be audited by chartered accountants selected from the Auditor Generalôs (AGôs) approved panel. The AG

may also carry out supplementary audit of the program at his/her discretion. Accounts maintained by UWSSCs at the GP level will be audited by the Local Fund Audit service of the state government, and supplemented as necessary by chartered accountant firms to ensure full coverage on an annual basis. The accounts of UJN and UJS will be separately audited by the Controller Auditor General (CAG) or by a chartered accountant selected from the AGôs approved panel. The accounts of the DWSM and the PMU will be audited by chartered accountants selected from the AGôs panel. SWSM will prepare an annual summary report on the issues raised by the various audits carried out across the program implementing units.

58. **Disbursement Arrangements:** The reimbursement of the credit will be based on actual eligible expenditures, as reported in the audited financial statements of the program. The IDA credit amount of $120 million corresponds to about 78 percent of GoUAôs estimated contribution to the five-year SWAp program. IDAôs percentage reimbursement of GoUAôs contribution will be 100 percent for component A and for components B and C, it will be on a declining basis, from 100 percent in the initial two years, to 90 percent in FY08ï 09, 70 percent in FY09ï 10, and 55 percent in FY10ï 11 and FY11-12.

59. **Retroactive Financing:** Up to SDR 1.4 million of the Credit will be made available for financing of eligible program expenditures incurred before the effectiveness date but on or after January 1, 2006.

4. Social

60. The stateôs topography is highly undulated with about 90 percent categorized as óhillyô and 70 percent of which are óforests.ô The hill ranges vary from as low as 500 to as high as 3,000 meters above sea level. Correspondingly, the settlement pattern, population spread, and water supply sources, and consequently the degree of difficulty vary substantially. All these render high drudgery for women and children. Local self governments, in particular GPs, are constrained in ensuring effective service delivery; for one, they are in their infancy and are yet to be developed, and two, the settlements are thinly spread over a large area with relatively few houses in each of them. The high heterogeneity in settlements also implies that the conventional technologies will not suffice; rather, technological innovations are essential, which compels local community participation. In a majority of the cases, water will have to be tapped on a gravity basis, from sources situated in the forests and therefore communityôs interface with the FD becomes critical. Given this setting, the program identifies the following as significant social issues: (i) inclusion and participation; (ii) decentralization and subsidiarity; (iii) ownership, transparency, and accountability; and (iv) capacity building.

61. **Inclusion and Participation:** GP, being the focal point, inclusion is viewed from two different perspectives: inter and intra GP. Given the projectôs demand-driven processes, GPôs prioritization criteria are drawn to ensure that GPs encountering greater ódegree of difficultyô are not left out. Once a GP is selected, all settlements within a GP will have an equal opportunity to participate in the project. To provide for participation, benefiting users will be enabled to have representation in a village-based institution, UWSSC. As the women bear greater responsibility for water supplies, their role needs to be emphasized and supported. Issues related to gender, in general, and women, in particular, will be given special emphasis to ensure full opportunity for the involvement of women at all levels in all activities in the project. Capacity-building initiatives will underpin gender and development as one of the major themes. To ensure effective mobilization of, and participation by, women a separate WDI component has been planned with focus on: (i) social mobilization and participation; (ii) skill upgradation; and (iii) economic development activities.

62. **Decentralization and Subsidiarity:** The project will strictly be premised on the principle of ósubsidiarityô viz., that a particular decision/activity will be made/take place at the lowest most

appropriate level. Accordingly, UWSSCs will, in most cases, be the primary management units exercising control over resources and decision-making.

63. **Ownership, Transparency, and Accountability:** Toward ensuring ownership and transparency, every village will be enabled to prepare and use tools such as Participatory Rural Appraisal (PRA) and Self-esteem, Associative in strength, Resourcefulness, Action plan, Responsibility (SARAR)ï based community development. This will form an attachment to the MoU, outlining the scheme-implementation procedures. Once approved by signatures, this will also enable comparative assessments in the future.

64. **Capacity Building:** Toward providing technical, financial, and institutional support to the GPs and UWSSCs, to build their capacity, the project would enlist the services of non-government SOs. The designated functions include: awareness creation, mobilizing communities and facilitating the communities in the preparation and implementation of community development plans, conducting and/or facilitating in capacity building, and liaison with GP and other agencies. Initially, SOs will be trained to enable them to undertake capacity building of the communities.

5. Environment

65. The Swajal project demonstrated the importance of environment management. In particular, source sustainability, water quality, and environmental sanitation have been identified as the key environmental issues that warrant due attention and management. To gain a deeper understanding, two detailed studies were conducted during project preparation: (i) Environmental Assessment (EA); and (ii) Catchment-Area Treatment Study (CAT). The CAT study has addressed the concern on depleting water sources linked to poor catchment management scenario in the state and recommended several catchment treatment and management options to improve the sustainability of water sources. The EA has prioritized the environmental issues in the state and those relevant to the program. The Environmental Management Framework (EMF) has been prepared based on these findings.

66. The EMF includes all relevant qualitative and quantitative management measures including environmental codes of practice required to be followed during the implementation process. A brief synopsis of EMF is given in Annex 10. Because source depletion has been a major challenge in Uttaranchal, the EMF integrates source sustainability, water quality, other relevant environment issues as identified in the EA, and suitable catchment-area treatment plans (if required). The EMF has been integrated in the Operations Manual for implementation.

67. As per the EA, bacteriological contamination is noted to be a concern for the program. Information available with different line departments dealing with water-sector development suggest that heavy metal and chemical contamination may not pose any risk to the project. The program has developed specifications for treating the water in each subproject area. Provisions are also made for emergency water-sample testing in case of any eventuality such as an epidemic in the subproject area or in the vicinity.

68. The increased trend of several existing water supply schemes getting defunct due to source depletion is a clear indicator of the magnitude of the problem. Identifying the right source and protecting the same for sustained yield is an issue concerning the overall sustainability of water supply schemes. Although available information does not indicate any alarming water quality issues in the state, increased urbanization and industrialization coupled with improper personal and environmental sanitation practices have the potential to trigger the issue. Therefore, water quality issues have been identified and addressed in a holistic manner. The EA also identified environmental sanitation as an attributing factor for bacteriological contamination, considering that less than 20 percent of households have access to latrines in the state, along with poor drainage and waste water discharge system. The EMF has identified

measures and codes of practice to improve these practices which have direct implication on water quality. These also include improved solid waste management (garbage/compost pits) practices.

6. Safeguard policies

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP/GP 4.01)	[X]	[ ]
Natural Habitats (OP/BP 4.04)	[ ]	[X]
Pest Management (OP 4.09)	[ ]	[X]
Cultural Property (OPN 11.03, being revised as OP 4.11)	[ ]	[X]
Involuntary Resettlement (OP/BP 4.12)	[ ]	[X]
Indigenous Peoples (OD 4.20, being revised as OP 4.10)	[ ]	[X]
Forests (OP/BP 4.36)	[X]	[ ]
Safety of Dams (OP/BP 4.37)	[ ]	[X]
Projects in Disputed Areas (OP/BP/GP 7.60)*	[ ]	[X]
Projects on International Waterways (OP/BP/GP 7.50)	[ ]	[X]

Environmental Assessment: See section D.5. Environment, above

69. **Forestry Policy:** Considering that the majority of the sources will lie in the reserve forest areas, various options for managing reserve forest lands for source sustainability have been explored. Under the existing forest rules and regulations of the Forest Department (FD), source sustainability interventions in the reserve forest areas can only be undertaken by the FD officials. However, the project follows a community participatory model with active participation of GPs and water user groups. In light of this, the operational implications of the proposed interventions (biological and physical interventions) in the EMF were discussed extensively with the FD and four options were agreed, as described below. It was further agreed that it is the discretion of the local GP and UWSSC to opt for any of the options as appropriate to the local conditions.

Option (i): For successful implementation and effective coordination at the state level, it was agreed that a state-level committee consisting of Secretary (Drinking Water), GoUA; Secretary (Forests), GoUA; Additional PCCF (Projects); Addl. PCCF (JFM); CCF (Planning & Finance); CCF (Garhwal); members of UJN and UJS and two members from PMU will be formed and responsible for providing necessary functional direction to the DFOs (Divisional Forest Officer) for ensuring that the EMF is implemented in true spirit for source sustainability.

Option (ii): Because the project is primarily implemented through Panchayats and the UWSSC will be receiving the funds for undertaking interventions pertaining to source sustainability, the UWSSC must ensure that:

- At least one member of the Van (forest) Panchayat Committee is a regular member of UWSSC.
- UWSSC will coordinate with the Van Panchayat member/committee and with the help of Environmental Specialists (DPMU), source sustainability plan will be duly endorsed by the local forest authorities and the same authorities will be involved in technical supervision of the implementation process.

* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas.*

Option (iii): It was suggested that the stipulated catchment treatment budget of the individual schemes could also be transferred from DPMU to DFO for executing the works in accordance with the scheme development in case the UWSSC express inability to take up the envisaged work.

Option (iv): It is possible that the project may encounter a scenario in which more than 50 percent of the source area may fall in the reserved forest and the remaining in either community area or in private land. Under such circumstances, where communities (through UWSSC and Van Panchayat) are unable to resolve the problem, the funds may be transferred to the concerned DFO for executing the work.

70. The program also ensures a detailed procedure for the use of forest land as per those specified by GoI. The EMF provides for adequate management measures (during scheme implementation) to mitigate adverse impacts of any activity in reserve forest areas. The Forestry policy is triggered and the program supports the overall objective of the policy and has ensured that the design of the EMF is fully consistent with it.

71. **Land Availability/Contribution:** Land requirement arises for four purposes: (i) water source; (ii) water treatment plants; (iii) construction of ground level or overhead tanks or cisterns; and (iv) water transmission and distribution pipelines as well as sullage/storm water drains. Majority of water sources in Uttaranchal are located in the forests and well prescribed/established rules and procedures are in place to secure forest lands. Transmission and distribution lines are laid mostly in public land or along public streets and no land needs to be acquired. In a few cases pipelines may have to pass through private agriculture fields. Since the pipeline are laid at least 90 cm below ground elevation, no land acquisition is needed, but permission from the land owner is taken. If such permission is not forthcoming, then alternative pipe routing is used, even if it is more expensive to do so. In respect of lands for tanks/ cisterns, past experience shows that in a majority of the cases, private lands will need to be secured. For this, it is not essential that a particular piece of land at a particular place is needed. Rather, lands can be chosen from a number of alternatives. Thus, the projectôs activity/success does not depend upon having a particular piece of land. Keeping this in view, it has been decided that all private land transactions will be voluntary and market led. Key principles thus are: (i) project will not resort to involuntary land acquisition; (ii) to a large extent, as a first priority, efforts will be made to secure public lands; (iii) if public lands are not available, then private lands will be secured in the open market; (iv) prices will be arrived at through negotiations; (v) land transfers will be completed through registered sale deed; and (v) right of refusal would rest with the seller until registration is done. No lands will be purchased from poor and vulnerable sections (such as Scheduled Caste/Scheduled Tribes) whose livelihoods are likely to be affected as a result of land alienation. Finally, no land will be secured unless certified by a higher level competent authority as to the óappropriatenessô of the land for the purpose.

72. Rules underlying securing private lands through purchase will essentially be voluntary and market led. Mechanisms developed are such as to not only ensure voluntariness, but also that it will not involve any significant adverse impacts upon incomes or physical displacement. Detailed criteria as well as procedures related to voluntary land purchase/donations have been worked out.

7. Policy exceptions and readiness

73. There are no policy exceptions to be sought from management.

The following activities were completed by Negotiations:

- GoUAôs MTP, including the projected RWSS sector expenditures for the new schemes that fall in the SWAp basket and the ongoing schemes that fall outside the SWAp basket, and funding sources broken down into investment categories, prepared for the period up to fiscal year 2011-12.
- SWSM, PMU, and 9 out of 13 DWSMs and DPMUs established and operational.

- Key elements of the SWAp policy tested through Swajaldhara, sector reform, and TSC programs in several districts.
- GO for establishing the SWSM cell including its: (i) structure; (ii) composition; (iii) roles and responsibilities; and (iv) its reporting and controlling relationships with other sector institutions issued.
- GO for establishing the SWAp program cells within UJN and UJS including their: (i) structure; (ii) composition; and (iii) roles and responsibilities issued.
- GO containing the SWAp guidelines, to be followed by the sector institutions starting April 1, 2006 issued.
- Model MoU among UJN, UJS, MVSLCs, and DWSC prepared.
- Operations Manual, including the annexes that contain: (i) Financial Management Manual; (ii) Procurement Manual and plan; (iii) Environmental Manual; (iv) capacity development plan; (v) Technical Manual; and (vi) M&E Manual finalized.
- Pre-planning phase initiated for the schemes identified as Batch One.
- Safeguards clearances obtained and EA and EMF completed and disclosed.

Annex 1: Country and Sector or Program Background

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

1. **Government of India's Sector Reform Program:** Since 1999, India has embarked on a significant reform program in the rural water supply and sanitation (RWSS) sector due to its recognition that a transformation was urgently required from a target-based, supply-driven approach to a demand-based approach, where users get the service they want and are willing to pay for. The Government of India (GoI) has developed the Swajaldhara guidelines which spell out the basic principles for reform in the RWSS sector, which include community participation in the planning, implementation, operations, and maintenance (O&M) for the schemes of its choice, and the changing role of the government from that of a service provider to a facilitator. This decentralized service delivery approach has followed the 73rd constitutional amendment of 1992 which introduced devolution of financial and decision-making powers to the three-tier local governments, called the Panchayati Raj Institutions (PRIs).

2. **Overview of the State of Uttaranchal:** The State of Uttaranchal was carved out from the State of Uttar Pradesh on November 9, 2000. It is situated centrally in the long sweep of Himalayas in north India, and lies in two of its regionsð Garhwal (northwest portion) and Kumaon (southeast portion). The state comprises 13 administrative districtsð Almora, Nainital, Pithoragarh, Bageshwar, Champawat, and Udam Singh Nagar in Kumaon division and Chamoli, Pauri, Tehrigarhwal, Uttarkashi, Haridwar, Dehradun, and Rudra Prayag in Garhwal division. The state has an area of 53,485 sq. km and a population of 8.48 million as per the 2001 census. The rural population of the state of 6.4 million (75 percent of total) is spread over 7,562 GPs, in 16,623 villages and 39,967 habitations. According to the 1997 BPL survey and census data, there were 1.0 million rural households of which 376,502 (36.4 percent) are identified to be below the poverty line.

3. The state presents a variety of physical and hydrogeological characteristics in terms of topography, altitude, rainfall, and vegetation. The monsoon in the state commences after middle of June until mid-September, providing four-fifths of total rainfall. In the high hills, rainfall generally occurs throughout the year with some variations. The stateôs hilly regions are well drained by numerous rivers and rivulets (locally known as gad, gadhera, and raula). The state has three main river systems: i) the Bhagirathi-Alkananda-Ganga basin, ii) the Yamuna-Tons basin, and iii) the Kali system, which are important water resources not only for the state but also for the whole Gangetic plains of north India. In general, these rivers make a steep descent in the first 10-20 km of their descent, with a lesser gradient later. Streams and rivulets, both perennial and seasonal, which flow down in almost every fold of the mountain ridges, and springs which occur all over the mountain region, form the main source of water to rural communities, which do not have access to river valleys. The region, being located in unstable Himalayan hills and with different river systems, is prone for natural hazards such as earthquakes and flash floods. Thus, the state poses challenges for RWSS service provision. Due partly to the difficult geographical characteristics of the state, there are a large number of water supply schemes that cover more than one village in Uttaranchal. An assessment carried out by the stateôs sector institutions found that there are about 3,977 multi-village schemes (MVSs) covering more than 10,000 villages, which corresponds to more than half of the rural population in the state.

4. **RWSS Sector Performance in Uttaranchal:** A recent survey conducted by the stateôs sector institutions revealed that only half of the 40,000 habitations in the state could be categorized as ôFully Coveredô (FC)[11] with functioning water supply schemes. About 12 percent of the habitations are categorized as ôNot Coveredô (NC) habitations (survey results are summarized in attached table 1). 75 to

[11] The GOI definition of coverage refers to ñaccess to water,ò defined as 40lpcd within a distance of 1.6km from the center of the village and 100 meters height.

80 percent of the rural population does not have access to sanitary latrines. Acute scarcity of drinking water, low access to sanitation facilities, and poor drainage of public facilities are the public health problems faced by the state. Most of the programs related to water and sanitation lay emphasis on wider coverage rather than encouraging attitudinal and behavioral changes and awareness of improved hygiene practices among rural masses, resulting in hardly any significant improvement in health-related problems. Poor upkeep of water sources further aggravates the situation. As a result, water-related diseases are a major health problem for the rural population, particularly for infants and children.

5. Drinking water scarcity is another issue faced by the state. Data from existing water supply schemes indicates that nearly 30 percent of the schemes are showing a trend of decrease in the availability of water, especially during the summer months, because of depletion in water sources. Reduced (both in quality and quantity) vegetation cover due to depleting forest cover, overgrazing by livestock, erosion of top soil due to faulty/intensive agricultural practices and other developmental activities (such as roads, mining, industry urbanization, etc.) has resulted into gradual reduction of the aquifer recharging capacity of the hills in general. Although the causes are many, the key ones include large-scale deforestation, forest fire, intensive grazing pressure, fuel wood pressure on catchments, and fragmented land holdings that often create bottlenecks for catchment-treatment interventions. This also causes some villagers to spend a considerable amount of time collecting water for domestic use, averaging one to three hours per day; even more time is spent in hilly locations. The problem is aggravated by the water supply systems that have outlived their design life, and inadequate O&M. According to some villagers, schemes are often not maintained at all, and it can take weeks or months to have a technician from UJN or UJS visit the villages to repair any schemes that are broken or damaged.

6. The sector problems described above have not been improving because of the poor quality of the investments that have taken place. Public RWSS service today does not adequately serve the needs of user communities as they are often positioned at sites without consideration to community needs or preference, and are operated poorly. Planning of RWSS services also takes place without due attention to resource availability or quality, and the schemes are rarely financially viable. The end result is a government-dominated, target-driven service that has become unsustainable institutionally, financially, and environmentally.

7. **Sector Institutional Framework:** The current institutional setup is centralized with the two large public utilitiesð UJN, which mainly constructs, and UJS, which mainly operates and maintains most of the existing water schemesð with the exception of the 1,146 schemes built and operated by the village water and sanitation communities (VWSCs) under the first Bank-funded RWSS project, Swajal and about 2,448 single-village schemes (SVSs) (40 percent of total), which have been transferred to the village-level local governments called the GPs. Most of these 2,448 schemes transferred to the GPs, however, are facing serious problems that require some sort of rehabilitation or augmentation as well as proper hand-over arrangements to ensure that O&M can be managed by the GPs. It is a huge challenge for the GPs to take over the schemes, as their capacity is limited. The GPs typically consist of five to six members elected by the Gram Nidhi (general population in the community) and are often struggling to deal with the 29 functions (one of which is delivery of drinking water) that have been transferred to them without adequate guidance or capacity building in the decentralization process.

8. **Government of Uttaranchal's Sector Vision:** The Government of Uttaranchal (GoUA) has prioritized RWSS as a key area of its development agenda in its Tenth Plan (FY2003ï 07). The vision for the GoUA envisages universal coverage of safe and potable water and sanitation by the end of the Eleventh Plan (FY2008ï 12) in an integrated and sustainable manner and with significant capital and O&M contribution from the communities. The vision also delineates the renewed institutional structure of the state as: *"the rural local government in partnership with rural communities, shall plan, design, construct, operate, and maintain their water supply and sanitation schemes so that they get potable water*

and attain health and hygiene benefits; GoUA and its sector institutions shall act as supporter, facilitator, and co-financier and as per need shall provide technical assistance, training, and cater for bigger construction works and sectoral contingencies. The institutional, legal, and financial changes will be brought in by 31st March 2007 and ultimate realization of the VISION will be expected in year 2012."

9. **GoUA Plans to Scale up Reforms:** The Swajal project has demonstrated the success of demand-driven community participatory approach, through piloting such models by forming and empowering the communities to plan, construct, operate, and maintain their own WSS schemes in the stateôs 857 villages. In addition, GoUA has implemented three GoI-sponsored programs involving similar reform principles: (i) the Sector Reform Project, which was launched in the district Haridwar and has so far implemented 103 water supply schemes in 89 GPs and 2 forest villages; (ii) Swajaldhara program, which has implemented 19 water supply schemes (of which 6 are in progress); and (iii) Total Sanitation Campaign (TSC), which was launched statewide in 2003, emphasizing information, education, and communication (IEC); human resource development; and capacity-building activities to increase awareness and demand generation for sanitary facilities and through providing inventive money for individual household sanitary latrines of Rs 500 for below poverty line (BPL) households only. So far TSC has promoted construction of more than 70,000 individual household latrines in the state.

10. GoUA recognizes the need to scale up the sector reform principles demonstrated in the above programs statewide and sectorwide, along with required institutional capacity building of sector stakeholders. GoUA has issued its RWSS sector policy in a series of government orders[12]. The key elements of the policy include:

- decentralized service delivery through devolution of administrative, executive, and financial powers to the three-tier PRI institutions;
- scaling up of the key reform principles spelled out in GoIôs Swajaldhara guidelines across the state for both SVS and MVS, regardless of source of funding;
- establishment of the SWSMs and DWSMs, which will oversee the policy and planning for the sector;
- establishment of the envisaged sector institutional framework where UJN and UJS shift their roles from service providers to facilitators;
- adoption of the integrated approach to service delivery, linking water supply, sanitation, health and hygiene, catchment-area management, and community-development initiatives.

[12] The relevant Government Orders include:
(i) Devolution of administrative, executive, and financial power to the Panchayats, October 29, 2003.
(ii) Devolution of administrative, executive, and financial powers/responsibilities to the three tier local governments, PRIs,, August 17, 2004.
(iii) Adoption of the sector reform policies in RWSS sector in Uttaranchal as per guidelines of GOI, August 18, 2004.
(iv) Formation of district level steering committee for monitoring and coordination of Swajaldhara and TSC funded by GoI, January 16, 2004.
(v) District level institutional arrangement for the implementation of GoI/state government/externally aided projects adopting the SWAp in drinking water supply and sanitation sector May 31, 2005.
(vi) Apex level institutional arrangements for adoption of SWAp in water supply and sanitation sector, May 31, 2005.
(vii) Regarding the policy arrangements at the state level for adopting the SWAp for reforms in water supply and sanitation sector, May 31, 2005;
(vii) Adoption of sector reform principles in drinking water and sanitation sector, December 5, 2005.
(viii) Adoption of the Sector Wide Policy for the Water and Sanitation Sector under the World Bank Assisted Rural Water Supply and Sanitation Program, March 25, 2006.
(ix) Establishment of cells within Uttaranchal Peyjal Nigam and Uttaranchal Jal Sansthan for implementation of reforms in the Water and Sanitation Sector under the Sector Wide Approach (SWAp) Program, March 25, 2006.
(x) Formation of Secretariat of State Water and Sanitation Mission for World Bank Assisted Rural Water Supply and Sanitation Program, March 25, 2006.
(xi) Creation of Four New District Units under the Project Management Unit, Swajal Project, March 27, 2006.
(xii) Adoption of Sector Wide Approach (SWAp) policies regarding procurement of works / consultancy services / goods by all institutions of Water Sector under the World Bank Assisted Rural Drinking Water and Sanitation Sector, July 26, 2006.

Table: District Wise Status of Water Supply Coverage in Uttaranchal Habitations

District Name	Total Villages	Fully Covered	Partially Covered	Not Covered	Other	Total Habitations
Garhwal Zone						
Chamoli	1,208	851	1,594	772	38	3,217
Dehradun	760	1,707	700	337	-	2,744
Haridwar	627	548	65	-	126	613
Pauri Garhwal	3,384	2,518	2,040	220	218	4,778
Prudra Prayag	676	719	897	93	3	1,709
Tehri Garhwal	1,872	2,983	1,551	935	44	5,469
Uttarkashi	682	1,173	85	406	-	1,664
Total	**9,209**	**10,499**	**6,932**	**2,763**	**429**	**20,623**
Kumaon Zone						
Almora	2,294	2,522	2,377	327	114	5,226
Bageshwar	904	1,099	1,169	559	38	2,827
Champawat	716	1,101	772	377	51	2,250
Nainital	1,141	1,691	762	302	56	2,755
Pithoragarh	1,672	2,561	1,878	396	99	4,835
Udam Singh Nagar	687	882	201	10	-	1,093
Total	7,414	9,856	7,159	1,971	358	19,344
Grand Total	**16,623**	**20,355**	**14,091**	**4,734**	**787**	**39,967**
		51%	*35%*	*12%*	*2%*	*100%*

Annex 2: Major Related Projects Financed by the Bank and/or other Agencies

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

Sector Issue	Project	Latest Supervision (PSR) Ratings (Bank-financed projects only)	
		Implementation Progress (IP)	Development Objective (DO)
Bank-financed			
Rural Water Supply and Sanitation (RWSS)	Second Maharashtra RWSS (ongoing)	MS	MS
	Kerala RWSS (ongoing)	S	S
	Karnataka RWSS II (ongoing)	S	S
	Karnataka RWSS (closed)	OED Rating - Satisfactory	
	Uttar Pradesh and Uttaranchal RWSS (closed)		
	Maharashtra RWSES	OED Rating - Marginally Unsatisfactory	
District Poverty Initiatives Project (DPIP)	AP DPIP (ongoing)	S	S
	Rajasthan DPIP (ongoing)	S	S
	Madhya Pradesh DPIP (ongoing)	S	S
Watershed Development	Karnataka Watershed (ongoing)	S	S
	Uttaranchal Watershed (ongoing)	S	S
Water Supply and Sanitation	Madras WSS (closed)	OED Rating - Satisfactory	
	Tamil Nadu WSS (closed)	OED Rating - Satisfactory	
	Kerala WSS (closed)	OED Rating - Marginally Satisfactory	
	Gujarat WSS (closed)	OED Rating - Marginally Satisfactory	
	Hyderabad WSS (closed)	OED Rating - Satisfactory	
Other Development Agencies			
DFID	Maharashtra RWSS		
DANIDA	State projects in Karnataka, Orissa, Tamil Nadu, Kerala		
The Netherlands	State projects in Gujarat, UP, AP, Karnataka, Kerala		

Annex 3: Results Framework and Monitoring

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

Results Framework

PDO	Outcome Indicators	Use of Outcome Information
To improve the effectiveness of rural water supply and sanitation services through decentralization and increased role of PRIs and local communities in the state of Uttaranchal* (*Balanced scorecard will be developed to assess effectiveness via reports from independent technical and social audit teams..)	**Indicator 1:** institutional effectiveness evident* in the sector. **Indicator 2:** increase in the number of people having access to improved water supply services. **Indicator 3:** high satisfaction level in participating communities. **Indicator 4:** increase in the number of households adopting improved hygiene and sanitation practices in the state. **Indicator 5:** improved financial performance of the water supply schemes.	To verify the viability of the underlying intervention model (SWAp) and the achievement of the expected development outcomes.
Intermediate Results One per Component	**Results Indicators for Each Component**	**Use of Results Monitoring**
Component One: **RWSS Sector Development** **Result:** RWSS sector-institutional reforms implemented.	**Component One:** **Indicator 1:** The envisioned decentralized institutional framework (for UJN,UJS, SWSM, DWSMs, and PRIs) is achieved and operational. **Indicator 2:** SWSM and DWSM are established and their cells are fully staffed and functional. **Indicator 3:** Sector information system, water quality monitoring program, and source measurement programs are implemented. **Indicator 4**: SWAp principles demonstrated to work successfully and could be replicated as a tested approach to RWSS service delivery in India.	**Component One:** **Indicator 1:** Progress of implementing decentralized decision-making will be reviewed and, if required, corrective actions will be taken. **Indicator 2:** Capacity-building and institutional strengthening activities will be evaluated. **Indicator 3:** Feedback to the RWSS sector programming and planning **Indicator 4:** Indication of replicability of SWAp.
Component Two: **RWSS Infrastructure Investments** **Result:** increased access to	**Component Two:** **Indicator 1**: Number of single-village schemes (SVSs) constructed and operating according to SWAp	**Component Two:** **Indicator 1, 2, 3:** In case of delays or problems, issues will be identified and corrective actions will be taken.

improved (40 lpcd) and sustainable RWSS service delivery	principles. **Indicator 2:** Number of multi-village schemes (MVSs) constructed and operating according to SWAp principles. **Indicator 3:** Percentage of habitations covered under: (a) Fully Covered (FC) category (b) Partially Covered (PC) category (c) Not Covered (NC) category **Indicator 4:** Percentage of GPs and habitations that are declared open-defecation free.	**Indicator 4:** In case of difficulty in achieving the targets, issues will be identified and corrective actions will be taken.
Component Three: RWSS Program Management Support and Monitoring & Evaluation (M&E)	**Component Three:** **Indicator 1:** M&E system is established and functional for the sector. **Indicator 2**: Expenditures of supply driven schemes as a percentage of total sector expenditures.	**Component Three:** **Indicator 1:** The findings will be used to provide feedback to sector institutions and improve any identified areas of weakness. **Indicator 2**: Feedback to the RWSS sector programming and planning

Arrangements for results monitoring

	Target Values			Data Collection and Reporting		
Outcome Indicators	**Baseline**	**Mid-term review**	**End of Project**	**Frequency and Reports**	**Data Collection Instruments**	**Responsibility for Data Collection**
Indicator 1: Institutional effectiveness evident in the sector**: • Behavior change among stakeholders • Timely completion of the program (as per plan) • Service provision is cost effective and sustainable ** Balanced scorecard will be developed to assess effectiveness via reports from independent technical and social audit teams.	No evidence	Some evidence	Strong evidence	Mid-term review and end-of-project review, through reports on balanced scorecards by independent technical and social audit teams.	Mid-term report and ICR	SWSM
Indicator 2: Increase in the number people having access to improved water supply service delivery	None	0.4 million people	1.2 million people	Annual & Quarterly Progress Reports	Impact monitoring studies	SWSM
Indicator 3: High satisfaction level in participating communities.	Not available	Some	High	MTR, end of project, and consumer satisfaction surveys	MTR and ICR, Consumer Satisfaction Survey reports.	SWSM.
Indicator 4: Increase in the number of households adopting improved hygiene and sanitation practices in the state. **	No evidence	Some evidence	Strong evidence	MTR, end of project, and impact evaluation studies.	MTR report, ICR and Impact evaluation study report	SWSM.

	Target Values			Data Collection and Reporting		
Outcome Indicators	**Baseline**	**Mid-term review**	**End of Project**	**Frequency and Reports**	**Data Collection Instruments**	**Responsibility for Data Collection**
Indicator 5: Improved financial performance of the water supply schemes (a) SVS-100% for O&M (b) MVS-in accordance with GoUAôs cost-sharing policy for RWSS sector	No evidence	Some evidence	Strong evidence	Semiannual Sustainability Evaluation Exercise	Progress Reports; technical and social audit reports	SWSM
Results Indicators for Each Component						
Component One: **Indicator 1:** The envisaged decentralized institutional framework (for UJN,UJS, SWSM, DWSMs, and PRIs) is achieved and operational.	UJN and UJS are the main service providers.	Sector institutional framework operational for all new schemes.	Sector institutional framework operational for all schemes in the sector.	Annual & Quarterly Progress Reports Bi-annual supervision/ implementation review missions	Annual & Quarterly Progress Reports Mission Aide Memoirs	SWSM. Bank
Indicator 2: SWSM and DWSM are established and their cells are fully staffed and functional.	SWSM and DWSM fully staffed	SWSM and DWSM fully staffed and functional.	SWSM and DWSM fully functional and district RWSS offices of UJN & UJS merged with DWSM.	Annual Progress Reports	Program implementation progress reports.	SWSM.
Indicator 3: Sector information system, water quality monitoring program, and source measurement programs are implemented.	Implementation Plan developed	Implementation initiated	Implementation competed	Annual and Quarterly Progress Reports	Progress Reports	SWSM

Outcome Indicators	Target Values			Data Collection and Reporting		
	Baseline	**Mid-term review**	**End of Project**	**Frequency and Reports**	**Data Collection Instruments**	**Responsibility for Data Collection**
Indicator 4: SWAp principles demonstrated to work successfully and could be replicated as a tested approach to RWSS service delivery in India.	No evidence	Some evidence	Strong evidence	MTR and End of Project; independent social audits; impact studies.	Independent social audit reports; impact study reports; ICR	SWSM
Component Two: **Indicator 1**: Number of SVSs constructed and operating according to SWAp principles.	None	2000 schemes	6300 schemes	Annual and Quarterly Progress Reports	Progress Reports	SWSM
Indicator 2: Number of MVS schemes constructed and operating according to SWAp principles.	None	600 schemes	3200 schemes	Annual and Quarterly Progress Reports	Progress Reports	SWSM
Indicator 3: Percentage of habitations under: (a) Fully Covered (FC) category (b) Partially Covered (PC) category (c) Not Covered (NC) category	 (a) 50% (b) 38% (c) 12%	 (a) 61% (b) 30% (c) 9%	 (a) 72% (b) 21% (c) 7%	Annual & Quarterly Progress Reports	Progress Reports	SWSM
Indicator 4: Percentage of GPs and habitations that are declared open-defecation free.	0%	15%	30%	Annual and Quarterly Progress Reports	Progress Reports	SWSM
Component Three: **Indicator 1:** Comprehensive M&E system is established and functional for the sector.	Implementation plan prepared	Implementation initiated	Implementation completed	Annual and Quarterly Progress Reports	Progress Reports	SWSM

	Target Values			Data Collection and Reporting		
Outcome Indicators	**Baseline**	**Mid-term review**	**End of Project**	**Frequency and Reports**	**Data Collection Instruments**	**Responsibility for Data Collection**
Indicator 2: Expenditures of supply driven schemes as a percentage of total sector expenditures.	72%	40%	0%	Mid-term and end of project; financial reports	MTR reports and ICR and financial reports	GoUA/SWSM GoI Bank ICR Mission

Annex 4: Detailed Project Description

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

1. The Bank would fund a share of GoUAôs Medium-Term Rural Water Sector Program (MTP), attached at the end of this annex. The MTP includes general sector development activities, ongoing and new investments in water and sanitation, and program-management activities geared toward achieving sound program administration. New investments are defined as all SVS identified (schemes whose administrative and financial sanctions have been accorded) after March 31, 2006 and all MVS identified after November 30, 2006, in addition to the SVS and MVS currently being operated by UJN or UJS, in the process of being devolved to the appropriate PRIs, and are mandated according to GoUA policy to follow the SWAp principles, eligible for Bank financing. The ongoing schemes identified prior to the above dates would fall outside the SWAp basket. However, if the ongoing schemes demonstrate that they have followed the SWAp principles, they could be eligible for Bank financing through retroactive financing.

2. The SWAp program includes the following three components: (A) RWSS Sector Development; (B) Rural RWSS Investments; and (C) Program Management and M&E.

Component A: RWSS Sector Development (US$ 5 million)

3. The objective of this component is to support the stateôs sector reform process by establishing and enhancing its institutional capacity to undertake and sustain the MTP. The component aims at building the capacity of the state-level institutions (DDW, SWSM, UJN, and UJS) and helping them to accommodate to the new policy and institutional framework, as well as the PRI level (district, block, and village level) to implement the MTP. The key elements of the sector reform include decentralization with full responsibility to the PRIs for planning, implementation, and operation of WSS schemes, while the sector institutions would remain as facilitators, providers of technical assistance, and carrying out construction and operation of large complex schemes. The state level will also improve its general sector policy, planning, programming, and M&E.

4. The component therefore aims at supporting the consolidation of this framework, by providing capacity building to all sector stakeholders, establishing sector information system, pilots for modernizing the stateôs procurement system, communication strategy and campaigns, preparing methodology/procedure manuals to assist in carrying out responsibilities and sector studies, and supporting monitoring programs for water sources and water quality. The subcomponents of this activity are given below.

5. **Subcomponent A1: Capacity-Building and Strengthening Programs**: This subcomponent would support capacity-building and institutional strengthening programs for the sector stakeholders. Proposed activities are derived from a comprehensive capacity-building plan developed by GoUA. The capacity-building plan is included in the Operations Manual, and includes programmed and detailed training modules for all stakeholders. While the plan covers the whole MTP period, details of the annual program will be updated every year based on the revised expenditure projections and lessons learned from the first batches.

(i) SWSM and PMU: Support will be provided to SWSM in strengthening of state capacity for policy, planning, and sector monitoring functions. To implement the policy decisions taken by SWSM, and to manage the sector program, PMU capacity would be strengthened through training programs in sector planning, project management, policy implementation, skill development, motivational, procurement, financial management, etc.

(ii) DWSMs and DPMUs: In the renewed institutional framework, DWSMs and DPMUs have a new and key role in water and sanitation scheme planning and implementation, implying new functions and therefore the need to build their capacity. Also, prior to program initiation there were only nine functional DWSMs and DPMUs (out of thirteen); the four remaining DWSMs and DPMUs need to be established, staffed, and strengthened urgently. The specific capacity-strengthening activities at the district level would include financial and accounts management, procurement, community development, health and hygiene, RWSS engineering, and project management.

(iii) Change Management for UJN and UJS: UJN and UJS require a shift in their mindset to move away from the traditional supply-driven mode to a demand-driven community participatory approach to RWSS service delivery, and to effectively establish and consolidate their new role as providers of technical assistance and service providers according to demand. The subcomponent includes training programs in community mobilization and health and hygiene education, and other software activities would be required for these two sector institutions.

(iv) General Training Activities for PRIs: General training activities, including financial management and procurement, would be supported by this subcomponent, and be done in coordination with the training programs prepared and planned by the Panchayati Raj department. Coordination will also be ensured with the AGôs office and the Bank-financed Decentralized Watershed Development Project. Community development activities directly related to the physical infrastructure, including the grass-roots level health and hygiene awareness programs, etc., are excluded from this subcomponent, but would be included in Component B.

(v) Training of Regional Training Institutions (RTIs), Support Organizations (SOs), and Support Agencies (SAs): GoUA plans to engage two regional training institutions, one for social trainings and the other for engineering trainings, for each of the two regions. Separate training programs have been designed for social RTIs and engineering RTIs keeping in view the needs emerging out of their envisaged roles. RTIs will provide training to SOs, DPMU, sector institutions, and SAs.

6. **Subcomponent A2: Information, Education, and Communications (IEC):** This subcomponent aims at supporting and facilitating the sector program by disseminating its relevant information amongst all stakeholders. Under this subcomponent, GoUAôs communication strategy developed during project preparation will be implemented. The specific activities would include radio, TV, mass media events, materials, equipment, evaluation studies, etc., as summarized below:

- IEC dedicated to promoting behavioral changes among all stakeholders toward improved sanitation and hygiene practices.
- Institutional strengthening IEC aimed at empowering the rural poor in their interactions with partnering institutions in the development process under a decentralized environment.
- Development of manuals, handbooks, field books, etc., on scheme cycles and nonnegotiables, incorporating lessons learned from earlier batches.
- Biannual newsletter will be produced in Hindi and English to report the program activities in the villages to all stakeholders, and annual water and sanitation fairs will be organized.

7. **Subcomponent A3: Sector Information System, Water Quality Monitoring Program, and Source Discharge Measurement Program**

(i) Sector Information System: A computerized sector management information system would be developed for monitoring of sector status including physical aspects of schemes, the service

provision, water quality, and other indicators and parameters of all schemes in the state. This would help GoUA to always have accurate and current information on the existing schemes, and to better develop future investment programs based on the real investment requirements. The system is also intended to benefit sector institutions at all levels. A benchmarking system to allow comparisons among districts, GPs, and schemes will also be developed. The component will finance all system development, including software and hardware, as well as system implementation and first years of operation.

(ii) Water Quality Monitoring Program: A state-level water quality monitoring program would be developed to ensure safe water to the population of Uttaranchal, and include the following activities:

- Statewide orthotolidine testing of all drinking water sources and subsequent follow-up measures. Public health laboratories at the district level equipped for testing physical, chemical, and biological parameters of water quality.

- In addition, user-friendly water quality testing kits and training programs would be developed to provide to schools, Mahila Mangal Dals, and UWSSC members at the GP level to check the residual chlorine in water samples on a daily basis.

(iii) Source Discharge Measurement Program: A state-level source discharge measurement program would be developed to measure the discharge of water source twice a year, in May and November, to assess the trend of depletion of water sources.

8. **Subcomponent A4: Modernization of Public Procurement and Procurement Reforms:** This component includes consultancy assignments for carrying out studies, preparation of standard bidding documents, provision of necessary equipment and training needs, etc., with a view to strengthening the capacity in procurement processes of sector institutions and agencies. It also includes a comprehensive plan to introduce e-procurement system to UJN and UJS as a pilot project, which can be rolled out to other procurement entities of the state. The component, among others, covers development of M&E system for procurement for the stateôs various programs and schemes and to meet its MIS needs for effective implementation and financial controls.

9. **Subcomponent A5: Sector Studies:** This includes technical and economical sector studies intended to better support the state-level efforts toward sector development.
- Time-saving studies
- Cost-effectiveness indicators
- Appropriate technologies
- Institutional models for service provision
- Other studies (tbd)

Component B: RWSS Infrastructure Investments (US$ 197 million)

10. The component aims to improve service and sustainable access to WSS services to rural communities by financing water and sanitation infrastructure and software activities. The water supply investments would be made in an integrated manner, with catchment-area management, health and hygiene awareness promotion, and incentives for construction of individual household latrines. It. would support building or rehabilitating water supply facilities including source-strengthening measures, which the communities plan, implement, and manage by themselves. In the case of large MVSs, O&M responsibility of the communities would be only for the intra-village distribution; inter-village facilities would be constructed by UJN and operated by UJS under MoU signed by the sector institution, scheme-level committee, and relevant implementing agency.

11. Expenditures eligible for reimbursement would comprise works, good, and services for:
(i) All new investments in water supply schemes, including rehabilitation and reorganization of existing schemes, both for SVSs and MVSs, WSS to rural public institutions, and micro catchmentï area protection;
(ii) Community mobilization and community development activities; and
(iii) Sanitation programs

12. **Subcomponent B1: Water Supply Schemes and Catchment Area Protection Works:** GoUA sector program expects to implement about 7,324 new water supply schemes during the next five years, covering 3,347 GPs and 17,741 habitations in total. This SWAp basket would include all new investments that could be grouped into three main categories: (i) SVSs and simple MVSs that are technically and institutionally feasible to be carried out by DWSM; ii) larger MVSs to be carried out by UJN and some MVSs requiring reorganization by UJS; and (iii) devolution of existing schemes (mostly SVS) currently under UJS and UJN to the PRI.

13. Given the hilly geography of the state, most of the schemes are expected to be gravity-piped water systems with spring/stream sources. A typical village-piped water system would have an intake structure, a roughing filter, a transmission main with break pressure tanks, valve and valve chambers, a reservoir, distribution mains, and public standposts and/or private connections.

14. Water supply schemes would also include micro catchmentï area protection (larger catchment-area work will be coordinated with other governmental departments, including the FD) for the water schemes. This is particularly needed given the scarcity of water source and decreasing discharge levels. Specific activities would include preventing contamination from surface pollutants, potentially recharging the source, and preventing erosion and siltation in surface sources. The subcomponent will finance studies for initial assessments and preparation of remedial and protection programs, community mobilization and training, and implementation of the plans, normally including works (check dams, fences, protection measures to prevent erosion, siltation in surface sources, and contamination), plantation of special vegetation, and other services. Details of this component are described in Annex 10.

15. The program will be implemented in a demand-responsive approach, and within an institutional framework designed to have PRIs with a deciding role for planning and implementation, assisted as needed by support organizations and sector institutions. In selecting the participating GPs, the first priority would be to cover the habitations defined as Not Covered (NC) in the recent survey, followed by habitations defined as Partially Covered (PC), habitations requiring reorganization, and habitations requiring augmentation. The envisaged 7,324 schemes will be implemented in four batches, as summarized in the table below. Details of the scheme cycle, selection of schemes/GPs, and investment guidelines are outlined in Annex 13.

Summary of batch wise and agency wise coverage of schemes

Batch	Batch Phasing		PMU			UJS			UJN			MVS - UJN/UJS/PMU			Total		
	From	To	No. of schemes	No. of habitations	No. of GPs	No. of Schemes	No. of Habitations	No. of GPs	No. of Schemes	No. of Habitations	No. of GPs	No. of Schemes	No. of Habitations	No. of GPs	No. of Schemes	No. of Habitations	No. of GPs
Batch-1	Apr-06	Mar-08	422	844	159	122	243	46	14	29	5	39	386	73	**597**	**1503**	**284**
Batch-2	Apr-07	Mar-09	1266	2531	478	730	1459	275	86	172	32	193	1932	365	**2274**	**6094**	**1150**
Batch-3	Apr-08	Mar-10	1477	2953	557	973	1946	367	114	229	43	155	1546	292	**2718**	**6674**	**1259**
Batch-4	Apr-09	Mar-11	1056	2111	398	608	1216	229	72	143	27				**1735**	**3470**	**655**
Total			**4220**	**8440**	**1592**	**2432**	**4864**	**918**	**286**	**572**	**108**	**386**	**3865**	**729**	**7324**	**17741**	**3347**

16. **Subcomponent B2: Community Development:** This component will support the establishment and capacity building of UWSSC and MVSLCs. A UWSSC will be formed for every new SVS. In the case of MVSs, an MVSLC will be formed in addition to the UWSSCs formed in each village. Forming and operationalizing these committees require significant community organization/mobilization activities. These include a series of small workshops, group discussions, information campaigns, and participatory community action planning to train the communities to elect a representative and to organize themselves in forming a responsive user committee. The UWSSC will have at least 30 percent women and representation from other minority groups such as the scheduled castes and scheduled tribes. Community development will also include health and hygiene promotion and awareness activities through similar means as described above.

17. **Subcomponent B3: Sanitation:** This subcomponent will contribute to the stateôs implementation of the GoI-supported TSC program. In accordance with the TSC guidelines, the program would focus on ñtotal sanitationò through collective behavior change. Sanitation activities will be carried out simultaneously with water supply in an integrated manner. In accordance with the TSC guidelines, the program would focus on ñtotal sanitationòð that is the eradication of open defecation, solid waste management, drainage, and hygiene. To achieve ñtotal sanitation,ò it is of paramount importance that these initiatives are targeted at the level of the collective, in preference to targeting individuals. The component would finance: (i) the IEC at the village level; (ii) habitation-level rewards for achievement of open-defecationï free status; (iii) rewards for the cleanest GP in the state/district/block; and (iv) limited incentives toward latrine construction for BPL households. The program envisages to achieve at least 30 percent open-defecationï free GPs and habitations by the end of the five-year period.

Component C: RWSS Program Management Support and M&E ($22 million)

18. **Subcomponent C1: Program Management Support:** This component includes SWAp program implementation costs for the period 2006/7ï 2011/12. It would finance operational and administrative costs for the implementation of SWAp, associated with the SWSM/PMU, UJN, UJS, and DWSMs/DPMUs. These would include staff compensation, PMU/DPMU offices, equipment, vehicle rental, and traveling allowances. Compensation would include salaries and benefits for the staff and local consultants for PMU, UJN, UJS, and 13 DPMUs. Other related expenses would include costs of audit to be carried out by government auditors, private auditors, technical auditors, and financial auditors.

19. PMU would consist of a qualified director and seven unit coordinators, including sanitation & hygiene, finance & administration, human resource development, engineering, social development, M&E, and environment. In total, there will be about 160 staff in PMU. There will be 13 DPMUs (currently nine

in existence). Each DPMU is expected to require offices (construction and rental) and basic equipment including computers, office equipment, furniture, and vehicles.

20. **Subcomponent C2: Sector Monitoring and Evaluation (M&E):** This subcomponent will support the development, establishment, and operation of the FM system and the M&E system for the sector program. The FM system would be for administering all funds and expenses of the program and M&E system. This FM system would be linked to the sector information system supported under component A. Once it is established, and will be used for monitoring the achievement of sector goals and objectives, as well as impact of sector program. M&E of the sector program will also be carried out through: (i) periodic review; (ii) sustainability monitoring and evaluation exercise; and (iii) community monitoring.

(i) Periodic review will be carried out through targeted process and impact evaluation to learn from field experience and suggest strategic inputs for further strengthening the program design and strategies for effective delivery of inputs at the GP level. This would include audits by independent financial and technical auditors of the schemes, as well as studies aimed at following up on the project impact in general as well as some of its main components. Main studies included are listed below:

- Process monitoring in planning and implementation phase
- Impact evaluation studies
- Catchment works impact influences study

(ii) Sustainability monitoring and evaluation would be based on the formats developed under Swajal I and track the long-term technical, financial, institutional, social, and environmental sustainability prospects of schemes and assets created during the project lifecycle of sample schemes.

(iii) Community monitoring would help community members to track the progress of their schemes in all the phases of the project, for continuous use after scheme completion. The system would contain a set of suggested participatory monitoring tools and be presented to the UWSSCs as part of the community development activities under Component B.

Detailed breakdown of the sector program component costs

Component	US$ million							% of Total
SWAp Basket								
A RWSS Development	**2006/7**	**2007/8**	**2008/9**	**2009/10**	**2010/11**	**2011/12**	**Total**	
A-1 Capacity building and strengthening programs	0.14	0.34	0.49	0.66	0.57	0.07	2.25	0.6%
A-2 Information, education, and communication	0.07	0.16	0.23	0.31	0.27	0.03	1.07	0.3%
A-3 Sector info, water quality, and sources programs	0.06	0.16	0.23	0.30	0.26	0.03	1.05	0.3%
A-4 Strengthening of state procurement capacity	0.01	0.02	0.03	0.03	0.03	0.00	0.12	0.0%
A-5 Sector studies	0.03	0.08	0.11	0.15	0.13	0.02	0.51	0.1%
Sub-Total A	**0.30**	**0.75**	**1.09**	**1.46**	**1.26**	**0.15**	**5.00**	**1.4%**
B. Rural W&S Investments								
B-1 Water supply schemes	**10.46**	**25.70**	**37.50**	**50.18**	**43.24**	**5.13**	**172**	**49.2%**
(i) Water supply schemes for SVS & MVS	7.68	21.87	33.76	46.16	39.69	4.71	153.87	44.0%
(ii) RWSS to Public Institutions	2.55	3.27	2.91	2.91	2.59	0.31	14.53	4.2%
(iii) Micro catchment area protection	0.23	0.57	0.83	1.11	0.96	0.11	3.83	1.1%
B-2 Community development	**0.58**	**1.43**	**2.09**	**2.80**	**2.41**	**0.29**	**9.60**	**2.7%**
(i) Planning Phase CD Activities	0.36	0.87	1.27	1.70	1.47	0.17	5.85	1.7%
(ii) Implementation Phase CD Activities	0.23	0.56	0.82	1.09	0.94	0.11	3.75	1.1%
B-3 Sanitation and hygiene	**0.91**	**2.23**	**3.26**	**4.36**	**3.76**	**0.45**	**14.96**	**4.3%**
BPL Incentive	0.17	0.42	0.61	0.82	0.71	0.08	2.82	0.8%
Other program activities	0.46	1.13	1.65	2.20	1.90	0.23	7.55	2.2%
Rewards/Awards	0.28	0.68	1.00	1.34	1.15	0.14	4.59	1.3%
Sub-Total B	**11.95**	**29.37**	**42.85**	**57.33**	**49.40**	**5.86**	**197**	**56.2%**
C. Project Management Support and M&E								
C-1 Program management support	0.91	2.24	3.27	4.37	3.77	0.45	15.00	4.3%
C-2 Monitoring and evaluation/audit/FM	0.43	1.06	1.54	2.06	1.78	0.21	7.07	2.0%
Sub-Total C	**1.34**	**3.29**	**4.81**	**6.43**	**5.54**	**0.66**	**22.07**	**6.3%**
Total SWAp Basket Expenditures	**13.60**	**33.41**	**48.75**	**65.22**	**56.20**	**6.67**	**224**	**64.0%**
Outside of SWAp Basket (ongoingchemes)	**40.15**	**35.11**	**31.89**	**12.67**	**6.26**	**-**	**126**	**36.0%**
Total GoUA MTP Sector Program	**53.75**	**68.52**	**80.64**	**77.89**	**62.46**	**6.67**	**350**	**100.0%**

Annex 5: Project Costs

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

Project Cost By Component and/or Activity	Total US$ million
A. RWSS Development	
A-1 Capacity-building and strengthening programs	2.25
A-2 Information, education, and communication	1.07
A-3 Sector info., water quality, and source programs	1.05
A-4 Establishment of e-procurement at state level	0.12
A-5 Sector studies	0.51
Subtotal	**5.00**
B. Rural Water and Sanitation Investments	
B-1 Water supply schemes and catchment-area costs	172.22
B-2 Community development	9.60
B-3 Sanitation and hygiene	15
Subtotal	**196.82**
C. Program Management Support and M&E	
C-1 Program management support	15.11
C-2 M&E, audit, and FM	7.07
Subtotal	22.18
Total Baseline Cost	**224**
Contingencies	0
Total Project Costs	224
Interest during construction	
Total Financing Required	**224**

Breakdown of SWAp program components and funding sources

Projections are based on figures of MTDP

Component	SWAp Basket (US$M)	% of Total	GOI financing (US$M)	% of GOI-financing	GoUA financing (US$M)	% of GoUA-financing	Community Contribution (US$M)	% of Community Contribution
A RWSS Development								
A-1 Capacity building and strengthening programs	2.25	1%		0%	2.25	1%		0%
A-2 Information, education, and communication	1.07	0%		0%	1.07	0%		0%
A-3 SIS, water quality, and sources programs	1.05	0%		0%	1.05	0%		0%
A-4 Strengthening of state procurement capacity	0.12	0%		0%	0.12	0%		0%
A-5 Sector studies	0.51	0%		0%	0.51	0%		0%
Sub-total	**5.00**	**2%**	**0.00**	**0%**	**5.00**	**2%**	**0.00**	**0%**
B. Rural W&S Investments								
B-1 Water supply schemes (incl. catchment area management and public institutions)	172.22	77%	55.79	25%	111.44	50%	4.98	2%
B-2 Community development	9.60	4%		0%	9.60	4%		0%
B-3 Sanitation and hygiene	15.00	7%	13.30	6%	0.85	0%	0.85	0%
Sub-total	**196.81**	**88%**	**69.10**	**31%**	**121.89**	**54%**	**5.83**	**3%**
C. Project Management Support and M&E								
C-1 Program management support	15.11	7%		0%	15.11	7%		0%
C-2 Monitoring and evaluation/audit/FM	7.07	3%		0%	7.07	3%		0%
Sub-total	**22.18**	**10%**	**0.00**	**0%**	**22.18**	**10%**	**0.00**	**0%**
Total	**224.00**	**100%**	**69.10**	**31%**	**149.07**	**67%**	**5.83**	**3%**

Note: World Bank will reimburse GoUA's share of sector expenditures under the SWAp basket up to the ceiling of $120 million.

GOI funded	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**Total**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**Total**
ARWSP and Bharat Nirman/PMGY/PM	14.5	11.7	12.5	0.0	0.0	0.0	**38.7**	0.0	0.0	0.0	13.8	12.2	0.0	**26.0**
Swajaldhara	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.3	2.8	2.6	2.8	3.1	0.0	**11.6**
TSC	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	2.7	2.7	2.7	2.7	2.7	0.0	**13.3**
Public institutions	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	2.9	2.9	2.9	2.9	2.9	0.0	**14.5**
CCDU	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.2	1.3	0.6	0.7	0.8	0.0	**3.6**
Total	14.5	11.7	12.5	0.0	0.0	0.0	**38.7**	6.1	9.6	8.8	22.9	21.6	0.0	**69.1**

	Ongoing Investments							**New Investments**						
GoUA funded	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**Total**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**Total**
Contribution for ARWSP & BN (RWS)/TSC	10.4	6.7	0.9	2.9	2.9	0.0	**23.7**	0.0	0.0	5.7	8.7	6.2	0.0	**20.6**
MNP	5.2	5.7	6.2	0.0	0.0	0.0	**17.1**	0.0	0.0	0.0	6.9	7.6	0.0	**14.4**
HP	1.7	1.9	2.1	2.3	0.0	0.0	**8.0**	0.0	0.0	0.0	0.0	0.5	0.0	**0.5**
TSP	1.7	1.9	2.1	1.8	1.7	0.0	**9.2**	0.0	0.0	0.0	0.5	0.8	0.0	**1.3**
Community contribution	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.2	0.8	1.2	1.9	1.1	0.5	**5.8**
SCP	2.4	2.6	2.9	0.0	0.0	0.0	**7.8**	0.0	0.0	0.0	3.1	3.5	0.0	**6.6**
Rejuvenation/Reorganisation of Rural Drinkin	4.3	4.7	5.2	5.7	1.6	0.0	**21.6**	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Sector Program								7.3	22.9	33.1	21.1	14.8	6.3	**105.5**
Total	**25.6**	**23.5**	**19.4**	**12.7**	**6.3**	**0.0**	**87.4**	**7.5**	**23.7**	**40.0**	**42.3**	**34.4**	**6.8**	**154.8**
Total Investments	**40.2**	**35.1**	**31.9**	**12.7**	**6.3**	**0.0**	**126**	**13.6**	**33.4**	**48.7**	**65.2**	**56.0**	**6.8**	**224**

Note: World Bank will reimburse GoUA's share of sector expenditures under the SWAp basket up to the ceiling of $120 million.
The fiscal year reflects the Bank fiscal year, from July to June. Since project effectiveness is expected in January 2007, the fiscal years 2006/7 and 2011/12 will each include six months out of the five-year implementation period.

Annex 6: Implementation Arrangements

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

Existing Institutional Arrangements

1. The Department of Drinking Water (DDW) has three main institutions: UJN, UJS, and the Swajal Directorate or Program Management Unit (PMU). Both UJN and UJS are autonomous bodies created under Sections 3 and 18 of the Act ñThe Uttaranchal (The Uttar Pradesh Water Supply and Sewerage Act, 1975) Adaptation and Modification Order 2002,ò respectively. UJN and UJS have independent Boards chaired by the Secretary, DDW, GoUA, and 11 members. Swajal Directorate is a society registered under the Societies Registration Act, 1860 with Chief Secretary, GoUA as its Chairman and Secretary, DDW as Vice Chairman and 11 members. UJN is primarily engaged in construction of drinking water schemes in rural and urban areas and sewerage schemes in urban areas, whereas UJS is primarily carrying out functions of O&M of these schemes handed to them by the UJN. The Swajal Directorate implements GoI-funded Swajaldhara and TSC programs.

Proposed Institutional Framework for the Program

2. As part of its decentralization commitment, the state government has decided to devolve the water and sanitation sector funds, functions, and functionaries and strengthen the three-tier PRIs system. At the state level, the SWSM, with the support of the SWSM Secretariat, will implement the Medium-Term Program (MTP), following demand-responsive approaches. It will ensure adequate financial provisions and oversee the implementation of the sector program. At the district level, the DWSM with the support of the DPMUs will be responsible for the implementation of the program. At the village level, the GP and the user committees will be responsible for designing, implementing, and maintaining the schemes. (The organogram attached in Annex 7 shows the implementation arrangements and the fund-flow arrangements).

State level

(a) State Water and Sanitation Mission: SWSM will be the highest policy-making body in the water supply and sanitation sector. SWSM will be chaired by the Honorable Chief Minister, and the Minister in charge of DDW will be the Vice Chairman with concerned senior Secretaries as its members.

(b) Secretariat of State Water and Sanitation Mission (Apex committee): A separate cell will be established at the DDW which shall act as the Secretariat of the SWSM. This cell will be responsible for overseeing the progress of reform/SWAp principles as implemented by the UJN, UJS, and the PMU. Specifically, the role of this Secretariat will be:

i. Oversee, disseminate, and monitor the implementation of policy decisions undertaken by SWSM;
ii. Implement the MTP (2006ï 12);
iii. Monitor the physical and financial progress of various schemes as per the MTP;
iv. Monitor the fund-flow arrangements for the sector program;
v. Submit utilization certificates to GoI and submit reimbursement claims to Bank;
vi. compile, review, and approve the annual plan and budget allocation for the sector for monitoring MTP;
vii. Appraise and approve high-cost MVSs that are beyond the prescribed limit of DWSM.
viii. Conduct SWAp process audit for ensuring implementation of reform principles in the sector.

(c) Department of Drinking Water, GoUA: DDW will be the nodal agency for the sector and will implement the sector-development component of the program and also coordinate with the sector stakeholders, including UJN, UJS, PMU, and other sector ministries and departments such as health, education, Panchayati Raj, and watershed management.

(d) Program Management Unit: The Swajal Directorate/Program Management Unit, assisted by the DPMUs at the district level, will:

i. Coordinate and implement the new capital investments for the SVS and small MVS schemes;
ii. Undertake IEC campaigns and capacity-building activities implemented through the CCDU;
iii. Prepare a budgetary plan for the schemes to be implemented by the PRIs in the SWAp basket;
iv. Carry out independent audits of the schemes for the SWAp basket;
v. Collect, compile, and consolidate the monthly physical and financial progress from the DPMUs for the sector;
vi. Coordinate with the sector institutions and DPMUs for the implementation of the sector program and submit utilization certificates and reimbursement claims to the SWSM cell.

(e) Uttaranchal Peyjal Nigam and Uttaranchal Jal Sansthan: The sector institutions through their district-level agencies will:

i. Continue to implement the SVS identified prior to March 31, 2006 and MVS identified prior to November 30, 2006.
ii. For MVSs identified after November 30, 2006, the UJN will plan, construct, and (other than for intra-village investments) operate and maintain the MVS covering more than two villages through a consultative process with the PRIs and the UWSSC.
iii. Prepare budgetary plan for the schemes to be implemented by UJN and UJS in participatory mode in the SWAp basket.
iv. Provide technical support to the PRIs and the UWSSCs for SVS, if desired by the latter.
v. Transfer the SVS to the GPs following the SWAp principles.
vi. Coordinate with the DPMUs/PMU for the implementation of the sector program and submit utilization certificates and reimbursement claims to the SWSM cell.

District level

(a) District Water and Sanitation Mission: DWSMs will be established progressively in each of the 13 districts and will report to the SWSM. DWSMs will:

i. Review the implementation of the sector program.
ii. Guide the District Water and Sanitation Committee (DWSC) for planning, designing, implementation, and O&M of water supply schemes as per the sector program.
iii. Approve the annual budget related to WSS in each district, proposed for district level UJN, UJS, and DPMUs.
iv. Channel funds to GP and community level.
v. Assist GPs/UWSSCs in procurement and construction of simple MVSs[13].
vi. Provide effective dispute resolution mechanism for GPs.

A specially constituted committee will be established in each of the 13 districts for appraising the SVS and MVS up to a certain prescribed limit (as per decisions taken by the state government), and will also be responsible for the selection of SOs and M&E. The committee will be given technical support and advice by the DWSM.

[13] Simple MVS is defined as a gravity scheme covering up to three GPs, which can be handled by the respective GPs/UWSSCs collectively with mutual consent.

(b) District Program Management Units: DPMUs will be established in all 13 districts to act as the secretariats to DWSMs. Staff from UJN and UJS will be deputed progressively to the DPMUs to provide technical guidance and assistance to the UWSSCs according to the SWAp principles.

(c) District Water and Sanitation Committees: DWSCs will select the GPs for the sector program, review their proposals, and approve the schemes up to a prescribed limit.

(d) District Level UJN and UJS: For implementation of works inside the SWAp basket, UJN and UJS will provide engineers to the DPMU. These engineers shall provide technical guidance and assistance to the UWSSCs according to the SWAp principles.

GP & Community Level

(a) Gram Panchayats: The GPs will mobilize and support the formation of UWSSC to ensure participatory approach. It will empower and provide capacity support to the UWSSC; ensure O&M and cost recovery of the scheme; and be responsible for fund flows, scheme approval, accounts management, auditing, M&E, and conflict resolution.

(b) User Water Supply and Sanitation Committees: UWSSC will be formed for each water supply scheme consisting of beneficiaries of the scheme. The UWSSC will be responsible for scheme planning, designing, procurement, construction, O&M, tariff fixation and revision, community contributions (capital and O&M), accounts management, and auditing. The UWSSC will be responsible for procurement and construction of SVS (including simple MVS).

(c) Multi-Village Scheme-Level Committee: For new MVS, scheme level committee, representing the UWSSCs, will be formed for planning, selection of technology option, and implementation of inter-village/common assets through a MoU, signed by the sector institution, scheme-level committee, and the implementing agency.

Post-Program Sector Institutional Vision (2011/12)

3. GoUAôs sector vision aims to transform the role of the state government and its sector institutions from service provider to a supporter, facilitator, and co-financier and as per need, provider of technical assistance, training, and catering for bigger construction works and sectoral contingencies. At the end of the SWAp program, UJN and UJS will have transferred the local governmentï level functionaries to the PRIs to facilitate them in carrying out the responsibilities of planning, designing, constructing, operating, and maintaining RWSS schemes. Significant capacity building will be carried out for all three tiers of the PRIs for exposure and awareness regarding policies, implementation arrangements, fund flow and procurement procedures, O&M, roles and responsibilities, etc. While most SVSs and simple MVSs are envisaged to be fully taken over by the PRIs and the UWSSCs, the high-cost pumping schemes and complex water supply schemes are expected to continue with UJN and UJS, following SWAp principles.

4. At the beginning of the SWAp program (2006), the SWSM will be supported by a PMU and each of the DWSMs will be supported by a DPMU comprising of staff on deputation from the UJN and the UJS, but reporting directly to the concerned DWSMs. This institutional arrangement is mainly to assist the PRIs in implementing the sector program. A percentage of the staff of UJN and UJS will progressively come under supervision and administrative control of the respective PRI Institutions, and the transition will be completed by the end of the program (2012). It is envisaged that by 2012, PMU will be merged with SWSM cell and DPMUs will work under the overall administrative, financial, and technical directions of the DWSM/DWSC. The salaries of such staff will be routed through DWSM/DWSC (with

financial support from GoUA). At the village level, UJS staff on contract, related to SVSs, will be transferred to the GPs (if the latter so desire), to facilitate water and sanitation activities. The GP will be responsible for meeting the salary and administrative costs of the staff from funding sources like water tariffs, grants from state government, grant from Finance Commission, etc.

Identifiable Milestones to Observe Sector Institutional Vision and Goal

5. ***At the State and District Sector Institutions level:***

a. At the start of SWAp program (2007):
i. The SWSM cell will be manned by senior officers recruited from the sector institutions.
ii. The program will be initiated with the existing structure of PMUs and DPMUs.
iii. The capacity development program for the sector institution staff shall be initiated regarding their changing roles and responsibilities for implementing demand-responsive RWSS schemes.

b. By the third year of SWAp program (2009ï 10):
i. 50 percent of the DPMUs will be headed by senior engineers of the sector institutions. These DPMUs will also be manned by the employees of sector institutions.
ii. The capacity of at least 50 percent of the engineering staff shall be built on the principles of demand-responsive and community-managed RWSS systems.

c. By the end of the SWAp program (2012):
i. All the DPMUs will be totally manned by staff recruited from sector institutions.
ii. SWSM will be fully manned by officers recruited from sector institutions.
iii. The capacity of all the engineering and non-engineering staff shall be built up on the principles of demand-responsive and community-managed RWSS systems. The refresher trainings shall continue for sustainability of the developed human resource.
iv. The entity of PMU and the DPMUs will be merged with the SWSM and DWSMs, respectively.

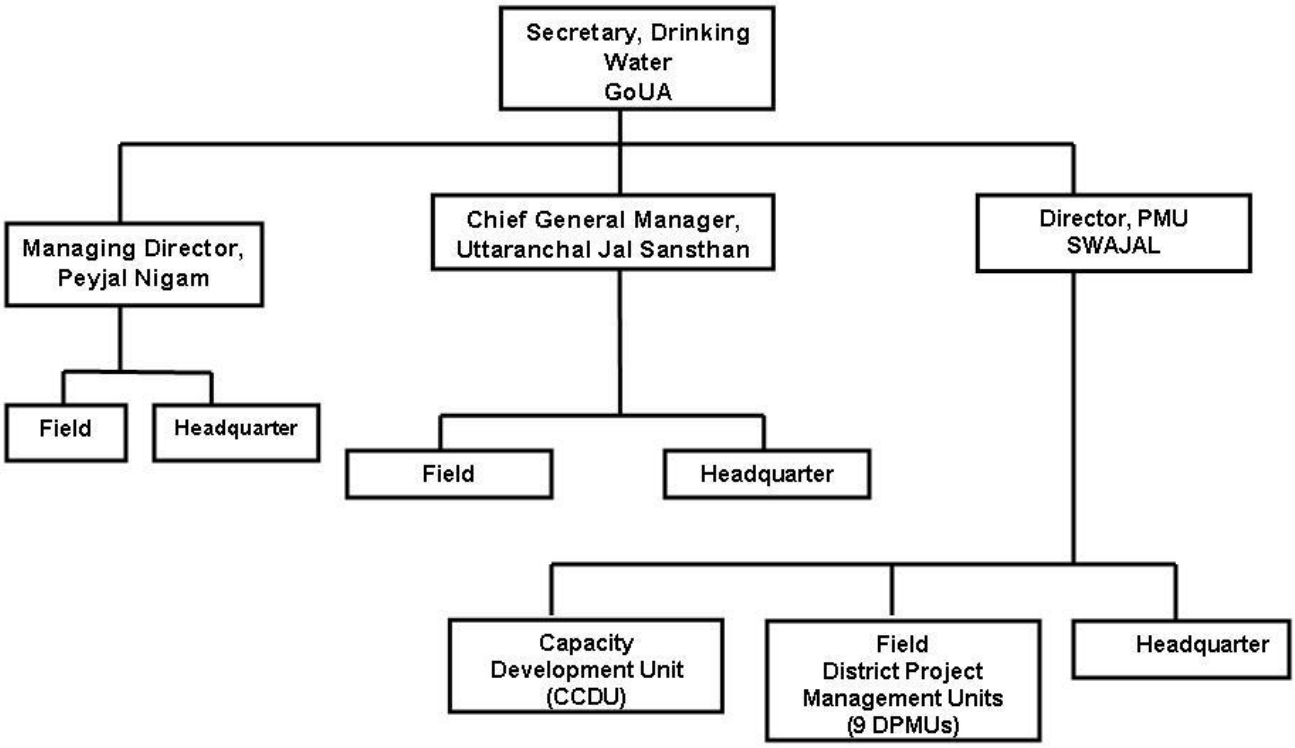
6. ***At the Panchayati Raj Institutions (PRIs) level:***

a. At the start of the SWAp program (2007):
i. The transfer of sector institution staff to the appropriate level of PRIs shall be initiated. The capacity-development program for this transferred staff shall be initiated.
ii. UWSSCs shall be formed for all SVSs under consideration.
iii. The capacity-development program for the PRI staff shall be initiated regarding their perceived roles and responsibilities in the RWSS sector.

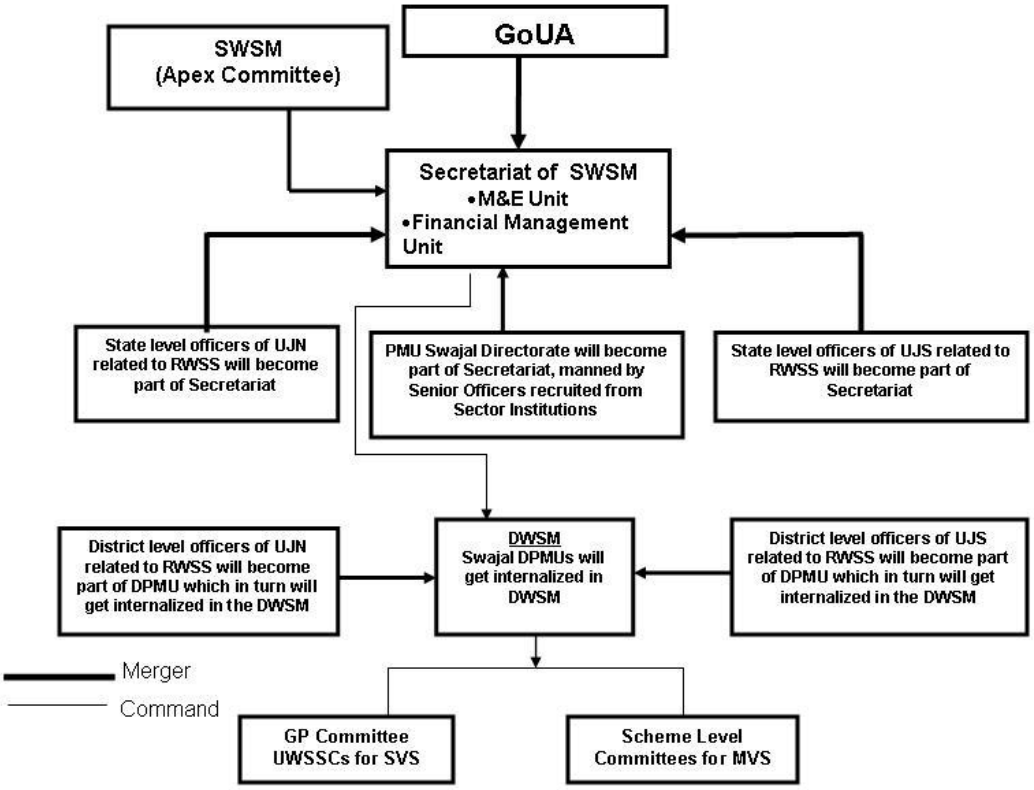
b. By mid-SWAp program (2009ï 10):
iv. Transfer of 50 percent of sector institution staff to the appropriate level of PRIs shall be done, after appropriate training to this staff.
v. The capacity-development program for the PRI staff will be continued as per the numbers of GPs taken up in the sector program.

c. By the end of the SWAp program (2012):
vi. The complete transfer of sector institution staff to the appropriate level of PRIs shall be done, after appropriate training to this staff.
vii. The capacity-development program for the PRI staff will be continued as per the numbers of GPs taken up in the sector program.
viii. Uniform sector policy will be applied in the state and all the functionaries in the RWSS sector will work in participatory mode with the PRIs.

Existing RWSS Institutional Arrangements



Post Program RWSS Implementation Arrangements (2011-12)



Implementation Arrangements

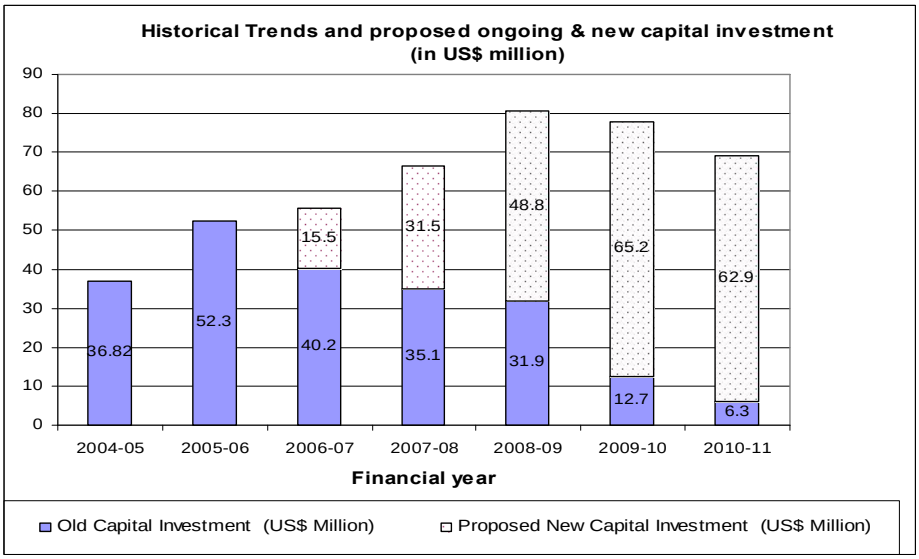
7. The program operational manual will detail out the agreed institutional structure for RWSS program; implementation roles, functions, and responsibilities of various institutions; details of their operations to deliver RWSS services in an efficient and effective manner; the support/facilities needed to deliver their responsibilities; etc. Procedures for scheme selection, scheme cycle, and investment guidelines are described in Annex 13. The key elements of the implementation plan for the RWSS infrastructure investments are as follows:

- All SVS identified[14] after March 31, 2006 will follow SWAp principles.
- All MVS identified after November 30, 2006 will follow SWAp principles.

8. All SVS and MVS identified before these dates will fall under ôongoing schemesô and will continue to be implemented by UJN and UJS. However, these may be classified as eligible expenditures and could be financed retroactively if they follow the SWAp principles.

9. The ongoing MVS (schemes identified before November 30, 2006) will be limited to 36 percent of the total expenditure requirements (about Rs Crores 550) for the five-year sector program.

10. The investment costs of the ongoing MVS will be on a declining basis, as illustrated in the table below.



Implementation Capacity Assessment of the Government of Uttaranchal

11. An in-depth assessment of the functional capacity of the GoUA to deliver the sector program has been carried out. The realistic MTP projects new investments to cover 68 percent PC/NC and slipped back habitations by the end of the five-year SWAp program (2006ï 11) at a cost of $224 million. In addition the ongoing schemes will be implemented at a cost of $126 million. The rationale for the total program size of $350 million is given below.

[14] Schemes identified pertain to those schemes whose administrative and financial sanction has been accorded prior to the set date.

(i) Trends in sector expenditure: While the average expenditures during last five years for RWSS sector (2001ï 05) are about $36 million per year, the expenditures in the last two years have increased significantly, and expenditures for FY05/06 are expected to reach $52 million, as illustrated in the above table. This depicts an increasing trend with an annual growth rate of about 35 percent, resulting from the capacity being progressively built up over the years (after splitting from Uttar Pradesh in 2000). Based on this trend, the GoUA is expected to disburse more than $70 million per annum in the coming years.

(ii) Political target and commitment: The GoI has the target of covering all PC/NC and slipped back habitations by 2009 and has committed funds to the state. GoUA is targeting 2012 for full coverage with the highest priority, and has also committed funds for the sector program.

(iii) Functional capacity to deliver the program: As described in the previous chapters, GoUA has established the main implementing agencies at the state and district levels. They include the SWSM and its cell, DWSMs and DPMUs in nine out of thirteen districts, as well as a concrete plan for establishment, staffing, and operationalization of the implementing agencies in the remaining four districts. GoUA has also developed a complete capacity-building program for all sector stakeholders for the implementation of SWAp.

(iv) Experience with similar programs: The capacity to deliver RWSS programs following the approaches similar to the proposed SWAp has been demonstrated through the sector reform program in Haridwar district with an expenditure of $4 million covering 103 habitations during the last two years. This compares well with the revised MTP projecting a coverage of about 85 habitations per DPMU at a cost of $3.5 million per year. In addition, the 10,000 village-level persons including VWSC chairmen and treasurers trained under the Swajal project are ready to support the program as SOs and SAs, in addition to the large number of existing nongovernmental organizations (NGOs) available in the state.

(v) Readiness for Implementation: The initial two yearsô expenditures are expected to average about $61 million, out of which $23 million is for new investments, taking into consideration the slow disbursements due to required capacity building for demand-responsive schemes. The list of ongoing MVSs has been identified, to be implemented in a ósunset modeô as per table above, comprising about 36 percent of the SWAp program. The batches have been conservatively designed, taking into consideration lessons learned from other state projects. Based on the advertisements, 739 GPs have already expressed interest in demand-responsive schemes. By project effectiveness, the schemes categorized as the first Batch are expected to have completed the preplanning and planning phase and entering into the implementation phase.

Annex 7: Financial Management and Disbursement Arrangements

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

1. The financial management arrangements for the project are documented in the Financial Management Manual.

Country issues

2. Timely availability of funds: The issue of timely availability of funds applies to the extent that this is a state-level project, subject to the cash constraints of the state government. The GoUAôs performance on release of funds for similar programs, including Uttaranchal Decentralized Watershed Development Project (UDWDP), has been satisfactory and the states overall fiscal position is expected to improve. Fiscal analysis shows that the overall financial position of the state is improving and an initial advance, equivalent to the Bankôs share of the first six monthsô expenditure, will also be provided to the state to accelerate funds flows.

3. Financial statements and audit opinions: The formats of program financial statements together with accounting policies have been agreed and are documented in the Financial Management Manual. Audit is normally based on detailed review of transactions rather than taking the form of an opinion on financial statements. The terms of reference (ToR) for audits have been agreed and consent will be sought from the CAG.

Panchayat-level issues

4. The bulk of the program funds will be utilized at the GP level. A study of accounting and accountability arrangements in PRIs was undertaken as part of preparation for the earlier UDWDP. This identified capacity problems affecting the maintenance of accounts at GP level and below, with approximately one GP secretary for every five GPs. The program will address this weakness by making provisions for the appointment of an accounts manager and an assistant at each district, and junior account assistants at sub-district level, each covering a cluster of eight UWSSCs. The junior level assistants will support accounting functions pending implementation of governmentôs plans to appoint more GP secretaries (or equivalents).

5. Reimbursement of project costs will depend on timely preparation of consolidated financial statements for the stateôs MTP program, showing actual expenditures. To speed up this process the project will extend the computerized accounting system currently operating at the PMU to the DPMUs. The tranche payments to UWSSCs will be treated as actual expenditure for purposes of reimbursements, consistent with the guidance on Community-Driven Development (CDD) type projects. Tranche payments are dependent on the achievement of certain milestones. Before release of the final tranche, the actual expenditures will be reported and verified and any adjustments made accordingly.

6. Delays could also occur in the process of transferring funds down to implementing entities. The project design has addressed this issue a) by using the state treasury system, which is fully computerized, to transfer funds directly to the districts and to the sector institutions; and b) funds transferred into the Gram Nidhi (village-level account) will be transferred to the UWSSC account within 15 days of receipt by the Gram Nidhi. GoUA has agreed to monitor the timeliness and completeness of funds transfer as part of the audit.

Strengths and weaknesses

7. The project has the following strengths:

- It builds on a successful pilot project (Swajal) and GoIôs Swajaldhara & sector reform program, following community-driven approaches to rural water supply in the same state and replicates the financial management arrangements at community level.
- It makes extensive use of existing government systems for funds flow, financial control, and financial reporting.
- Since the design of the project is largely community based, the disbursement arrangements make use of simplified fiduciary arrangements applicable to CDD projects.

Significant risks and mitigating measures

Risk	Rating	Mitigating measures
Weak capacity to carry out basic accounting functions at district and village levels.	S	This is being addressed through (i) recruitment and training of accounts staff to work at district GP levels (ii) use of simple books of account previously tried and tested in the Swajal project (iii) extension of computerized accounting systems to district level and strengthening internal audit iv) availability of detailed Financial Management Manual including detailed formats
Delay in flow of funds to village level.	M	The project design has addressed this issue a) by using the state treasury system, which is fully computerized, to transfer funds directly to the districts and to the sector institutions; and b) funds transferred into the Gram Nidhi (village level account) will be transferred to the UWSSC account within 15 days of receipt, and will be monitored by audits.
Timely reimbursement depends on financial reports flowing from districts, the PMU and the two sector institutions.	M	The project will extend the computerized accounting system currently operating at the PMU to the DPMUs, while UJN and UJS already have plans to computerize their accounting systems. At the village level expenditure reporting will be simplified by treating tranche payments to UWSSCs as actual expenditure. This is consistent with guidance on CDD type projects.
Overall Risk Rating	S	

8. Financial management assessments have been carried out for the UJN, UJS, and the SWSM. Although UJN and UJS have sound financial reporting systems and adequate capacity, the annual financial statements (since the separation of the new state of Uttaranchal from its parent state of Uttar Pradesh) are under preparation and will be finalized by October 2006.

Financial management framework

9. **State level:** The Secretariat of SWSM will be responsible for overall financial management, funds flow and financial reporting for the statesô MTP. The Secretariat of SWSM will also be responsible for approving district annual workplans and the budgets for support activities to be undertaken by the sector institutions within the sector program. MoUs for individual MVS, requiring works in excess of 2 million rupees, will be signed off by the SWSM.

10. SWSM, supported by PMU, will be responsible for preparing the overall sector budget, tracking funds flows, conducting internal audit, monitoring financial progress, and preparing consolidated financial statements for the program and a consolidated report on audit. SWSM will also be responsible for processing quarterly claims for reimbursement of the Bank credit.

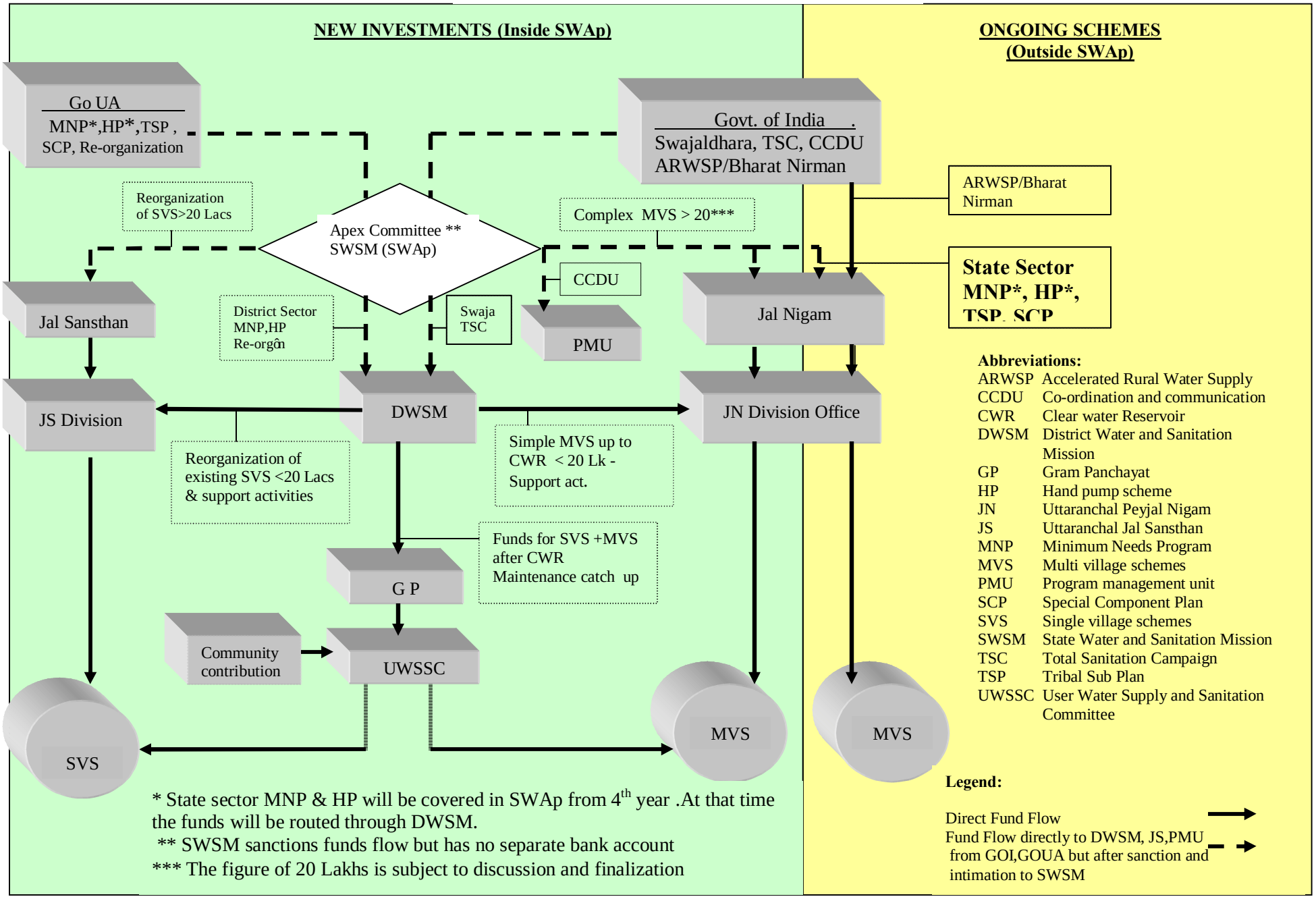
11. The sector institutions (UJN and UJS) will report on the utilization of funds for implementation of MVS and support activities. They will report either to the DWSM or to the SWSM in the formats specified in the MoU. In addition they will report scheme-wise expenditure as required by GoI and the state government.

12. **District level:** DWSMs, supported by the DPMUs, will be responsible for preparing the Annual District work plans and for signing the MoUs for SVS and smaller MVS, triggering release of funds. The DWSM will also control the release of funds to the GPs, for implementation of both SVS and intra village works which form part of MVS. DWSM, supported by the DPMU, will maintain the monthly program accounts for the district, including expenditure by the DPMU on support activities, payments to the sector institutions and expenditure at the GP level. The DPMU will convert the financial books and records maintained at GP level into double entry account and submit these to SWSM on a monthly basis.

13. **Village level:** The GPs with support from the DPMU will be responsible for preparing plans and budgets, receiving and managing funds in dedicated bank accounts, including collection of community contributions, for maintaining basic books of account and submitting utilization certificates. Detailed formats and procedures were developed and refined during the operation of the previous project (Swajal) which piloted demand-driven approaches and community responsibility for handling funds. This pilot was successful and the same formats and controls are being replicated in this scaled-up approach.

Funds flow

14. The diagram below illustrates the funds-flow arrangements for the project:


NEW INVESTMENTS (Inside SWAp)
ONGOING SCHEMES (Outside SWAp)
Go UA
MNP*,HP*,TSP , SCP, Re-organization
Govt. of India .
Swajaldhara, TSC, CCDU ARWSP/Bharat Nirman
ARWSP/Bharat Nirman
Reorganization of SVS>20 Lacs
Apex Committee ** SWSM (SWAp)
Complex MVS > 20***
State Sector MNP*, HP*, TSP, SCP
CCDU
Jal Sansthan
District Sector MNP,HP Re-orgn
Swaja TSC
PMU
Jal Nigam
JS Division
DWSM
JN Division Office
Reorganization of existing SVS <20 Lacs & support activities
Simple MVS up to CWR < 20 Lk - Support act.
Funds for SVS +MVS after CWR Maintenance catch up
G P
Community contribution
UWSSC
SVS
MVS
MVS
Abbreviations:
ARWSP Accelerated Rural Water Supply
CCDU Co-ordination and communication
CWR Clear water Reservoir
DWSM District Water and Sanitation Mission
GP Gram Panchayat
HP Hand pump scheme
JN Uttaranchal Peyjal Nigam
JS Uttaranchal Jal Sansthan
MNP Minimum Needs Program
MVS Multi village schemes
PMU Program management unit
SCP Special Component Plan
SVS Single village schemes
SWSM State Water and Sanitation Mission
TSC Total Sanitation Campaign
TSP Tribal Sub Plan
UWSSC User Water Supply and Sanitation Committee
Legend:
Direct Fund Flow
Fund Flow directly to DWSM, JS,PMU from GOI,GOUA but after sanction and intimation to SWSM
* State sector MNP & HP will be covered in SWAp from 4th year .At that time the funds will be routed through DWSM.
** SWSM sanctions funds flow but has no separate bank account
*** The figure of 20 Lakhs is subject to discussion and finalization

15. **State level:** The flow of GoUA funds will be managed by the Secretariat of the SWSM. GoI funds for demand-driven programs (Swajaldhara and TSC) will flow directly to the districts but subject to sanction and monitoring by the SWSM, based on district work plans.

16. The Program Management Unit (PMU) under the SWSM will directly finance certain technical assistance components of the program. The SWSM will control the flow of funds to UJN and UJS to carry out technical support activities, based on MoUs.

17. For the larger and more complex schemes which are institutionally and technically not feasible to be constructed by communities (excess of Rs 2 million as an indicative figure), the funds will flow to the sector institutions via the SWSM, based on similar MoUs. During the period covered by the project, it is anticipated that the volume of funds being routed through the districts will increase.

18. **District level:** Funds will be transferred to the districts, based on annual work plans and budgets. For the construction of common infrastructure required for complex MVS funds will flow from the DWSM to UJN, on approval of scheme-wise MoUs, specifying the works to be carried out, the amount and timing of payments and reporting on financial and physical progress.

19. Funds will be transferred from district to UJN in three tranches as follows: (i) an advance of about 30 percent of the estimated investment requirement on recruitment of nodal SO/consultants by UJN to undertake initial community mobilization activities in the participating GPs; (ii) a second tranche equal to 40 percent of the approved DPR amount, after the approval of the DPR by MVSLC and DWSC; and (iii) the final tranche for the remaining 30 percent of the DPR, after satisfactory implementation progress of the scheme construction, approved by the MVSLC and DWSC. This release will be linked to the implementation progress review based on physical and financial progress reports submitted by UJN to the MVSLC and DWSC about four months prior to construction finalization. In the case of large or complex schemes, additional interim payments may be agreed on a case-by-case basis.

20. Payments to UJN will be made from the District Treasury and in accordance with government financial rules. The sanction of scheme will require approval by the MVSLC. An MoU will be signed among the parties (DWSM, MVSLC, and UJN).

21. **GP level:** Management of GoUA funds for construction of village level infrastructure will be devolved to UWSSCs of the GPs, consistent with the decentralization policies of the GoUA. Transfers to GPs will be based on individual scheme agreements (in the form of MoUs), and will be in two equal tranches.

22. Funds from the DWSM will be transferred to the GP Fund (Gram Nidhi) via the banking system and thence to individual UWSSC accounts for each village or habitation. Transfer of funds from the Gram Nidhi to UWSSCs will be monitored as per the Financial Management Manual.

23. Separate capital and O&M bank accounts will be opened and operated by each UWSSC. UWSSCs will collect initial user contributions toward capital costs and will also collect and retain user charges to pay for ongoing maintenance.

Financial management capacity building

24. A financial management cell headed by a senior finance manager will be appointed at the SWSM to oversee the financial management arrangements within the program. At each new district office an accounts manager and data-entry operator will support accounting functions.

25. Several initiatives have already been taken to strengthen financial management capacity at GP level, including:

- Appointment and training of accounts assistants to support preparation of accounts by GPs (approx. 450) covered under the UDWDP.
- Cascade training in financial management at Panchayat level conducted by the AG,
- Introduction of standard accounting procedures for local governments by the AG.

26. To ensure that the financial books and records are maintained reliably and on time, additional accounts positions will be created in each district to provide support to clusters of GPs and UWSSCs. Where necessary, additional accounts assistants will be recruited in order to provide an average of one accounts assistant to support every eight UWSSCs. Training for these staff and existing GP secretaries will be funded as part of the program.

27. Internal audit capacity in the SWSM and DWSMs will also be strengthened as part of the project so that the operation of internal controls at state and district level can be monitored effectively. The specific plans are detailed in the capacity-building plan in the Operations Manual.

28. A computerized accounting system is operating satisfactorily in the PMU. As part of the project this system will be modified and extended to reach district offices. Entry of GP-level accounting information will be made at the district level, based on the manual records maintained by the GP/UWSSCs. Funding from GoI is available to fund computerization of accounting in UJN and UJS and plans to implement this are being prepared by the respective institutions.

Financial reporting and monitoring

29. The project will follow the general financial rules and reporting requirements of the state government, supplemented as necessary by detailed guidance, specifying the financial books and records to be maintained by the UWSSCs. The financial management arrangements as a whole are captured in the financial management manual for the scheme, which will be rolled out statewide and incorporates separate sections pertaining to each institution.

30. Financial reporting arrangements for the program are set out in detail in the Financial Management Manual. In summary, consolidated accounts for the stateôs sector program will be prepared on a monthly basis by the SWSM. Accounting will be done on the cash basis, using double-entry method and following the account code classification system of the state government. A separate account head will be set up for all expenditures under the SWAp program. Separate reporting of expenditures under each program or schemes will continue to be prepared as necessary to meet GoI reporting requirements.

31. At the GP level, responsibility for maintaining accounting records and ensuring compliance with internal controls (government financial rules) currently rests with Panchayat secretaries, each of whom covers a number of villages. The financial management capacity of the GPs and UWSSCs will be enhanced as part of the program, to ensure that books of account and financial reports are maintained in a timely and reliable manner. To enhance transparency and accountability, information regarding the amount of funds available for scheme implementation, and financial and physical progress will be publicly displayed at the GP level.

32. UJN and UJS have well-established accounting systems that are capable of regular and timely financial reporting. However, UJN and UJSôs financial statements and audits are substantially in arrears. This is primarily due to unresolved certainties regarding the opening balance sheets following the separation of Uttaranchal from Uttar Pradesh. The sector institutions have up-to-date trial balances, but

an action plan needs to be prepared in order to bring accounts and audit up to date by the time the first audited financial statements are required (September 2007). Under the program UJN and UJS will be required to provide districts with scheme-wise statements of expenditure on MVS, reorganization of schemes, and support activities.

Disbursement Arrangements

The new country financing parameters are applicable to this project, and all expenditures under the SWAp program will be considered eligible for reimbursement. Component A (RWSS sector development) will be reimbursed at 100 percent and component B and C (RWSS infrastructure investments, program management support, and M&E) will be reimbursed on a declining percentage, from 100 percent in the initial two years to 90 percent in FY08/09, 70 percent in FY09/10, and 55 percent in FY10/11. The IDAôs share has been calculated based on the total projected GoUA contribution to the program costs, as set out in the MTP. The MTP will be updated and reviewed annually, incorporating the actual figures and realistic estimates, along with IDAôs share of the sector program. The Bank will refund about 78 percent of the state governmentôs total contribution over the five-year period, as set out in Table 1 below. This works out as 54 percent of the SWAp program, with a total value of 120 million dollars over 5 years.

Table 1 - Disbursement Profile ($ million)

	FY06/7	FY07/8	FY08/9	FY09/10	FY10/11	FY11/12	Total
GoI	6.1	9.6	8.8	22.9	21.6	-	69.1
GoUA	7.3	22.9	38.8	40.4	33.3	6.3	149
Community	0.2	0.8	1.2	1.9	1.1	0.5	5.8
Total Program	13.6	33.4	48.7	65.2	56.0	6.8	224
World Bank	7.5	23.6	35.9	29.8	19.2	3.9	120
Bank reimbursement	100%	100%	90%	71%	56%	57%	78%

	FY 06/7		FY 07/8		FY 08/9		FY 09/10		FY 10/11		FY 11/12		Total	
Components	A	B&C	A	B&C	A	B&C	A	B&C	A	B&C	A	B&C	A	B&C
GoUA and communities	0.4	7.1	0.7	22.9	1.1	38.9	1.5	40.8	1.0	33.2	0.4	6.4	5.0	149
Bank reimbursement	100%	100%	100%	100%	100%	90%	100%	70%	100%	55%	100%	55%	100%	77%
World Bank	0.4	7.1	0.7	22.9	1.1	34.8	1.5	28.4	1.0	18.3	0.4	3.5	5.0	115

Note: World Bank will reimburse GoUA's share of sector expenditures under the SWAp basket up to the ceiling of $120 million.
The fiscal year reflects the Bank fiscal year, from July to June. Since project effectiveness is expected in January 2007, the fiscal years 2006/7 and 2011/12 will each include six months out of the five-year implementation period.

33. Reimbursements of the credit will be based on actual eligible expenditure. The Bank will reimburse the agreed percentage, indicated in the table above, of the GoUAôs contribution to the program up to a ceiling of $120 million. The reimbursement will cover the capital costs of all new investments and the cost of technical support for program implementation, including the operating costs of the PMU, DPMU and cost incurred by UJN and UJS (not exceeding 25 percent of the capital cost) for the MVS. The eligibility of specific investments will be determined by audits of the SWAp process, based on compliance with operational policies and procedures for new investments.

34. An initial advance of $5 million will be paid at the start of the project equivalent to 100 percent of budgeted expenditure in the first six months equivalent based on budget estimates. A second payment will be made after six months, based on a percentage reimbursement of actual program expenditure, as reported in the unaudited financial statements of the SWSM. Thereafter, payments will be made quarterly

based on financial statements, subject to adjustments in respect of final audited accounts received in respect of prior periods.

35. GoUA may apply for retroactive funding for any investments in new schemes, including preparatory activities, which are implemented using the SWAp principles since January 2006. A separate account of all such expenditure incurred prior to the commencement of the project will be maintained by the SWSM using the same format as for other project expenditure. Reimbursement of this component will be based on the final audited account.

36. Expenditure may be deemed ineligible where, in the Bankôs opinion, they are either not consistent with the intended purposes of the program or do not follow the GoUAôs policy guidelines. Such instances may be identified either during supervision or through audit. Differences between expenditure reported in the FMRs and the final audited accounts, and other disallowances, will be adjusted against the next disbursement claim. Any disallowances identified by audit after the project has closed will be refunded to the Bank.

37. Reimbursement claims will be submitted by GoUA to the Ministry of Finance (Aid Audit and Accounts Department). The Bank will make all payments into a Special Account operated by the Ministry of Finance. This money will then be advanced to the state government in the form of additional ACA. The special account will be maintained in the RBI and operated by the Department of Economic Affairs, Ministry of Finance. The authorized allocation of the special account would be $10 million, equivalent to six monthsô average expenditure. The special account would be operated in accordance with the Bankôs operational policies.

Audit

38. The existing system of internal audits will be strengthened.

39. The SWSM will prepare an annual consolidated report on the audits carried out at all levels, highlighting common issues, significant control failures, systemic risks, and material errors (including amounts to be disallowed). The overall audit arrangements for the sector are summarized in the table below:

Financial statements	CAG Audit	Local Fund Audit	Chartered Accountants	Supplementary AG audit*
SWSM			X	X
DWSM			X	X
GP/UWSSC		X		X
Jal Nigam	X			
Jal Sansthan	X			

* The AG may also carry out supplementary audits of any aspects of the program at their discretion.

40. The accounts of each scheme comprising the program will be audited progressively during the year. The consolidated accounts of the sector program, prepared by the SWSM will be audited by Chartered Accountants selected from the AGôs approved panel. The following audit reports will be monitored in ARCS.

Implementing Agency	Audit	Auditors
SWSM	RWSS Program	CA Firm
Dept. of Economic Affairs	Special Account	C&AG of India

41. Accounts at the GP level will be audited by the Local Fund Audit service of the state government, supplemented as necessary by chartered accountant firms, to ensure full coverage on an annual basis. The incremental costs of audit work carried out by the Local Fund Audit will be included in the program costs. Under the UDWDP GoUA has established a set of indicators for monitoring GPôs compliance with public financial management norms, including internal controls, submission of accounts and audit. This will be extended to all villages participating in the scheme and monitoring of these is included in the terms of reference for the auditors.

42. The audit of the accounts of UJN and UJS is currently conducted by the AG. Audits by chartered accountants will also be acceptable.

Supervision plan

43. The project will require intensive supervision of financial management arrangements during the initial stages, focused particularly on the identified risks including on the performance of the GP level systems and progress on capacity building.

Annex 8: Procurement

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

General

1. Procurement of the program would be carried out in accordance with the following.

2. The bulk of the procurement is expected to be under MVS and the sector institutions will be responsible for their implementation. Procurement by these sector institutions will be carried out following their procurement rules and procedures, with certain specific requirements to make these procedures consistent with practices, acceptable to the Bank. These procedures and specific requirements have been incorporated in the Procurement Manual prepared by the SWSM/ PMU.

3. SVS will be implemented by the GPs (community driven)/UWSSCs following the procedures and requirements/formats described in the Procurement Manual, as mentioned above.

4. As per current planning, no ICB contract is envisaged. However, whenever the mode of procurement is ICB, the Bankôs Procurement Guidelines (Procurement under IBRD loans and IDA credits, May 2004) and Procedures/ Standard Bidding Documents (SBD) will be followed.

Implementation Arrangements

5. As described in Annex 6, there is a three-tier arrangement for program implementation: (i) DDW, SWSM, and UJN and UJS at the state level; (ii) 13 DWSMs and DPMUs at the district level; and (iii) GPs at the participating villages in the state, and UWSSCs of the villages.

The procurement responsibility

6. The SWSM/PMU shall be responsible for procurement related to M&E and reforms. DWSMs/ DPMUs located in various districts will provide support to the GPs/ UWSSCs in planning and implementation of SVS through engagement of consultancy services. Procurement and implementation of inter-village schemes of the MVS shall be the responsibility of UJN and UJS; whereas village-level schemes shall be the responsibility of GP with the involvement of UWSSC.

7. The Program Operation Manual will detail out the agreed institutional structure for program implementation, roles, functions, and responsibilities of various institutions.

Procurement Arrangements

8. The implementation of the program covers procurement of goods, works, and consultancy services and is based on state- and district-generated annual work plans. The table below provides the breakdown by indicative categories of expenditure according to the approved program outlays for 2005ï06. However, the distribution of expenditure could change from year to year.

Table 8.1: Indicative Categories of Expenditure

Category	Percentage
Civil Works	60.00
Goods	35.00
Consultancy Services	5.00
Total	100.00

9. The procurement envisaged for the program at different levels will be as follows:

(i) Works required for schemes for water, which will also include supply of materials such as construction materials and specific materials for the implementation of schemes, for example cement steel pipes, pumps, valves, instruments, and control equipment;

(ii) Goods and equipment include computers/office equipment/furniture, vehicles, books, periodicals, pamphlets, specialized equipment, and other items not included in the contracts for works.

(iii) The consultancy services mostly involve hiring of NGO services. Other important consultancies are audit firms and/ or individuals, consultancies for capacity development, training of various agencies, consultancy for modernization of procurement including carrying out assessments/ studies and assistance in pilot e-procurement project, development of databases, information awareness and communication, paraprofessionals, monitoring, and evaluation.

Procurement Manual

10. GoUA has developed a Procurement Manual, which covers in separate sections the procedures to be followed by the Communities for the SVS and by the district level and state level agencies for MVS. All the agencies will be required to follow the procedures specified in the Procurement Manual for the program implementation. The procurement thresholds for various methods of procurement will be revised in consultation with Bank during implementation on the basis of implementation experience. The current thresholds, for various methods of procurement, are as follows.

11. Slicing/packaging shall be appropriately reviewed to avoid fragmentation to the extent practicable. Whenever bids are invited concurrently for several contracts in a package and cross discounts are invited, the aggregate value of the total package will form the basis to determine the procurement method as well as the review requirement.

***Works and Goods*:**

- ICB, contracts above US$10 million equivalent for works and US$200,000 equivalent for goods
- NCB, contracts up to US$10 million equivalent for works and up to US$200,000 equivalent for goods
- Limited Competitive Bidding/Shopping, contracts up to US$100,000 equivalent for works and goods.
- Rate contracts of Director General of Supplies and Disposal (DGS &D) are also acceptable as a substitute for shopping procedures.
- Direct contracting, proprietary items, such as spare parts, software, books, periodicals etc. up to US$10,000 equivalent per contract meeting requirements stated in the Procurement Manual and petty items costing up to US$1,000 equivalent per contract may be procured through direct contracting
- Community Driven Procurement, the procedures are described in the Procurement Manual.

Selection of Consultants

12. All consulting services will be selected as per the procedures prescribed in the Procurement Manual, which are adopted form the Bankôs Consultancy Guidelines (Selection and employment of consultants by World Bank borrowers, May 2004). The main considerations, governing the selection process prescribed

are, as follows: (a) the need for high-quality services; (b) the need for economy and efficiency; and (c) the importance of transparency. Service contracts under this program may cover hiring of services such as technical and resource support provided to the various institutions/organizations in all areas including expertise in scheme design, cost assessment, construction support, monitoring and evaluation of various schemes, management information services and supervision of construction (civil) works. It is expected that the maximum value of consultancy contracts will be below US$100,000 per contract for firms and US$50,000 for individual consultants.

13. The following methods of selection will be adopted depending upon size and complexity of assignment, as defined in the manual/Consultancy Guidelines:

- Quality and Cost Based Selection (QCBS)
- Selection under Fixed Budget (FBS)
- Least-Cost Selection (LCS)
- Selection based on Consultantôs Qualifications (CQS)
- Single-Source Selection (SSS)
- Individuals

Review Requirements

Prior Review

(i) Works and Goods: All ICB contracts and the first two NCB contracts each valued over US$1,000,000 equivalent for works and US$100,000 equivalent for goods, every year during the program.

(ii) Consultancy Services: All contracts valued over US$100,000 equivalent for firms, including NGO services and above US $50,000 equivalent for individuals.

Post Review

14. All contracts not covered under prior review will be subject to post award review. The ToR for the independent auditors, to be engaged by the GoUA, would also include procurement review of selected contracts. The Bank on its part will review the reports of the auditors in addition to conducting its own post award review on sample basis.

Social Audit

15. The Procurement Manual spells out arrangements for social audit for GPs and Community driven procurement.

Complaint Handling Mechanism

16. Procurement Manual also includes provision for complaint handling mechanism.

Procurement Plan

17. As per the draft guidelines for SWAp, issued in 2002, a three-year rolling procurement plan is required to be prepared. However, the government does not prepare a rolling budget for three years and therefore, only an annual plan in alignment with the budget can be prepared. The borrower has prepared annual plan for the first year of the project. The annual plan will be forwarded to the Bank by end of

December, each year, which will be followed for the next financial year, i.e., April 1 to March 31.The annual plan and its amendments as required, will be subject to clearance by the Bank.

Bidding Documents

18. Bankôs SBDs will be followed for ICB. For NCB, the documents of the sector institutions will be followed, subject to modifications required to comply with the accepted NCB procedures as per Attachment. One set of NCB documents will be forwarded to the Bank for its clearance, before initiating procurement. For GPs and community the manual provides for the requisite formats.

19. The weaknesses of the Implementing Agencies are envisaged to be addressed through super-imposition of agreed measures in the procurement procedures of the state entities engaged in the program implementation and incorporated in the Procurement Manual prepared and agreed with the GoUA. The NCB procedures (See Attachment 1), also address some of the issues, such as negotiations, uniform bidding documents, etc.

Capacity and Risk Assessment

20. A Procurement Capacity and Risk Assessment as well as the review of procurement procedures, of the Implementing Agencies, were carried out and the following recommendations made pursuant to the same, have been incorporated in the Procurement Arrangements/Manual:

- Establishment of adequate procurement organization
- Standardization of Bidding Documents
- Preparation of Procurement Manual
- Review of Procurement Procedures
- Independent Appeal Mechanism
- Procurement Audit
- Regular Training Facilities

21. Of the agencies engaged in the procurement process for the program, SWSM and PMU have exposure to public procurement processes and they had followed Bank guidelines in the implementation of the Swajal project. UJN and UJS, the sector institutions have procurement set-up within the organizations. Engineers with exposure to procurement are engaged in the procurement. These institutions will, however, require adequate guidance in the beginning to follow procedures acceptable to the Bank. The UWSSCs/GPs will require training and support organizations to help them develop schemes and community involvement in procurement.

22. The overall procurement risk is medium to high.

23. The risk is proposed to be minimized by (i) standardizing the procedures and documents; (ii) involvement of community; (iii) provision of independent audit; (iv) social audit; and (v) grievance mechanism, besides supervision and review requirements.

The following action plan is agreed with the GoUA for capacity building:

Sr. No.	Subject	Year 1			Year 2
		3 Months	6 months	12 months	
1.	Creation of procurement organization/cell in SWSM/ PMU	**X**			
2	Selection of trained personnel to man the procurement organization	**X**			
3	Training ï SWSM (PMU), DWSM (DPMU), GPs		**x**	**x**	Continuous process
4	Review of existing procurement procedures	**X**			
5	Preparation of Procurement Manual	**X**			
6	Preparation of Standardized Bidding Documents	**X**			
7	Introduction of complaint handling and appeal mechanism		**x**		
8	Introduction of Procurement Audit			**x**	

Misprocurement:

24. The Bank does not finance expenditures for goods, works, and consultancy services which have not been procured/ contracted in accordance with the agreed provisions of the financing agreement and as further elaborated in Procurement Plan agreed with the Bank. In such cases, the Bank will declare misprocurement and it is the policy of the Bank to cancel that portion of credit allocated to the goods, works, and consultancy services that have been misprocured. The Bank may, in addition, exercise other remedies provided for under the Financing Agreement. Even once the contract is awarded after obtaining ñno objectionò from the Bank, the Bank may still declare misprocurement, if it concludes that the ñno objectionò was issued on the basis of incomplete, inaccurate, or misleading information furnished by the Borrower or the terms and conditions of the contract had been modified without Bankôs prior approval.

Frequency of Procurement Supervision Missions Proposed

25. Procurement supervision shall, generally, be part of the Bankôs periodic supervision/ review missions, and will be undertaken once every six months.

Attachment 1

26. An organized system exists in the UJN and UJS for the procurement of goods, works, and services based on the rules and regulations of the state government as enunciated in the financial hand books of the state of U .P. (Adopted also by GoUA) as modified from time to time by GOsô on the relevant subjects. The procedures followed are more or less the same as that of the state Public Works Department. Sector Institutions will follow their existing procurement procedures, as applicable for procurement of goods, works and services (other than the Consultancy services) under the program, subject to following provisions for new investments (SWAp basket) in the RWSS sector:

i. Equal opportunity to all eligible bidders without regional preferences and all the bidders have the same information to compete in providing goods and works. Foreign bidders will not be precluded from bidding against NCBs issued. NCBs for procurement of works may require the bidders to offer bid prices in local currency.

ii. No preference shall be given to any bidder other than domestic preference in case of ICB. The Sector Institutions shall select the most appropriate method for the specific procurement as given below:

- ICB, contracts above US $ 10 million (approximately Rs 45 crores) for works and US $ 200,000 (approximately Rs 90 lakhs) for goods in each case.
- NCB, contracts up to US $ 10 million (approximately Rs 45 crores) for works and up to US $ 200,000 (approximately Rs 90 lakhs) for goods in each case.
- Limited Competitive Bidding/Shopping, contracts up to US $ 100,000 (approximately Rs 45 lakhs) for works and goods in each case.
- Direct Contracting, proprietary items, such as spare parts, software, books, periodicals etc. up to US $ 10,000 (approximately Rs 4.5 lakhs) equivalent per contract meeting requirements stated in the Procurement Manual and petty items costing up to US $ 1,000 (approximately Rs 45,000) per contract may be procured through direct contracting.
- Community Driven Procurement, the procedures are described in the Procurement Manual.

iii. Bids will not be rejected at the sole discretion of any authority. Reason of rejection must be disclosed to the bidders.

iv. There will be no requirement of registration with State Departments/ Sector Institutions beyond the Limited Competitive Bidding (LCB)/ Shopping limit of Rs 45.00 lakhs for works and goods. However sector institutions will ensure that the process of registration is open and only the firms that meet the criteria shall be registered for Limited Competitive Bidding.

v. Award of contract shall be made to the lowest evaluated responsive bidder, who is qualified and capable to perform and not necessarily to the lowest bidder.

vi. The result of bidding process shall be disclosed to all bidders, through details placed on the website. Reason for rejection of bids shall be given to the bidders.

vii. Bidding documents shall state either that (a) bid prices will be fixed or (b) that price adjustments will be made to reflect any changes (upwards or downwards) in major cost components of the contract, such as labor, equipment, materials, and fuel. Price adjustment provisions are usually not necessary in simple contracts involving delivery of goods or completion of works within eighteen months, but shall be included in contracts, which extend beyond eighteen months. Prices may be adjusted by the use of a prescribed formula (or formulae) which breaks down the total price into components that are adjusted by price indices specified for each component provided by the supplier or contractor. The method to be used, the formula (if applicable), and the base date for application shall be clearly defined in the bidding documents. If the payment currency is different from the source of the input and corresponding index, a correction factor shall be applied in the formula, to avoid incorrect adjustment. The Sector Institutions will be required to prepare and finalize the sample bidding documents for NCB, after review of the draft by the Bank, so as to ensure appropriate incorporation of the observations contained in this Chapter. The possibility of use of banksô standard bidding document will be explored.

viii. No exemption will be given to any organization, from submission of Earnest Money or Bid Security Deposit, as this, amounts to unfair advantage to the beneficiary of such exception.

ix. Works contracts shall be awarded to competent and capable contractors and the contractor shall be responsible for supply of all materials. No materials shall be transferred by the employer either on free issue or on issue rate basis. Contractor will not be forced to procure materials from any specified firms or agencies. For this purpose, Sector Institutions will include in the Bidding Documents, clear and elaborate Specifications and provisions relating to Inspection for the purpose of ensuring Quality Control and Testing Facilities for compliance with the Specifications.

x. The following provisions shall also apply and shall be suitably incorporated in the Bidding Documents for bids invited on NCB basis:

- Invitations to bids shall be advertised in at least one widely circulated national daily newspaper, at least 30 days prior to the deadline for the submission of the bids.
- No special preference will be accorded to any bidder either for price or for other terms and conditions when competing with foreign bidders, State owned enterprises, small-scale enterprises or enterprises from any given State.
- There shall be no negotiation of price with the bidders, not even with the lowest evaluated bidder without prior clearance of the Bank.
- Re-bidding, if required for reasons whatsoever, will be resorted to only after prior clearance of the Bank.

xi. For the purpose of engaging services of consultants, the procedure, as outlined in the Chapter III of the Procurement Manual, shall be followed.

xii. The MVS may be divided into components of works by their nature and specifications which can be given as separate contracts to different contractors based on technical parameters.

Annex 9: Economic and Financial Analysis

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

Summary Economic Analysis

1. Cost benefit NPV=U $68 million; ERR = 20 percent

2. **Background:** The economic analysis for the SWAp program is based on a representative sample of 89 villages in 68 GPs for single-village schemes (SVSs) and 60 villages in 36 GPs for MVSs. A specially designed survey was carried out for 2,660 households for SVS and 3,050 households for MVS to get baseline information; and an additional sample of 583 ñcontrol householdsò for SVS and 162 ñcontrol householdsò for MVS to document data on the post-project scenario. The information from the ñcontrol householdsò has been used for assessing the likely benefits due to improved water supply services. The cost side information is based on a representative sample of schemes selected across the 13 districts on the basis of sources of water supply and the type of proposed technology:

Cluster 1: SVS-Gravity ï Spring
Cluster 2: SVS-Gravity ï Gadhera (GG)
Cluster 3: SVS-Tube well (including OHT TW/ pumping)
Cluster 4: SVS-Hand Pump
Cluster 5: SVS-Mixed Technology (Hand Pump & Gadhera; Tube well and HP; GG and Pumping)
Cluster 6: MVS-Gravity ï Gadhera
Cluster 7: MVS-Tube Well (including OHT TW/ pumping)

3. The economic analysis has been carried out separately for each of the above seven schemes and for the program as a whole, using likely technology mix and the phasing proposed for the SWAp.

4. **SWAp Benefits:** The proposed program is justified on the basis of direct benefits to more than 4,64,160 households and 28,47,664 rural population under the SWAp program. The rate of growth of population is considered to be 1.74 percent per annum. Based on the survey data and secondary sources of information, the likely quantifiable benefits due to the proposed SWAp interventions are:

Water Supply:
- Value of time saved in water collection;
- Value of incremental water;
- Value of savings in (existing) capital and recurring costs.

Sanitation:
- Value of time savings from reduction in travel time due to shift from open defecation to household toilets;
- Value of health benefits due to reduction in incidence of diarrhea and gastroenteritis.

5. The time *spent* for water collection has been obtained from the field survey data, with appropriate weights for dry and wet seasons. Based on the survey data, about 3.3 hrs/household/day is currently spent on water collection and the expected time savings is about 3 hrs/household/day after the program implementation. Time savings of 90 percent is applied for the proportion of households preferring domestic connections and 60 percent for households preferring public standposts (based on similar studies carried out in the past). Also, based on household survey data, an assumption of 15 percent households preferring domestic connections and 85 percent preferring standposts is considered for the analysis. The

time saving has been valued at the opportunity cost of labor, based on the number of days of gainful employment. *Incremental (additional) water* will be available to the project beneficiaries due to improvements in the existing service level. In the absence of a detailed demand curve, the average demand price (approximated by the average of the current and future cost of water) has been used to value the incremental water. *Savings in travel time for open defecation* is considered as a benefit, and it is assumed that the post program travel time spent by households with toilets is nil. This effective time saving has been valued at the opportunity cost of labor. The *capital cost saved* (periodic rehabilitation or replacement of existing schemes) has been valued by taking the least-cost technology option (handpump) for the analysis. Also, the *existing O&M and other recurring costs* are assumed as savings and considered as benefits for the cost-benefit analysis.

6. The benefits from *reduced incidence of diarrhea and gastroenteritis* has been considered and three types of health benefits quantified:

- Reduction in mortality and loss of direct man-days (captured by DALYs);
- Reduction in loss of indirect man-days (by the attendant, usually the female household member);
- Reduction in treatment-related expenses.

7. Apart from these, environmental and institutional strengthening and capacity-building benefits are also expected to accrue, but these have not been quantified. The main benefits are due to time savings.

8. **Program Cost:** The total program cost for SWAp including the water supply, catchment-area protection and environmental sanitation is Rs 96243 lakhs. All costs, estimated for the program are expressed in constant prices, net of taxes. The average unit cost of capital investment per habitation for SVS and MVS is about Rs 6 lakhs and Rs 9 lakhs respectively. The estimated latrine cost is Rs 4800 per household and the software costs are Rs 1554 per capita for SVS and MVS. A wide variation in cost is expected across villages, depending on the number of households in the village, new schemes to be provided, and the extent of augmentation of existing water supply schemes. The O & M cost depends on the type of scheme and varies from Rs 10 to Rs 144 per capita. The above costs are extrapolated for the entire state, based on the following phasing of schemes: 5 percent of schemes expected in the first year, 13 percent, 22 percent, 33 percent, and 27 percent in second, third, fourth, and fifth year, respectively. The software cost (including awards/rewards, capacity building, and program management) are extrapolated based on the projections for five years: 12.8 percent, 18.4 percent, 28.6 percent, 29.4 percent, and 10.8 percent in first, second, third, fourth and fifth year, respectively. The overall benefit-cost analysis is based on the phasing and mix of schemes as given above.

9. **ERR and Sensitivity Analysis:** The economic rate of return (ERR) of the SWAp program is estimated to be 20 percent. Sensitivity tests based on assessed risks indicate that the program is able to absorb negative impacts and still generate positive ERR. For example, the program can sustain:

- Significant decreases in benefits or increases in total costs: A 66 percent increase in total costs or a 36 percent decrease in total benefits, or a combined 23 percent increase in total costs and decrease in total benefits reduce the program ERR to 12 percent;
- Implementation delays which would delay benefits: If benefits are delayed by 4 years, the ERR falls to 15.14 percent;
- Large reduction in time saving from water collection and household latrines: If all villages are able to realize only 65 percent of time saving from water collection and household latrines, the program ERR would fall to 12 percent;
- Significant decreases in benefits or increases in water supply cost: A combined 23 percent increase in water supply cost and decrease in benefits reduces the program ERR to 12 percent;
- 50 percent of water supply schemes fails after 10 years reduces the ERR to 17 percent.

10. The following tables present information on the ERR and sensitivity analysis:

Economic Rate of Return

Clusters	Cluster Types	ERR: Water Supply-Hardware and Software	ERR: Sanitation-Hardware and Software	ERR: Total Program Cost	NPV: Cost Benefit (Rs Lakhs)	BC Ratio
Cluster 1	Gravity ï Spring	26%	33%	28%	11202	2.10
Cluster 2	Gravity ï Gadhera	18%	23%	19%	3656	1.45
Cluster 3	Tube well (including OHT TW/pumping)	17%	18%	18%	126	1.34
Cluster 4	Hand Pump	24%	18%	22%	515	1.71
Cluster 5	Mixed Technology (Hand Pump & Gadhera; Tube well and HP; GG and Pumping)	22%	18%	21%	1930	1.62
Cluster 6	Gravity MVS	24%	18%	23%	26919	1.71
Cluster 7	Pumping MVS	30%	19%	27%	937	2.03
Entire Program		21%	18%	20%	29329	1.58

Sensitivity of ERRs

CRITERIA	ERR(%)
Base Case Value	20%
Increase in Costs	
10% increase in total cost	18%
20% increase in total cost	17%
30% increase in total cost	16%
Switching Value: 66% increase	12%
Decrease in Benefits	
10% decreases in total benefits	18%
20% decrease in total benefits	16%
30% decrease in total benefits	14%
Switching Value: 36% decrease	12%
Combined Increase in the Total Costs and Decrease in Total Benefits	
Increase in the Costs and Decrease in Benefits by 5%	18%
Increase in the Costs and Decrease in Benefits by 10%	17%
Increase in the Costs and Decrease in Benefits by 15%	15%
Increase in the Costs and Decrease in Benefits by 20%	13%
Switching Value: Increase in the Costs and Decrease in Benefits by 23%	12%
Reduction in Time Saving	
10% Reduction in Time Saving	19%
20% Reduction in Time Saving	18%
30% Reduction in Time Saving	17%
Switching Value: 65% Reduction in Time Saving	12%
Changes in Population Accessing Toilets	
Without Household Latrines	29%

CRITERIA	ERR(%)
25% triggered to have private toilets	21%
50% triggered to have Private toilets	20%
Changes in Opportunity Cost	
No. of Days of gainful employment considered 200 days	17%
No. of Days of gainful employment considered 150 days	13%
Gender Benefits	
Benefits only to Women	15%
No benefits to Women	14%
Combined Increase in the Water Supply Costs and Decrease in Water Supply Benefits	
Increase in the Costs and Decrease in Benefits by 5%	19%
Increase in the Costs and Decrease in Benefits by 10%	17%
Increase in the Costs and Decrease in Benefits by 15%	16%
Increase in the Costs and Decrease in Benefits by 20%	14%
Switching value: Increase in the Costs and Decrease in Benefits by 23%	12%
Part of the Schemes Failing after 10 years	
10% of Scheme fails after 10 years	20%
20% of Scheme fails after 10 years	19%
30% of Scheme fails after 10 years	18%
40% of Scheme fails after 10 years	18%
50% of Scheme fails after 10 years	17%
Delay in Benefits	
Benefits are delayed by 1 year	20%
Benefits are delayed by 2 years	18%
Benefits are delayed by 3 years	17%
Benefits are delayed by 4 years	15%

Annex 10: Safeguard Policy Issues

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

1. **Environment Management Framework:** The EMF provides a roadmap, which shows how the key environmental issues would be identified, assessed, managed, and monitored during implementation for incorporation of environmental management measures into the program planning, execution, and O&M. The project will launch the SVS and MVS schemes, referred to as subproject, in about 1,000+ habitations in all districts of the state. The EA attempts to understand and analyze the environmental impacts from diverse perspectives and develops a suitable management plan applying technical, ecological, and financial considerations. It contains all baseline environmental data relevant to the project. The report also analyzes the range of issues, concerns, and challenges in the rural water sector as well as those specific to the project itself.

2. The EMF has been developed, based on the EA findings, to assist the implementation of management measures under the project. The roles and responsibilities of different stakeholders and an M&E system also form part of this EMF. The environmental impacts have been analyzed with respect to the different RWSS options that could be used under this project. If the individual schemes are not properly planned, designed, constructed, operated, and maintained with the following issues in mind, adverse impacts could potentially occur.

3. **Water Scarcity:** The state receives surplus precipitation every year and is a source to many perennial rivers of northern India (i.e., Ganga and Yamuna). Despite this, accessing water for drinking and irrigation purposes has been a major challenge in the state. The undulating terrain and geology of the area in general does not support the long-term retention of water on its hilly slopes. In addition, the EA finds water scarcity is a cumulative result of various environmental degradations. Reduced (both in quality and quantity) vegetation cover due to depleting forest cover, overgrazing by livestock, erosion of top soil due to faulty/intensive agricultural practices and other developmental activities (as roads, mining, industry urbanization, etc.) have resulted into gradual reduction of the aquifer recharging capacity of the hills in general. Although the causes are many, the key ones include large-scale deforestation, forest fire, intensive grazing pressure, fuel wood pressure on catchments, and fragmented land holdings that often create bottlenecks for catchment treatment interventions.

4. **Degradation of Micro Catchment:** Considering that the proposed project is guided by a demand-driven approach, it is expected to cover all districts and their available water sources in their respective catchments. The EA clearly suggests that silt load on rivers and run-off water along the catchments has significantly made many water supply sources unsustainable. Catchment treatment has primarily been the responsibility of Forest, Agriculture, and Watershed Management Departments. Clearly, the interventions from these line departments have not been adequate. The project will use SWAp to ensure a collective effort for reviving the degraded catchments in SVS and MVS.

5. **Water Quality Issues:** Increasing levels of water contamination due to anthropogenic activities is slowly becoming an area of concern. Open defecation, lack of means to dispose animal waste, and garbage are major contaminating factors in the state. Available information suggests that only 16 percent of rural households have access to proper sanitation facilities and less than 2.2 percent of rural households have garbage/compost pits. Frequent flash floods and storm water also carry residues, posing environmental risks for water storage of the piped water supply schemes. According to the EA study, the cattle generate about 1600 kg dung/village/day and most of the villagers do not have cattle shed. Therefore, livestock residues are generally carried by run-off water polluting the downstream water sources. Most of this bacteriological contamination gets aggravated during monsoon periods. The EMF

has provided a clear mitigation strategy on water quality surveillance including the use of H2S strip test at the community level.

6. **Possible impact on downstream ecosystem and settlements:** One of the direct adverse impacts of the individual water supply schemes is anticipated to be the impact on down stream ecosystem and downstream human settlements that depend upon the same water sources. The waste (both solid and liquid) discharge of uphill villages affect the downhill villages in different ways. The waste of uphill villages is drained out in the streams going to downhill villages. The waste also contaminates subsoil water going down hill. Therefore, the waste (solid and liquid) of uphill villages must be discharged/ managed properly so that they do not contaminate directly or indirectly water sources of downhill villages. A clear strategy proposed for tapping required water supply without affecting the natural flow of the stream. The leftover discharge after tapping by different source should be such that some water is still left in the stream, especially in lean periods, to maintain stream ecology.

7. The state of Uttaranchal is well-known for its rich biodiversity providing favorable niche for different habitats, flora and fauna. The ecological impacts of the project activities are anticipated to be of two types: i) one arising from reduced discharge (due to tapping of water by the proposed water supply scheme) to support down stream ecosystem (which is already discussed above), and ii) the other one pertains to damaging of ecological resources such as the forests in the subproject area due to the construction activities envisaged in the water supply schemes. In response, the EMF has provided adequate management measures (under Environmental Codes of Practice) to comply during the construction and laying of pipe-distribution networks.

8. **Management Measures:** Environmental management strategy, along with technical specification required for effective implementation, is captured under eight Environmental Codes of Practice (ECoPs). These ECoPs respond to the environmental priorities analyzed as part of the EA.

1. ECoPs for Identification of Sources of Water Supply
2. ECoPs on Protecting Surface Water Supply Source and Ensuring Sustainability
3. ECoPs on Protecting Ground Water Supply Sources and in Ensuring Sustainability
4. ECoPs on Water Quality Monitoring
5. ECoPs on selection of Safe Sanitation Technology Options (Including Drainage) at Individual Household and Community Level
6. ECoPs on Selection of Location for Community Toilets
7. ECoPs on Safe Sullage Disposal and Organic Waste Management
8. ECoPs on Safe Solid Waste Management at Individual Household and Community Level

9. **Management Measures for Source Protection and its Sustainability:** Source protection and its sustainability have been identified as a priority area of intervention under the environment component the proposed project. Various interventions have already been demonstrated in the earlier Swajal projectôs micro-catchment treatment options for source protection and recharge of the local aquifer. This project has consolidated from those interventions with improved practices (under ECoPs) appropriate for local environment. The sources include perennial spring water, stream water and uncontaminated shallow and deep aquifers that can be tapped through single-villageï based piped water supply schemes.

10. Because 75 percent of the rural population in the state depends on spring water sources for drinking and cooking, the project has developed systematic/controlled spring water management norms within the communityð so that the very purpose of this source protection is not defeated. A detailed mitigation plan along with cost estimation during implementation is stated in the EMF and includes the following steps:

Step 1: The source centered catchment-area plan is to be implemented in phases involving identification and assessment of source catchment, creating a baseline database for the source catchment, delineation of zones for treatment within the source catchment and prioritization of issues and interventions. The planning and execution will involve three stages of interventions: 1) technical intervention plan, 2) cost estimation plan, 3) and a monitoring plan. While the Support Organization (SO, mainly NGOs/CBOs), GP, and other resource agency will provide technical support for developing and finalizing these plans, the management and implementation remains the responsibility of the UWSSC.

Step 2: A planning phase agreement will be signed between SO/GP, DPMU and UWSSC. The agreement will clearly define the description of activities to be performed during the planning phase. The agreement will have provisions for source catchment assessment, problem identification, catchment-area identification, and zonation. The provision for the manpower and cost required for the various activities to be performed will also be part of the planning phase agreement. The outcome of the planning phase will be the Detailed Environmental Project Report (DEPR). The Plan Formulation and Source Centered Catchment-Area Conservation and Management Program will be depicted in the DEPR.

Step 3: The Environmental Specialist (ES) of the DPMU will ensure that the UWSSCs and SOs selected for implementing the subproject activities follow the guidelines developed under the environmental mitigation plan. It will also ensure that the source protection work start before the onset of monsoon. As part of the implementation process, the UWSSC in coordination with the local SO will need to submit a technical and a financial report (stating key activities expected to be undertaken by UWSSC for source catchment treatment). The technical report should include all environmental concerns: availability of water sources, measures for source protection, technical support required from GP and DPMU, type of support required from the line departments during the construction and operation of the catchment treatment plan for source protection, water quality monitoring strategy, and emergency (contingency) plan for any environmental crisis during the operation. This activity can also be clubbed with water supply scheme plan.

Step 4: Based on the technical report, the ES at the DPMU will undertake a quick appraisal of the proposed environmental management plan (EMP) validating the technical report. Based on ES report, the DPMU will directly release the budget to the UWSC for implementing the EMP. The DEPR will be implemented through provisions of the Implementation Phase Quadrapule Agreement (IPQA), signed between the DPMU, SO and the UWSSC. The DEPR will be the integral part of the IPQA. The outcome of the IPQA will be the successful implementation of the DEPR.

Step 5: An external independent service agency will be placed to supervise the progress of the implementation. The agency will be required to monitor the monthly progress and provide technical support and guidance to the GP/UWSSC. The agency will be also responsible for the quality of the work under implementation.

11. **Large-scale degradation of micro-catchment:** In view of the large-scale degradation of the catchment, the project has made a conscious attempt to ensure that each subproject is adequately supported by a small micro-mini-catchment treatment plan. This includes contour/terrace-bunding, creation of percolation tanks, plantation/grass land development on village forest and reserve forest land including percolation/recharge pits and drainage treatments. While the catchment area for recharging any spring/stream sources would require a larger intervention in a micro-catchment, the project intervention would focus on a limited scale (focus on micro-mini-catchment) and the remaining watershed interventions would be dovetailed with other line department activities. Catchment treatment to be carried out at the subproject level is expected to include treatment of an average of 5 Ha of forest/community/private land around the source as part of the source protection measures (detailed cost and technical specifications for different micro-mini-catchment treatment interventions are provided at

Annex 2 of EMF). However, for long-term sustainability of the schemes located in critical watershed areas, the PMU shall coordinate with the Forest Department & Watershed Management Directorate of GoUA to implement larger interventions in these areas. Key mitigation steps required to treat a micro-mini catchment of the source supplying water include the following:

i. Protecting the catchment area from grazing animals.
ii. Rotational grass cutting (for fodder) may be permitted in line of rangeland management as appropriate in the catchments.
iii. Check dams will be made in all streams and gully plugging will be done in gullies of micro-mini-catchments.
iv. Staggered contour trenches will be made as suggested in the case of source protection.
v. Plant locally suitable and useful brushwood (as Rhus, Carissa, Debregeasia, etc.), 15 cm. below the edge of each trench.
vi. Plantation of multipurpose trees (1000 trees/ ha.) will be encouragedð mainly locally suitable broad leaved species as oak, horse chestnut, walnut, mulberry, etc.

12. **Uncontrolled and overgrazing on catchments:** Another perceived environmental risk for source protection includes the grazing pressure on the source catchment and the fuel wood consumption. Considering that the livestock has been an integral part of the existing livelihood system, the subproject will encourage stall-feeding practices and reduce grazing pressure on the catchment areas through various community mobilization interventions.

13. Overgrazing can be controlled by encouraging people to keep lesser high-yielding cattle than more low-yielding cattle. Proper grazing management activities will be encouraged in line of close and open rangeland management practices. Besides this, the carrying capacity of grazing land can also be improved promoting plantation of good quality of grasses, legumes of higher fodder value, and making staggered contour trenches to improve the moisture regime. This will also include encouraging people to use crop residue as fodder through a collective effort at the village level. The project plans to have extensive community mobilization action by using SO for creating such awareness activities.

14. **Fuelwood pressure on catchments:** A preliminary assessment suggests that fuel wood is primarily collected from the catchments that are having rich biomass base in the villages and the same catchments are also having the sources for water supply schemes. In light of this, the project has made provision for creating awareness for alternative energy campaign (promoting LPG) for cooking and stall-feeding for livestock. While the does not intend to undertake any capital intensive hardware intervention, software intervention in the form of campaign advocacy for reducing fuel wood pressure includes the following steps.

i. Promotional camps for LPG in coordination with private companies will be undertaken in each subproject areas.
ii. Encouraging/promoting biogas plants in subproject areas.
iii. The project will be promoting wood-saving devices (Priyagni Angethi, Smokeless Chullah) and alternate source of energy (solar) in collaboration with other line departments.

15. **Water Quality Issues:** Information available with different line departments dealing with water sector development suggests that heavy metal and chemical contamination may not pose any risk to the project. However, bacteriological contamination may pose some concern for the project. Keeping this in mind the project has developed specification for treating the water in each subproject area. The proposed treatment involves three-fold interventions: i) undertaking regular residue chlorine testing (residue assessment) by the UWSSC, ii) testing of water samples from different single-/multiple-village schemes (particularly from source collection point and storage tank) periodically (twice in a year) for

bacteriological parameters by using locally available techniques, iii) testing of water sample (random basis) for any possible heavy metal and chemical contamination once in two years. The bacteriological test will be undertaken to assess the coliform and fecal coliform count in the common storage tank from which the water is taken for households and common standpost supply. Detailed water quality monitoring will be done at the time of selecting a site for tapping water sources. Critical water quality parameters identified would be kept in mind for future follow-up actions. Water testing will be done twice every year at the end of July and February (pre-post monsoon), especially for bacteriological contamination. Provisions are also made for emergency water sample testing in case of any eventuality such as epidemic in the subproject area or in vicinity.

16. The monitoring of physiochemical and bacteriological parameters under this project include; turbidity, color, taste, odor, pH, total dissolved solids, total hardness, chlorides, calcium, nitrates, iron, flourides, sulphates, and bacteriological parameters such as MPN Coliform bacteria per 100 ml & E coli per 100 ml. The project will adhere to the permissible limit/standard prescribed by the Indian National Standard. Institutional arrangement has been made by PMU for testing of water samples in local laboratories, which can be conveniently accessed from different subproject areas. Because testing of Coliform should be done within a short period, H_2S strip will also be encouraged by the project. Accordingly, UWSSC will be trained for regular testing by using H_2S with the help of the support organization. The key mitigation interventions required as part of the water quality surveillance include the following:

i. Undertaking chemical and bacteriological water testing source point prior to any execution work of the water supply scheme.
ii. Undertaking regular bacteriological test during the implementation phase for assessing coliform infections by the UWSSC/GP/SO by using H_2S stripsð preferably during pre-post-monsoon times.
iii. At village level, training of UWSSC along with SOs on the use of H_2S for quarterly bacteriological testing of water samples. Each UWSSC will be provided with H_2S strips by the DPMU. The SO will provide all catalytic support for undertaking regular water quality surveillance and mitigation measures in consultation with GP. The PMU in coordination with DPMU will make regular training arrangements for the UWSSC, Sos, and selected GP members on how to undertake bacteriological testing by using H_2S.
iv. In case of any Coliform presence, the project will coordinate with the health department and supply chlorine tablets for disinfecting the sources and storage tanks. Besides, regular checking of chlorine residues in the storage tanks will also be an integral part of the project.
v. Project will establish a mechanism in coordination with the Pollution Control Board to allow user UWSSC/GP to use its laboratories for water sample testing on demand basis.
vi. At district and regional level, the state does not have any water testing laboratory facilities at the district level. Having adopted sector wide approach (SWAp), the project must ensure that the concerned line departments (Health, Pollution Control Board, and Peyjal Nigam) develop decentralized water testing facilities so that the UWSSC can access such facilities at the district level. At present, the state has only two laboratories with Spectrophotometer and Atomic Absorption Spectrophotometer (AAS) facilities managed by the Pollution Control Board.
vii. While the project does not anticipate any industrial effluent discharge in the districts that can pose any concern for the chemical and heavy metal contamination in downstream areas, it has taken adequate precaution for any such possible contamination. Most of the districts in Uttaranchal state fall into hilly terrain of Himalayan region (high-/mid-Himalayan and Sivalik hilly regions). However, there are two districts (Haridwar and Udamsingh Nagar) in the state that fall into the plain Tarrai-belt of India. These two districts are subject to intensive agricultural practices with increasing use of pesticides and fertilizers. According to the PMU, most of the single-/multiple-village water supply schemes in these two districts are likely to tap groundwater as the main

source for water supply. Considering the increasing trend of using pesticides and fertilizers in these two districts, the project has made provision of regular tubewell water testing for chemical as well as bacteriological contamination.

17. **Possible impact due to inadequate environmental sanitation:** According to GoUA, only 16 percent rural households have access to proper sanitation facilities and less than 2.2 percent of households have garbage or compost pits. Considering that majority of the project areas fall into hilly terrain, run-off of frequent flash floods and storm water may carry residues posing environmental risks for water storage of the piped water supply schemes. The project has made provision for garbage pits, soak pits, and compost pits, and for improved drainage system in subproject areas.

18. For non-biodegradable waste the project will adopt extensive community mobilization strategy to segregate these wastes at primary level (glass, metal, plastic, paper, etc.). As part of the SWAp, the project will also coordinate with specialized agencies to help in safe disposal or recycling these wastes. The projectôs community mobilization strategy will promote basic primary segregation at the village/household level; of waste having economic value, waste having hazardous implications and waste that can be disposed at the village level with collective input from the community itself. The waste having economic value will be collected at one place near village and it will be disposed with the help of a professional garbage collector. The biodegradable waste will be collected in garbage pits in form of landfills and subsequently used as compost. The site should be selected in a way that the waste will not contaminate any water source.

19. The garbage bit will be about 6 feet (1.8 meter) deep with 8 x 4 feet (1/2 x 2.4 meters) width in section. It should be covered by mud plaster and be permitted to decompose for 6 to 8 weeks. In intervening period the second pit be made and used. As far as possible these compost pits be made on household basis so that there is no problem of compost sharing. Care should be taken to select site from which there is no leaching to any drinking water source. The project will also encourage for soak pits at the household and community level for improved environmental sanitation practices through advocacy and campaign.

20. **Institutional Framework:** Under this project, the SWSM is the implementing agency with the overall project management support provided by the PMU. The PMU will consist of resource people from different disciplines and government departments and will be responsible for managing the entire project. They will be supported by the DPMUs in implementing the project at the district level. The PMU will nominate one of its members as Environmental Coordinator (EC) for being exclusively responsible for ensuring the implementation of EMF in all the single-/multiple-village water supply schemes. S/he shall be the overall in charge of implementing and coordinating the activities under the EMF of the project. The EC at the state level will be supported by an ES at PMU level. The DPMU as the district nodal agency will decide on the allocation of the core responsibility and ensure coordination between the GP and the UWSSC for better environmental management and mitigation of the adverse impacts. An Environmental Specialist will be appointed at the district level for proving regular technical and monitoring support to each of the schemes. At the village level, the UWSSC will be implementing the project with support from a local SO. The SOs could be an NGO/CBO, a technical institution, or individuals having necessary technical skills.

21. **Monitoring and Performance Tracking:** To evaluate the efficiency of mitigation measures, the monitoring will focus on the two types of observations in the subproject areas: 1) visual observation of overall environmental conditions; and 2) monitoring specific environmental quantitative/qualitative parameters. Project design is purposefully flexible to encourage a variety of approaches. It was agreed that the project design will need to allow for rapid learning and replication. At the same time, it is important to learn as systematically as possible from these interventions. The M&E component has been

designed accordingly. The M&E system will permit to learn from the variety of approaches adopted during proposed project so that the lessons learned can subsequently be fed back into the project.

22. **Land Availability/Contribution:** Land requirement arises for four purposes: (i) water source; (ii) water treatment plants; (iii) construction of ground level or overhead tanks (G/OHT) or cisterns; and (iv) water transmission and distribution pipelines as well as sullage/storm water drains. Majority of land requirement will be met out of public/forest lands. In a few cases, private lands will need to be secured. However, it is not essential that a particular piece of land at a particular place is needed. Rather, lands can be chosen from a number of alternatives. The projectôs activity/success does not depend upon having a particular piece of land. Thus, lands need not be enquired involuntarily and hence OP 4.12 is not triggered. Detailed procedures on securing lands are enumerated below.

23. Transmission/distribution as well as sullage/storm drainage in the case of single- village schemes, are laid mostly in public land or along public streets and no land needs to be acquired. In a few cases pipelines may have to pass through private agriculture fields. Because the pipeline is laid at least 90 cms below ground elevation, no land acquisition is needed, but permission from the land owner is taken. If such permission is not forthcoming, then alternative pipe routing is used, even if it is more expensive to do so. In a few cases, where sources are located in the forests, transmission lines may have to be drawn through the forest lands. In such a situation, procedure as described below will be adopted.

24. **Water Source:** Uttaranchal being a hilly state with about 65 percent of lands under forests, most water sources are located in the forests. Government of India (GoI) as well as state government has laid out rules and procedures for making use of forest lands for non-forest purposes. Key principles underpinning the land transactions are:

(i) GP will make an application to the concerned Divisional Forest Officer (DFO) requesting lands specifying location and area required as well as purpose for which it will be used.

(ii) DFO will examine and recommends to the state government which has powers to accord approval for lands up to one hectare and area beyond one hectare needs approval by GoI. Past experience of Swajal (Bank assisted) as well as other projects implemented by other sector institutions indicate that a majority of schemes may not require more than 0.3 Ha (single-village schemes) and 0.8 Ha (multi-village schemes). This means that most approvals will be sought within the state.

(iii) Land transfer will require fees to be paid toward lease amount, annual lease rent, and net present value (NPV), amounts will be determined by DFO. The state government recently has waived off lease amount and rent for drinking water projects. It may be noted that NPV is meant for compensatory afforestation elsewhere in lieu of forests given up for the project. NPV varies from location to location and will be calculated on the basis of not only area but also forest density. NPV normally varies between Rs 580,000 and Rs 10,00,000, average being Rs 750,000 per hectare. Projectôs requirement of lands being 0.3 to 0.8 Ha, sum required will be a maximum of Rs 225,000 to Rs 600,00,000.

25. GOHT & Treatment Plant. When plots of lands are to be acquired for project installations, their ownership could be either public or private. While it is easier to access public land, arrangements will have to be made for securing privately owned land. All land purchases will be voluntary by donations or market led sale-purchase transactions. This is being adopted as it is not mandatory that a particular piece of land alone will be required without which scheme can not be grounded. In other words, the projectôs activity/ success does not depend upon having a particular piece of land.

26. Single-Village Water Supply Schemes. The prevailing normal practice in the state is to obtain such land plots either through voluntary donation or by outright purchase. In the experience of the recently

concluded Bank assisted project, there were about 10 percent cases wherein communities secured lands by outright purchase. But, again, actual cash transactions were very few and most of them were based on a mutual understanding between the owner and the community. This practice is expected to continue for the proposed project too for single village water supply schemes.

27. Multi-Village Water Supply Schemes. In this case, the number of outright purchases with cash transaction could be higher. In these cases, responsibility of making available lands will rest with GPs/VWSCs. Detailed principles underpinning securing lands are described below:

i. Project will not resort to involuntary land acquisition.
ii. To a large extent, as a first priority, efforts will be made to secure Public lands (lands belonging to revenue or other departments).
iii. If public lands are not available, private lands will be secured in the open market.
iv. All three partiesð GP, UWSSC, and the respective state bodyð together will decide on the selection of land, taking into account suitability from all perspectives.
v. Prices. A district-level advisory committee headed by the Block Pramukh with broad-base participation by other functionaries (Block Development Officer, Jr. Engineer of the state sector agency, Gram Pradhan, and Chairman of UWSSC) will involve in negotiations with prospective sellers and arrive at a negotiated price. This will be endorsed by DWSM.
vi. Right of Refusal. A seller will have the right to refuse to sell his/her piece of land.
vii. Thus, all (private) land transactions will meet the following criteria:
    a. the land in question will be free of squatters, encroachers, or other claims of encumbrances;
    b. no lands will be secured which has semi/permanent structures;
    c. activity for which a specific land is chosen has the general acceptance by the local community (as endorsed by the GP through consultations);
    d. verification of the voluntary nature of land sale purchase in each caseð independent monitoring and certification by SWSM;
    e. due transparent measures for publicizing the rules of securing lands as well as the transactions thereof;
    f. land transfers will be complete, land title will be vested with the (GP/ UWSSC);
    g. no project activity will start unless payments are made and title transfer are completed; and,
    h. provision will be made for redressal of grievances (ROG). PMU (SWSM) will act as a redressal house, with an officer designated particularly for monitoring the land purchases.

28. Lands will not be secured from socially poor and vulnerable households (such as those belonging to Scheduled Castes/Scheduled Tribes) who, after alienation, will be left with less than a minimum holding essential to support livelihood.

29. **Forestry Policy:** Considering that majority of the sources will lie in the reserve forest areas, various options for managing reserve forest lands for source sustainability have been explored. Under the existing forest rules and regulation of the Forest Department (FD), source sustainability interventions in the reserve forest areas can only be undertaken by the FD officials. However, the project follows a community participatory model with active participation of GPs and water user groups. In light of this, the operational implications of the proposed interventions (biological and physical interventions) in the EMF were discussed extensively with the FD and four options were agreed. It was further agreed that it is the discretion of the local GP and UWSSC to opt for any of the options as appropriate to the local conditions.

Option (i): For successful implementation and effective coordination at the state level, it was agreed that a state-level committee consisting of Secretary (Drinking Water), GOUA; Secretary (Forests), GOUA; Additional PCCF (Projects); Addl. PCCF (JFM); CCF (Planning & Finance); CCF (Garhwal); members of UJN and UJS and two members from PMU will be formed and responsible for providing necessary functional direction to the DFOs (Divisional Forest Officer) for ensuring that the EMF is implemented in true spirit for source sustainability.

Option (ii): Because the project is primarily implemented through Panchayats and the UWSSC will be receiving the funds for undertaking interventions pertaining to source sustainability, the UWSSC must ensure that:

- At least one member of the Van Panchayat Committee is a regular member of UWSSC.
- UWSSC will coordinate with the Van Panchayat member/committee and with the help of Environmental Specialists (DPMU), source sustainability plan will be duly endorsed by the local forest authorities and the same authorities will be involved in technical supervision of the implementation process.

Option (iii): It was suggested that the stipulated catchment treatment budget of the individual schemes could also be transferred from DPMU to DFO for executing the works in accordance with the scheme development in case the UWSSC express inability to take up the envisaged work.

Option (iv): It is possible that the project may encounter a scenario in which more than 50 percent of the source area may fall in the reserved forest and the remaining in either community area or in private land. Under such circumstances, where communities (through UWSSC and Van Panchayat) are unable to resolve the problem, the funds may be transferred to the concerned DFO for executing the work.

30. The program also ensures a detailed procedure for the use of forest land as per those specified by GoI. The EMF provides for adequate management measures (during scheme implementation) to mitigate adverse impacts of any activity in reserve forest areas. The Forestry policy is triggered and the program supports the overall objective of the policy and has ensured that the design of the EMF is fully consistent with it.

Annex 11: Project Preparation and Supervision
UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

	Planned	Actual
PCN review		February 3, 2004
Initial PID to PIC		February 11, 2004
Initial ISDS to PIC		February 10, 2004
Appraisal	July 5, 2005	February 20ï 27, 2006
Negotiations	August 22, 2005	April 3ï 6 & July 28, 2006
Board/RVP approval	October 20, 2005	
Planned date of effectiveness	November 1, 2005	
Planned date of mid-term review	January 31, 2008	
Planned closing date	November 30, 2010	

Key institutions responsible for preparation of the project:

- Department of Drinking Water, Government of Uttaranchal
- Cell of State Water and Sanitation Mission, Government of Uttaranchal
- Program Management Unit (Swajal Directorate)
- Uttaranchal Peyjal Nigam
- Uttaranchal Jal Sansthan

Bank staff and consultants who worked on the project included:

Name	Title	Unit
Midori Makino	Senior Financial Analyst and Task Team Leader	AFTU1
Smita Misra	Senior Economist and Co-Task Team Leader	SASEI
Oscar Alvarado	Senior Water & Sanitation Specialist	SASEI
N.V.V. Raghava	Municipal Engineer	SASEI
Tashi Tenzing	Senior Sanitary Engineer	SASEI
S. Satish	Senior Social Development Specialist	SASES
Sonia Chand Sandhu	Senior Environmental Specialist	SASES
Ranjan Samantary	Environmental Specialist	SASES
Ivor Beazley	Senior Financial Management Specialist	SARFM
Manmohan Singh Bajaj	Senior Procurement Specialist	SARPS
Mark Ellery	Water & Sanitation Specialist	EWDSA
Nina Masako Eijima	Senior Counsel	LEGMS
Thao Le Nguyen	Senior Finance Officer	LOAG2
Neha Kaul	Research Analyst	SASPR
Param Iyer	Peer Reviewer	EWDWS
Wambui Gichuri	Peer Reviewer	EWDWP
Mamata Baruah	Program Assistant	SASEI
Jayashree Srinivasan	Program Assistant	SASEI

Bank funds expended to date on project preparation:

1. Bank resources: $ 545,706
2. Trust funds: $ 0
3. Total: $ 545,706

Estimated Approval and Supervision costs:

1. Remaining costs to approval: $ 18,000
2. Estimated annual supervision cost: $ 80,000

Annex 12: Sanitation

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

Present Sanitation Situation

1. As described in the previous chapters, the Swajal project achieved major accomplishments, including an increase in coverage of sanitary latrines from about 10 percent to 60 percent. The use of these latrines has been evaluated and is estimated to be 97 percent[15] within the intervention villages. The key elements of the sanitation program under the Swajal project were:

1. Emphasis on household level behavior change, with inputs of; (i) hygiene education; and (ii) subsidy for BPL (Rs 2250/-), BPL ST/SC (Rs 2,375/-) & APL (Rs 1,500/-).
2. Promotion of a single technology option.
3. Intensive IEC campaign within target villages.
4. Implementation by DPMU at the district level with NGO support and hiring of community mobilizers at the habitation level (within a VWSC focus).

2. GoUA is currently implementing the TSC Program initiated by GoI in all districts. Out of the 13 districts, 11 districts are allocated among UJN (2 districts), UJS (2 districts) and DPMU (7 districts). The PRI Department is the nodal institution for sanitation in the state.

Proposed Strategy for Scaling up Sanitation

3. The challenge facing GoUA is that of learning from the successes of Swajal I and developing an appropriate strategy for scaling this up across the state. The key principles to be considered for scaling up are the following:

i. **Adopt a total concept of sanitation (Solid waste management, drainage, excreta disposal, hygiene, and safe handling of water) but focus on highest health risk first.** A sustainable approach to sanitation will need to go beyond a focus on ósanitation as latrines,ô to a more comprehensive understanding of the linkages between individual and communal waste and the impact of this on our environment.

ii. **Focus on stopping open defecation rather than building latrines.** The sustainability of the approach is higher if the program focus is directed to the desired outcome to deliver (and measure) behavior change rather than the sanitary outputs. In this context, it is critical to make people realize the adverse effects of open defecation and its implication for others.

iii. **Focus on creating demand for sanitation services at the community level rather than at the individual level.** Triggering behavior change at a communal level is a more likely to establish an environment to sustain improved sanitation outcomes. The need to internalize the public good dimension of private behavior makes the involvement of the community central to the approach. The importance of education and awareness creation emerge as critical ingredients for successful sanitation outcomes.

iv. **Strategic approach to IEC:** The development of a strategic decentralized community-responsive approach to IEC should enable a identification of ówhat key messages should be delivered to what community.ô The intention here is to: (a) train local NGOs and government functionaries to ascertain ówhat are the triggers for sanitationô; (b) óat what level these triggers should be targetedô within

[15] Can be assessed in the proposed óSanitation Studyô

respective villages; and (c) utilize a series of participatory means to trigger the desired behavioral change.

v. **Sustainability is higher if fiscal incentives are directed to rewarding communal outcomes rather than subsiding outputs at the individual level.** The self-realization of individuals and communities is enhanced when an onus is placed on them to discover and deliver certain outcomes. Subsidies directed at individual level are often difficult to administer and do not meet the desired objective. Financial and non-financial rewards at all tiers (including a state-level competition for environmental sanitation) for these achievements support the process and motivates communities and agencies for achieving the public good outcomes and leveraging existing national reward schemes like *Nirmal Gram Puraskar.*

vi. **Greater PRI involvement with focus on the GP for implementation.** The sustainability of local institutions of self-government is well recognized in both theory and Government of India policies. Carving out a central role for the GP and a facilitation role for the higher level PRIs is a central tenant of embedding and sustaining the deliverables.

vii. **Promote and encourage a variety of technology options.** The promotion of a range of technological options enables individuals and communities to choose technologies that are appropriate to their financial and social circumstances. Inviting and rewarding technological innovations can also promote greater local ownership.

viii. **Ensuring sanitation facilities in formal and non-formal schools.** Children are critical for generating lasting changes in sanitation and hygiene behavior. They act as change agents in transferring knowledge and hygienic practices, both child to child and child to parent. Sanitation facilities with appropriate technology, infrastructural linkage (assured water supply) and management structure (Parent-Teacher Association/Village Education Committee) for maintenance should form an integral part of collective action and sanitation promotion. The GP will need to play a pivotal role in coordinating with the Education Department and facilitating the implementation of sanitation in primary/secondary schools, anganwadis, and balwadis.

Annex 13: Guidelines for Selection and Appraisal of Schemes

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

Introduction

1. This Annex lays out the framework for selection and appraisal of SVS and MVS under the demand responsive and participatory RWSS SWAp that GoUA is embarking on. These guidelines present broad principles for selection and prioritization of schemes in order to ensure implementation of the Governmentôs policy of funding MVS only if SVS are not found to be feasible The O&M of water supply systems are the responsibility of the community for SVS and for the intra-village system for MVS; this therefore calls for handing over of existing schemes maintained by the sector institutions to the communities in an operational condition. The following sections present a stepwise approach to select, prioritize, and appraise the schemes that fall under various categories: along with a broad Project Cycle that will be followed.

A. SELECTION AND PRIORITIZATION

Investment Guidelines

2. The investment guidelines for new investments under SWAp shall follow the steps mentioned below. Monitoring and Evaluation would be part of all these steps.
(a) Preparatory Steps: This includes dissemination of the Sector Program in the state and compilation of existing water sources database, and institutional mobilization to implement the program.
(b) Scheme Selection: Schemes to be covered under various categories are identified and pre-feasibility to collect basic data of the schemes is collected
(c) Agreement by the constituting GPs: The GPs constituting an SVS/MVS confirm to go ahead with either of the scheme.
(d) Implementation of the Project Cycle: Planning and Implementation of the schemes, following a set of defined activities and involving the community**.**
(e) Post-Implementation Support: Support to the GPs post-implementation to monitor sustainability

Process for Each Step

(a) Preparatory Steps

Dissemination of Sector Program: The first activity shall focus on the dissemination of the Sector Program at the state, district and block levels. Workshops will be carried out at each level by the DPMUs to make the PRIs, Government Institutions, and other stakeholders aware of the sector program, the main principles, and the roles and responsibilities of the program partners. Various IEC tools shall be utilized in this process. Service Agencies will be hired to assist GoUA in carrying out these activities.

Water Resources Database: Using the existing information regarding the water sources, the water resources database shall be compiled. The critical areas with source depletion shall be demarcated on district wise basis. Coordination will be ensured between the various implementing agencies in carrying out these activities.

Constitution of district level Technical Review Committee (TRC): A district level TRC shall be constituted comprising engineers from UJN/UJS/PMU and representatives of PRIs. The roles of TRC are to review the technological options proposed by the various User Groups, analyze the justification of SVS/MVS, and to finalize the Scheme Identification Plan for SVS/MVS.

District Schedule of Rates: The district schedule of rates for various engineering items/works/materials (local and non-local) shall be prepared by the concerned implementing agency based on the existing analysis of rates and shall be approved by the DWSM. This schedule of rates shall be updated on yearly basis or as and when needed. There shall be a single set of schedule of rates for each district and for all the implementing agencies.

Staff Mobilization: The requisite staff of PMU/UJN /UJS for carrying out the various activities as per the sector Program shall be deployed. UJN / UJS would establish their district units with staff strength as required.

Selection of Support Organizations: Support Organizations would help the GPs/UJN/UJS in planning and implementation of the SVS/MVS. The SO selection process shall be initiated at the DWSM level through advertisement in the newspapers. The Project Manager, DPMU shall be responsible for this activity. A shortlist of eligible SOs based on desk review would be prepared by DPMU at the district level. Teams comprising members from the district units of PMU/UJN /UJS shall carry out the field assessment of the short listed SOs. The DPMU shall rank them and submit to DWSM for its approval. DWSM would approve the final list of the SOs.

(b) Scheme Selection

3. The broad principles for resource allocation are as under. This priority shall be guided by the existing ground realities.

- First priority to Not Covered(NC) Habitations
- Second priority to Partially Covered(PC) Habitations

4. Following are the categories for the various investment planning under SWAp:

Category-1: SVSs and simple MVSs that are technically and institutionally feasible to be carried out by DWSM
Category-2: Larger MVSs to be carried out by UJN and some MVSs requiring reorganization by UJS
Category 3: Devolution of existing schemes (mostly SVS) currently under UJS and UJN to the PRI.

Procedure for Categories 1 & 2:

5. The DWSC shall initially prioritize GPs based on Rajiv Gandhi Survey 2003 information on the habitations. For subsequent Batches, the process would be refined, including exploring seeking Expression of Interest from GPs. In parallel, the UJN/UJS would identify the existing large MVSs that need to be rehabilitated under the program, using NC/PC criteria. The Pre-feasibility of these prioritized/short listed GPs/existing large MVSs shall be carried out by the DWSC through pre identified local resource persons/Support Agencies selected at the district level, exploring futher information and analyzing SVS/MVS justification. The GPs are ranked based on criteria given in Operations Manual. After appraising and confirming justifications, the district level Technical Review Committee (TRC) would clear *Scheme Identification Plan* for each GP in case of SVS; or for a cluster of GPs in case of MVS. The final GPs/SVS/MVS scheme identification shall be approved by DWSM.

Procedure for Category 3:

6. The SVS currently under maintenance by UJN/UJS would be devolved to the GPs following a certain process. The following requirements are to be met in this process.

Requirements:

i. The water supply scheme in the GP/village will be made fully functional by the existing maintenance agency after following procedure of demand driven approach.

ii. The inventory of the water supply assets shall be checked and finalized before handing over to the GP by the existing maintenance agency.

iii. User Water and Sanitation Sub Committee (UWSSC) will be formed corresponding to each scheme as per the UWSSC notification no 308/86(16)/2005 dated 19th May, 2005 of GoUA. This committee will plan, design, implement and operate & maintain the schemes with technical assistance from sector institutions.

iv. UWSSC will be properly and adequately trained in managing the scheme in technical, institutional and financial matters. The training of Village Maintenance Worker (VMW) and the UWSSC Treasurer will be more focused with emphasis on practical hands on training.

Implementation Steps:

7. UJS and UJN would update the list of all existing SVS, which are presently being operated and maintained by them, along with necessary information such as design life, status of habitations covered (NC/PC/FC) etc. The GPs would then be prioritized based on NC/PC Criteria similar to Category 1 and 2, and using local knowledge/existing database initially; and then they are ranked. Preliminary Plans would be prepared by the district divisions of UJN/UJS for implementation of activities as per the following heads, in a report ñDevolution ï Identification Planò. The final GP/schemes identification for devolution shall be approved by DWSM.

- Whether new scheme is required
- Major re-organization is required
- Minor repairs will be sufficient.

(c) Agreement by GPs of SVS/GPs of MVS to participate in Sector Program

8. After the selection of the GPs/schemes, necessary initial IEC campaign and orientation activities would be conducted in the villages by the selected Service Agencies. Following this, the interested / participating GPs in all the above categories shall give an undertaking for participation in a sector Program on the principles of demand responsive approach and community sharing in capital and O&M cost.

(d) Implementation of the Project Cycle

9. Following the confirmation of GPs to participate in the program, a Project Cycle would be followed to go through the cycle of detailed planning, implementation and O&M.

Project Cycle for Single Village Schemes:

10. Each scheme cycle would include four phases, including pre-planning (2 months), planning (5 months), implementation (6-18 months), and operation and maintenance phase (4 months). The duration of each phase would depend on the scheme size, technology type, and the time it takes to mobilize the communities.

(a) Pre-planning phase: major outputs of the pre-planning phase include the following;

- Selection of nodal support organization/consultant for initial IEC in the villages
- Selection of support organizations
- Selection of support agencies
- Prioritization / selection of the GPs
- Collection of baseline data

(b) Planning phase would include the following activities;

- Mobilization of communities, participatory planning, and use of SARAR tools, problem investigation and analysis.
- Hygiene and environmental sanitation awareness and Womenôs Development Initiative.
- Identification of user groups depending on the number of water supply schemes to be implemented in the GP and formation of the User Water and Sanitation Committees (UWSSC).
- Trainings on community development, health, feasibility and design of water supply schemes, catchment area protection, accounting, etc. for SO/GP/UWSSCs members.
- Identifying technology options, conducting feasibility analysis, and agree to do meetings for separate UWSSCs.
- Preparation of detailed project reports and community action plan for each of the UWSSCs.
- Collecting upfront cash and O&M community contribution for water supply, sanitation, and catchment area protection works.
- Preparation of implementation phase proposals.
- Environmental sanitation activities shall start in the planning phase and shall continue up to the operations and maintenance phase.

(c) Implementation Phase would include the following activities:

- Construction of water supply schemes, environmental sanitation works and catchment area protection works by GP/UWSSC through community engineer procurement by DPMU or a district implementing agency contracted out by DPMU
- Independent third party construction supervision by SA and facilitation and monitoring by DPMU or a DIA contracted out by DPMU.
- Collecting balance cash/labor and O&M community contribution for water supply, sanitation, and catchment area protection works.
- Training and community development, health, womenôs development initiatives, book keeping, O&M (technical, institutional, financial) etc. for GP/UWSSCs members. These activities shall be carried out by the SO of the planning phase.
- Preparation of the Implementation Phase Completion Reports.

(d) Operation and Maintenance Phase would include the following activities:

- DPMU shall provide technical assistance to the UWSSCs after commissioning of the water supply schemes to place the O&M system in order. Trainings at the GP/UWSSC level will be conducted by DPMU or a DIA contracted out by DPMU. The O&M system shall comprise the technical, financial, and the institutional systems. After establishing O&M system and completing all the activities stipulated in the agreement, the DPMU shall formally exist from the GP.

Project Cycle for Multi village Schemes

11. Each scheme cycle would include four phases, including pre-planning (2 months), planning (6 months), implementation (12-30 months), and operation and maintenance phase (4 months). The duration of each phase would depend on the scheme size, technology type, and the time it takes to mobilize the communities.

(a) Pre-planning phase: major outputs of the pre-planning phase include the following;

- Selection of nodal support organization/consultant for initial IEC in the villages
- Selection of support organizations
- Selection of support agencies
- Prioritization / selection of the GPs
- Collection of baseline data
- After the selection of the GPs, the selected nodal SO/consultant shall immediately conduct initial IEC campaign and awareness creation amongst communities of all the concerned GPs to be covered under the MVS regarding the project ï its principles and implementation approach, objectives, scope, roles and responsibilities of various project partners and mobilization, wall writings, slogans, etc.

(b) Planning phase would include the following activities;

- Mobilization of communities, participatory planning, and use of SARAR tools, problem investigation and analysis for all participating GPs to be covered under MVS
- Hygiene and environmental sanitation awareness and Womenôs Development Initiative.
- Identification of user groups within each GP and formation of the User Water and Sanitation Committees (UWSSC).
- Formation of Federation of UWSSCs for overall coordination amongst individual UWSSCs and management of the MVS. The federation will comprise all the Gram Pradhans of the concerned GPs and the Treasurer of the respective UWSSCs. The Chairman of the federation will be elected from the members.
- Trainings on community development, health, feasibility and design of MVS schemes, catchment area protection, accounting, etc. for SO/GP/UWSSCs members.
- Identifying technology options, conducting feasibility analysis, and agree to do meetings for separate UWSSCs and federation of UWSSCs.
- Preparation of detailed project reports and community action plan for each of the UWSSCs. This shall entail the overall DPR for the entire MVS and separate DPRs for the intra village distribution for each of the UWSSC.
- Collecting upfront cash and O&M community contribution for water supply, sanitation, and catchment area protection works from the concerned users through UWSScs by the federation of UWSSCs.
- Preparation of implementation phase proposals.
- Environmental sanitation activities shall start in the planning phase and shall continue up to the operations and maintenance phase.

(d) Implementation Phase would include the following activities:

- Construction of the common assets of MVS head work, distribution main up till the head of each covered village by the sector institution.
- Construction of intra village water supply schemes, environmental sanitation works and catchment area protection works by GP/UWSSC through community engineer.
- Independent third party construction supervision by SA and facilitation and monitoring by DDW.
- Collecting balance cash/labor and O&M community contribution for water supply, sanitation, and catchment area protection works by the individual UWSSCs.
- Training and community development, health, womenôs development initiatives, book keeping, O&M (technical, institutional, financial) etc. for GP/UWSSCs members. These activities shall be carried out by the SO of the planning phase.
- Preparation of the Implementation Phase Completion Reports.

(d) Operation and Maintenance Phase would include the following activities:

- DDW shall provide technical assistance to the UWSSCs after commissioning of the water supply schemes to place the O&M system in order. Trainings at the GP/UWSSC level will be conducted by DDW. The O&M system shall comprise the technical, financial, and the institutional systems. After establishing O&M system and completing all the activities stipulated in the agreement, the DDW shall formally exist from the GP. The individual UWSSCs shall collect the O&M charges from their respective user groups. A part of this revenue collected will be given by the federation of UWSSCs to the sector institution for managing the common assets of MVS while the balance will be utilized by the UWSSs for the O&M of their respective intra village water supply network.

(e) Post Implementation Support

12. The DPMUs/District Divisions of UJN and UJS shall provide technical assistance to the UWSSCs as and when required by them, especially in the case of emergencies.

B. APPRAISAL

Appraisal Check Lists for Schemes

a) Non-negotiables

- Capital cost sharing according to the GoUA policy
- 100% O&M according to the GoUA policy
- Integration of water supply, sanitation, and catchment
- Commitment to become Open Defecation Free village over time
- UWSSC formation
- Renovate existing w/s scheme, where technically feasible
- Proposed sources are undisputed, perennial etc.

b) Intermediate Appraisal Milestones

13. The following intermediate milestones are to be ensured by the implementing agency and appraised by the Appraisal agency.

***Planning* Phase**

i. Formation of user groups. Ensure that UWSSCs are formed on representative basis, based on technological options.
ii. ñAgreed to Doò meeting on Community Action Plan, ratified by GP in an open community wide meeting
iii. The prepared Community Action Plan includes integrated planning for water supply, sanitation and catchment protection, health and hygiene; plans proposed are based on investment guidelines; check whether community participation is satisfactory.
iv. Community has collected 1% of upfront cash contribution, and 50% of the annual O&M

Implementation Phase

1. Construction of water supply schemes, environmental sanitation works and catchment area protection works as per the DPR.
2. Compliance of the comments of the Independent third party construction supervision Service Agency.
3. Balance 50% community cash contribution collection, besides the labor contribution towards capital cost sharing and 50% cash O&M community contribution for water supply, sanitation and catchment area protection works by the end of the implementation phase.
4. Completion of the trainings on community development, health, womenôs development initiatives, book keeping, operation and maintenance (technical, institutional, financial) etc. for GP/UWSSCs/MVSLC members.
5. Preparation of the Implementation Phase Completion Reports.

Operation and Maintenance Phase

1. Conduction of Sustainability Evaluation Exercise in the GPs and providing feedback to the GP/UWSSCs/MVSLC members.
2. Preventive and scheduled maintenance is carried out as per the guidelines.
3. Regular chlorination is carried out by the Village Maintenance Worker
4. The sources taken for the schemes are tested for their water quality on a regular basis.
5. Regular billing and collection of consumer receivables is being done.
6. Regular, scheduled meetings of GP/UWSSCs/MVSLC members are being held and the minutes of the meetings are properly recorded and necessary follow-up done.

Annex 14: Uttaranchal Fiscal Analysis

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

Uttaranchal Preliminary Fiscal Analysis

Key Fiscal Indicators

	2001-02	2002-03	2003-04	2004-05*	2005-06
% of GSDP				R.E.	B.E.
Revenue Deficit	0.77	3.30	5.00	6.24	2.29
Fiscal Deficit	3.26	6.42	9.24	15.65	11.68
Capital Expenditure (net)	2.49	3.12	4.24	9.4	9.4

*Pre Actuals for 2004-05 would be a few % points lower.

1. The overall financial situation of Uttaranchal does not show much improvement since its inception in November 2000. The revenue and fiscal deficit show an upward trend with a huge increase in the revised estimates (REs) for 2004-05. However the state authorities are assured that the actual deficit figures will be much lower and they expect a further decline in 2005ï 06. Salaries are around 10-11 percent of Gross State Domestic Product (GSDP). However this figure is likely to increase further on account of recruitments in health and education sectors. Revenue deficits as a percent of revenue receipts steadily increased from 3.6 percent in 2001-02 to 21.2 percent in 2003-04.

2. On the positive side however interest payments as a percentage of revenue receipts show a steady decline from 19.7 percent in 2001-02 to 14.8 percent in 2005-06. The stateôs own tax revenue has increased from 6.9 percent (of GSDP) in 2001-02 to a budgeted 13.6 percent in 2005-06. With a five-year tax holiday to industries coming to an end in 2007, the state expects a further increase in revenue. They are also expecting a 12.5 percent royalty from the Tehri Dam project.Net capital expenditure also shows a steady upward trend. The state has implemented VAT from October 2005. It has also signed the MTFRM and passed the FRBM (Fiscal Responsibility and Budget management) Act in October 2005. They are expected to table the MTFP (Medium-Term Fiscal Plan) soon. The new budget which will be presented soon will provide the latest estimates and will be a basis for a more comprehensive fiscal assessment on the trends in the state.

3. The MTP (Medium-Term Development Program) for the RWSS project presented assumes that the state would fully qualify for the available earmarked grants totaling Rs 16.40 billion (2006ï 11). The requirements for capital investment will be met by funds from government sources (central and state), and community contributions with the gap being met by Bank funding. With the central government announcing the Bharat Nirman project (which also allows for funds for water supply projects), the state expects a further flow of funds.

Uttaranchal Fiscal Summary

As a % of GSDP	**2001–02**	**2002–03**	**2003–04**	**2004–05**	**2005–06**
				R.E.	**B.E.**
Revenue Receipts	21.0	23.2	23.6	29.2	31.7
A. Tax Revenue	9.6	10.1	10.9	10.8	13.6
States' own Tax Revenue	6.9	7.4	8.1	7.6	8.8
Sales Tax	3.7	4.0	4.3	4.2	4.7

As a % of GSDP	2001–02	2002–03	2003–04	2004–05	2005–06
				R.E.	B.E.
Excise	1.8	1.8	1.8	1.8	1.9
Stamps & Regn	0.7	0.9	1.1	0.9	1.2
Motor Vehicles Tax	0.5	0.5	0.6	0.6	0.7
Others	0.2	0.2	0.2	0.2	0.3
Share of Central Taxes	2.7	2.7	2.8	3.2	4.9
B. Non-Tax Revenue	11.4	13.2	12.7	18.4	18.1
State's own non-tax revenue	1.2	2.7	2.4	2.4	2.8
Grants from Centre	10.2	10.5	10.3	16.1	15.3
Revenue Expenditure	21.8	26.5	28.6	35.5	34.0
A. Social Services	8.6	10.6	11.1	13.5	13.2
Education	5.3	6.8	6.8	7.5	7.1
Health and Family Welfare	1.1	1.1	1.1	1.5	1.6
Water supply & Sanitation	1.3	1.0	1.0	2.1	1.7
Others	1.0	1.6	2.2	2.4	2.8
B. Economic Services	5.3	6.9	6.6	7.8	8.0
Agriculture and Allied Services	2.6	2.7	3.0	3.0	2.7
Rural Development	1.2	1.1	1.1	1.3	1.5
Irrigation and Flood Control	0.9	1.0	0.9	1.0	1.0
Energy	0.1	1.0	0.7	0.7	1.1
Other	0.5	1.1	0.9	1.8	1.6
C. General Services	7.4	8.6	9.6	12.9	12.0
Interest Payments	4.1	4.4	3.9	4.7	4.7
Administrative Services	2.4	2.6	2.7	3.5	3.0
Pensions	0.2	1.0	1.9	2.6	2.7
Other	0.6	0.7	1.1	2.1	1.6
D. Devolution to Local bodies & PRIs	0.5	0.5	1.3	1.2	0.9
Revenue Deficit	0.8	3.3	5.0	6.2	2.3
Capital Expenditure (net)	2.5	3.1	4.2	9.4	9.4
Fiscal Deficit	3.3	6.4	9.2	15.7	11.7
Primary deficit	-0.9	2.1	5.3	11.0	7.0

Annex 15: Documents in the Project File

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

A. Government of India/Government of Uttaranchal Policy Documents

1. Swajaldhara Guidelines
2. Total Sanitation Campaign Guidelines
3. Draft MoU between GoI and GoUA
4. Uttaranchal Rural Water Supply 2012 Vision Statement
5. Government orders and Cabinet notes outlining the GoUA RWSS sector policy
6. Sanitation Strategy of GoUA

B. Preparation Study Reports

1. Feasibility Criteria and Selection of GPs for Batch One
2. Capacity-building Strategy and Implementation Plan for RWSS Sector Institutions & PRIs
3. Roles & Responsibilities of Sector Institutions & PRIs
4. RWSS Sector: Coverage, Policy, Financial Aspects and MTDP
5. Multi Village Water Supply Schemes: State Policy & Sample Studies
6. Financial Management Manual
7. Economic Analysis
8. Operations Manual
9. Financial Viability and Institutional Modalities for Water Supply & Sanitation Services in ULBs
10. Design of Monitoring & Evaluation System
11. Procurement Manual
12. Environmental Analysis
13. Preparation of Project Implementation Plan
14. Communication Strategy
15. Social Assessment
16. Catchment-Area Conservation and Management Program
17. Technical Manual Assignment 1 & 2
18. Engineering Study Reports
19. Sanitation & Hygiene Promotion Strategy and Implementation Action Plan

C. Bank Staff Assessments

1. Aide Memoires
2. PCN, QER, and decision meeting minutes

D. Project Implementation Documents

1. Operations Manual
2. Technical Manual
3. Financial Management Manual
4. Procurement Manual
5. Environmental Assessment and Environmental Management Framework
6. Social Assessment
7. Community Development Manual
8. Capacity Development Plan
9. M&E Manual

Annex 16: Statement of Loans and Credits

UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

			Original Amount in US$ Millions						Difference between expected and actual disbursements	
Project ID	FY	Purpose	IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Revôd
P097036	2007	Orissa Socio-Econ Dev Loan II	150.00	75.00	0.00	0.00	0.00	224.65	0.00	0.00
P079675	2006	Karn Municipal Reform	216.00	0.00	0.00	0.00	0.00	215.46	-0.54	0.00
P078832	2006	Karnataka Panchayats Strengthening Proj	0.00	120.00	0.00	0.00	0.00	121.18	0.00	0.00
P093720	2006	Mid-Himalayan (HP) Watersheds	0.00	60.00	0.00	0.00	0.00	55.05	-1.68	0.00
P092735	2006	NAIP	0.00	200.00	0.00	0.00	0.00	203.18	0.00	0.00
P086414	2006	Power System Development Project III	400.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00
P079708	2006	TN Empwr & Pov Reduction	0.00	120.00	0.00	0.00	0.00	109.70	-6.85	0.00
P083780	2006	TN Urban III	300.00	0.00	0.00	0.00	0.00	282.62	18.37	0.00
P084792	2005	Assam Agric Competitiveness	0.00	154.00	0.00	0.00	0.00	141.87	16.22	0.00
P073651	2005	DISEASE SURVEILLANCE	0.00	68.00	0.00	0.00	0.00	62.00	16.42	0.00
P084632	2005	Hydrology II	104.98	0.00	0.00	0.00	0.00	104.46	30.78	0.80
P086518	2005	IN SME Financing & Development	120.00	0.00	0.00	0.00	0.00	19.40	7.73	0.00
P094513	2005	India Tsunami ERC	0.00	465.00	0.00	0.00	0.00	400.66	174.20	0.00
P077856	2005	Lucknow-Muzaffarpur National Highway	620.00	0.00	0.00	0.00	0.00	510.47	-29.53	0.00
P084790	2005	MAHAR WSIP	325.00	0.00	0.00	0.00	0.00	293.18	-16.48	0.00
P073370	2005	Madhya Pradesh Water Sector Restructurin	394.02	0.00	0.00	0.00	0.00	371.58	44.73	0.00
P085345	2005	ODS IV-CTC Sector Phaseout Project	0.00	0.00	0.00	53.04	0.00	35.92	-0.45	0.00
P077977	2005	Rural Roads Project	99.50	300.00	0.00	0.00	0.00	272.16	-21.87	0.00
P075058	2005	TN HEALTH SYSTEMS	0.00	110.83	0.00	0.00	20.06	81.91	10.55	13.06
P050655	2004	RAJASTHAN HEALTH SYSTEMS DEVELOPMENT	0.00	89.00	0.00	0.00	0.00	75.44	37.22	0.00
P073776	2004	ALLAHABAD BYPASS	240.00	0.00	0.00	0.00	0.00	168.45	99.65	0.00
P055459	2004	ELEMENTARY EDUCATION PROJECT (SSA)	0.00	500.00	0.00	0.00	0.00	101.61	-9.41	0.00
P079865	2004	GEF Biosafety Project	0.00	0.00	0.00	1.00	0.00	0.76	0.71	0.00
P082510	2004	Karnataka UWS Improvement Project	39.50	0.00	0.00	0.00	0.00	23.61	12.85	0.00
P073369	2004	MAHAR RWSS	0.00	181.00	0.00	0.00	0.00	142.53	23.99	0.00
P078550	2004	Uttar Wtrshed	0.00	69.62	0.00	0.00	0.00	63.19	-0.72	0.00
P073094	2003	AP Comm Forest Mgmt	0.00	108.00	0.00	0.00	0.00	56.49	-0.32	0.00
P071272	2003	AP RURAL POV REDUCTION	0.00	150.03	0.00	0.00	0.00	47.91	12.27	0.00
P076467	2003	Chatt DRPP	0.00	112.56	0.00	0.00	20.06	89.82	43.89	0.00
P075056	2003	Food & Drugs Capacity Building Project	0.00	54.03	0.00	0.00	0.00	44.66	24.24	0.00
P050649	2003	TN ROADS	348.00		0.00	0.00	0.00	266.75	74.78	0.00
P072123	2003	Tech/Engg Quality Improvement Project	0.00	250.00	0.00	0.00	40.11	151.42	51.39	-29.68
P067606	2003	UP ROADS	488.00	0.00	0.00	0.00	0.00	335.24	163.33	0.00
P074018	2002	Gujarat Emergency Earthquake Reconstruct	0.00	442.80	0.00	0.00	80.23	141.97	149.86	18.77

P071033	2002	KARN Tank Mgmt	0.00	98.90	0.00	0.00	25.07	60.61	52.52	0.62
P050653	2002	KARNATAKA RWSS II	0.00	151.60	0.00	0.00	15.04	85.80	61.19	0.00
P072539	2002	KERALA STATE TRANSPORT	255.00	0.00	0.00	0.00	0.00	135.30	35.63	0.00
P069889	2002	MIZORAM ROADS	0.00	60.00	0.00	0.00	0.00	32.01	9.02	0.00
P050668	2002	MUMBAI URBAN TRANSPORT PROJECT	463.00	79.00	0.00	0.00	0.00	377.76	178.96	0.00
P040610	2002	RAJ WSRP	0.00	140.00	0.00	0.00	15.04	83.46	46.99	0.00
P050647	2002	UP WSRP	0.00	149.20	0.00	0.00	40.11	101.71	109.14	0.00
P010566	2001	GUJARAT HWYS	381.00	0.00	0.00	0.00	101.00	38.76	139.76	108.76
P071244	2001	Grand Trunk Road Improvement Project	589.00	0.00	0.00	0.00	0.00	228.73	228.73	0.00
P067216	2001	KAR WSHD DEVELOPMENT	0.00	100.40	0.00	0.00	20.06	52.41	56.79	39.93
P070421	2001	KARN HWYS	360.00	0.00	0.00	0.00	0.00	77.32	62.32	0.00
P055454	2001	KERALA RWSS	0.00	65.50	0.00	0.00	12.27	15.37	14.88	2.77
P059242	2001	MP DPIP	0.00	110.10	0.00	0.00	20.06	12.65	19.62	-9.64
P055455	2001	RAJ DPEP II	0.00	74.40	0.00	0.00	0.00	26.87	16.94	0.00
P050658	2001	TECHN EDUC III	0.00	64.90	0.00	0.00	0.00	11.79	5.61	-3.68
P045049	2000	AP DPIP	0.00	111.00	0.00	0.00	0.00	15.97	7.64	0.00
P069376	2000	CFC PRODTN SECTOR CLOSURE ODS III INDIA	0.00	0.00	0.00	85.34	0.00	21.14	-5.51	0.00
P059501	2000	IN-TA for Econ Reform Project	0.00	45.00	0.00	0.00	12.03	19.08	27.13	4.03
P009972	2000	NATIONAL HIGHWAYS III PROJECT	516.00	0.00	0.00	0.00	0.00	136.00	136.00	62.66
P010505	2000	RAJASTHAN DPIP	0.00	100.48	0.00	0.00	0.00	40.59	31.42	29.75
P049770	2000	REN EGY II	80.00	50.00	0.00	0.00	18.00	41.70	57.98	56.98
P050657	2000	UP Health Systems Development Project	0.00	110.00	0.00	0.00	30.09	36.35	56.43	2.77
P050646	1999	UP Sodic Lands II	0.00	194.10	0.00	0.00	0.00	7.59	3.93	-3.23
		Overall Result	6489.00	5334.45	0.00	139.38	469.23	7274.28	2278.46	294.69

ERROR! UNKNOWN DOCUMENT PROPERTY NAME.

STATEMENT OF IFCôs

Held and Disbursed Portfolio

In Millions of US Dollars

		Committed				**Disbursed**			
		IFC				**IFC**			
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
2005	ADPCL	40.77	7.00	0.00	0.00	0.00	0.00	0.00	0.00
2006	AHEL	0.00	5.08	0.00	0.00	0.00	5.08	0.00	0.00
2005	AP Paper Mills	35.00	5.00	0.00	0.00	15.00	5.00	0.00	0.00
2005	APIDC Biotech	0.00	4.00	0.00	0.00	0.00	1.24	0.00	0.00
2002	ATL	14.15	0.00	0.00	9.36	14.15	0.00	0.00	9.36
2003	ATL	1.00	0.00	0.00	0.00	0.68	0.00	0.00	0.00
2005	ATL	9.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	BHF	10.64	0.00	10.64	0.00	10.64	0.00	10.64	0.00
2004	BILT	0.00	0.00	15.00	0.00	0.00	0.00	15.00	0.00
2001	BTVL	0.72	5.00	0.00	0.00	0.72	5.00	0.00	0.00
2003	Balrampur	12.41	0.00	0.00	0.00	12.41	0.00	0.00	0.00
2001	Basix Ltd.	0.00	0.98	0.00	0.00	0.00	0.98	0.00	0.00
2005	Bharat Biotech	0.00	0.00	4.50	0.00	0.00	0.00	3.30	0.00

1984	Bihar Sponge	5.83	0.00	0.00	0.00	5.83	0.00	0.00	0.00
2001	CCIL	6.00	0.00	0.00	5.75	6.00	0.00	0.00	5.75
2003	CCIL	1.50	0.00	0.00	0.00	0.59	0.00	0.00	0.00
1990	CESC	6.87	0.00	0.00	0.00	6.87	0.00	0.00	0.00
1992	CESC	9.82	0.00	0.00	21.89	9.82	0.00	0.00	21.89
2004	CGL	15.00	0.00	0.00	0.00	8.00	0.00	0.00	0.00
2004	CMScomputers	0.00	10.00	2.50	0.00	0.00	0.00	0.00	0.00
2002	COSMO	3.75	0.00	0.00	0.00	3.75	0.00	0.00	0.00
2005	COSMO	0.00	3.73	0.00	0.00	0.00	3.73	0.00	0.00
2005	DCM Shriram	30.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00
2003	DQEL	0.00	1.50	1.50	0.00	0.00	1.50	1.50	0.00
2005	Dabur	0.00	14.09	0.00	0.00	0.00	14.09	0.00	0.00
2003	Dewan	10.75	0.00	0.00	0.00	10.75	0.00	0.00	0.00
2006	Federal Bank	0.00	31.50	0.00	0.00	0.00	27.43	0.00	0.00
2001	GTF Fact	0.00	1.20	0.00	0.00	0.00	1.20	0.00	0.00
2006	GTF Fact	0.00	0.00	0.99	0.00	0.00	0.00	0.99	0.00
1994	GVK	0.00	5.00	0.00	0.00	0.00	5.00	0.00	0.00
2003	HDFC	100.00	0.00	0.00	100.00	100.00	0.00	0.00	100.00
1998	IAAF	0.00	0.47	0.00	0.00	0.00	0.30	0.00	0.00
2006	IAL	0.00	9.86	0.00	0.00	0.00	7.70	0.00	0.00
1998	IDFC	0.00	10.82	0.00	0.00	0.00	10.82	0.00	0.00
2005	IDFC	50.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
	IHDC	7.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2006	IHDC	8.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1995	IL&FS VC	0.00	0.03	0.00	0.00	0.00	0.03	0.00	0.00
2006	Indecomm	0.00	2.57	0.00	0.00	0.00	2.57	0.00	0.00
1996	India Direct Fnd	0.00	1.10	0.00	0.00	0.00	0.66	0.00	0.00
2001	Indian Seamless	6.00	0.00	0.00	0.00	6.00	0.00	0.00	0.00
1992	Indus VC Mgt Co	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
2006	JK Paper	15.00	11.50	0.00	0.00	0.00	11.26	0.00	0.00
2005	K Mahindra INDIA	22.00	0.00	0.00	0.00	22.00	0.00	0.00	0.00
2005	KPIT	11.00	2.50	0.00	0.00	4.00	0.00	0.00	0.00
2003	L&T	50.00	0.00	0.00	0.00	50.00	0.00	0.00	0.00
2002	MMFSL	8.69	0.00	7.76	0.00	8.69	0.00	7.76	0.00
2003	MSSL	0.00	2.29	0.00	0.00	0.00	2.20	0.00	0.00
2001	MahInfra	0.00	10.00	0.00	0.00	0.00	0.79	0.00	0.00
	Montalvo	0.00	3.00	0.00	0.00	0.00	1.08	0.00	0.00
1996	Moser Baer	0.00	0.82	0.00	0.00	0.00	0.82	0.00	0.00
1999	Moser Baer	0.00	8.74	0.00	0.00	0.00	8.74	0.00	0.00
2000	Moser Baer	12.41	10.54	0.00	0.00	12.41	10.54	0.00	0.00
2001	NIIT-SLP	8.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Nevis	0.00	4.00	0.00	0.00	0.00	4.00	0.00	0.00
2003	NewPath	0.00	9.31	0.00	0.00	0.00	8.31	0.00	0.00
2004	NewPath	0.00	2.79	0.00	0.00	0.00	2.49	0.00	0.00
2003	Niko Resources	24.44	0.00	0.00	0.00	24.44	0.00	0.00	0.00
2001	Orchid	0.00	0.73	0.00	0.00	0.00	0.73	0.00	0.00
1997	Owens Corning	6.83	0.00	0.00	0.00	6.83	0.00	0.00	0.00
2006	PSL Limited	15.00	5.19	0.00	0.00	0.00	4.98	0.00	0.00
2004	Powerlinks	75.34	0.00	0.00	0.00	66.24	0.00	0.00	0.00
1995	Prism Cement	5.54	0.00	0.00	1.50	5.54	0.00	0.00	1.50
2004	RAK India	20.00	0.00	0.00	0.00	20.00	0.00	0.00	0.00
1995	Rain Calcining	0.00	2.30	0.00	0.00	0.00	2.30	0.00	0.00
2004	Rain Calcining	10.00	0.00	0.00	0.00	10.00	0.00	0.00	0.00
2005	Ramky	3.86	10.61	0.00	0.00	0.00	0.00	0.00	0.00
2005	Ruchi Soya	10.00	10.00	0.00	0.00	0.00	7.50	0.00	0.00
2001	SBI	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

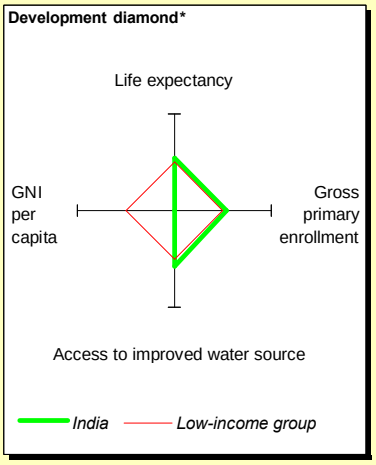
1997	SREI	3.21	0.00	0.00	0.00	3.21	0.00	0.00	0.00
2000	SREI	7.00	0.00	0.00	0.00	7.00	0.00	0.00	0.00
1995	Sara Fund	0.00	3.43	0.00	0.00	0.00	3.43	0.00	0.00
2004	SeaLion	4.54	0.00	0.00	0.00	4.54	0.00	0.00	0.00
2001	Spryance	0.00	1.90	0.00	0.00	0.00	1.90	0.00	0.00
2003	Spryance	0.00	0.95	0.00	0.00	0.00	0.95	0.00	0.00
2004	Sundaram Finance	44.32	0.00	0.00	0.00	44.32	0.00	0.00	0.00
2000	Sundaram Home	0.00	2.18	0.00	0.00	0.00	2.18	0.00	0.00
2002	Sundaram Home	7.39	0.00	0.00	0.00	7.39	0.00	0.00	0.00
1998	TCW/ICICI	0.00	0.80	0.00	0.00	0.00	0.80	0.00	0.00
2005	TISCO	100.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00
2004	UPL	16.48	0.00	0.00	0.00	16.48	0.00	0.00	0.00
1996	United Riceland	6.25	0.00	0.00	0.00	6.25	0.00	0.00	0.00
2005	United Riceland	8.50	0.00	0.00	0.00	3.00	0.00	0.00	0.00
2002	Usha Martin	0.00	0.72	0.00	0.00	0.00	0.72	0.00	0.00
2001	Vysya Bank	0.00	3.66	0.00	0.00	0.00	3.66	0.00	0.00
2005	Vysya Bank	0.00	3.51	0.00	0.00	0.00	3.51	0.00	0.00
1997	WIV	0.00	0.37	0.00	0.00	0.00	0.37	0.00	0.00
1997	Walden-Mgt India	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
	Total portfolio:	931.38	230.79	42.89	538.50	563.55	175.61	39.19	138.50

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
2004	CGL	10.00	0.00	0.00	0.00
2000	APCL	7.10	1.90	0.00	0.00
2004	CIFCO	0.00	0.00	22.07	0.00
2006	IDFC B Inc	0.00	0.00	0.00	100.00
2001	Vysya Bank	0.00	0.00	0.00	0.00
2006	Federal Bank	10.00	0.00	0.00	0.00
2001	GI Wind Farms	9.79	0.00	0.98	0.00
2004	Ocean Sparkle	3.00	0.00	0.00	0.00
2005	Allain Duhangan	0.00	0.00	0.00	0.00
2006	Lok Microfinance	0.00	2.00	0.00	0.00
	Total pending commitment:	39.89	3.90	23.05	100.00

Annex 17: Country at a Glance

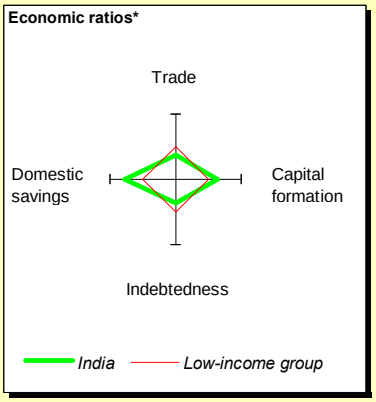
UTTARANCHAL RURAL WATER SUPPLY AND SANITATION PROJECT

POVERTY and SOCIAL	India	South Asia	Low-income
2004			
Population, mid-year *(millions)*	1,079.7	1,447	2,343
GNI per capita *(Atlas method, US$)*	630	590	510
GNI *(Atlas method, US$ billions)*	680.3	859	1,188
Average annual growth, 1998-04			
Population *(%)*	1.6	1.7	1.9
Labor force *(%)*	1.9	2.1	2.2
Most recent estimate (latest year available, 1998-04)			
Poverty *(% of population below national poverty line)*	29	..	..
Urban population *(% of total population)*	29	29	31
Life expectancy at birth *(years)*	63	63	58
Infant mortality *(per 1,000 live births)*	62	66	79
Child malnutrition *(% of children under 5)*	47	49	43
Access to an improved water source *(% of population)*	86	84	75
Literacy *(% of population age 15+)*	61	61	61
Gross primary enrollment *(% of school-age population)*	107	103	100
Male	111	108	105
Female	104	97	94



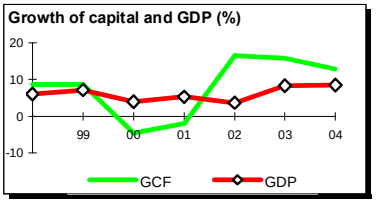
KEY ECONOMIC RATIOS and LONG-TERM TRENDS	1984	1994	2003	2004
GDP *(US$ billions)*	206.5	322.6	600.7	694.7
Gross capital formation/GDP	21.6	23.4	27.2	30.1
Exports of goods and services/GDP	6.5	10.0	14.8	19.0
Gross domestic savings/GDP	18.8	24.8	28.9	29.1
Gross national savings/GDP	19.4	26.0	32.0	31.4
Current account balance/GDP	-1.4	-1.2	1.7	-1.0
Interest payments/GDP	0.5	1.3	18.4	16.8
Total debt/GDP	16.5	31.8	19.2	17.5
Total debt service/exports	18.3	26.6	12.6	7.3
Present value of debt/GDP	..	..	16.7	..
Present value of debt/exports	..	..	87.4	..

	1984-94	1994-04	2003	2004	2004-08
(average annual growth)					
GDP	5.4	5.8	8.3	8.5	6.9
GDP per capita	3.3	4.1	6.7	7.0	5.5
Exports of goods and services	9.0	13.3	5.8	39.3	..

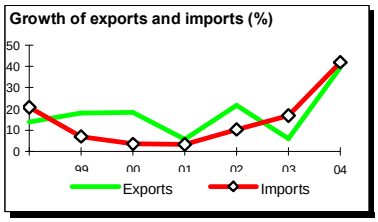


STRUCTURE of the ECONOMY

	1984	1994	2003	2004
(% of GDP)				
Agriculture	35.2	30.4	21.0	19.6
Industry	26.2	27.1	26.4	27.3
Manufacturing	16.4	16.9	15.4	16.0
Services	38.7	42.5	52.5	53.2
Household final consumption expenditure	69.0	66.2	62.9	60.7
General gov't final consumption expenditure	10.8	10.7	11.2	11.3
Imports of goods and services	7.9	10.3	16.1	21.0



	1984-94	1994-04	2003	2004
(average annual growth)				
Agriculture	3.4	2.1	10.0	0.7
Industry	6.3	5.7	7.6	8.6
Manufacturing	6.2	5.5	7.1	8.1
Services	6.7	8.1	8.2	9.9
Household final consumption expenditure	5.7	5.3	8.9	7.2
General gov't final consumption expenditure	4.8	6.0	2.4	9.2
Gross capital formation	5.0	6.1	15.8	12.8
Imports of goods and services	8.4	11.0	16.8	41.9

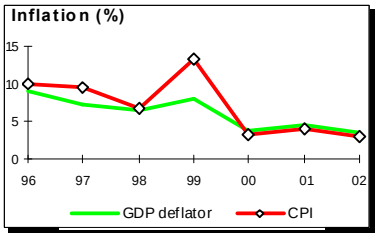


Note: 2004 data are preliminary estimates. 2004 represents Indian Fiscal Year 2004-05, which runs from April 1 to March 31.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

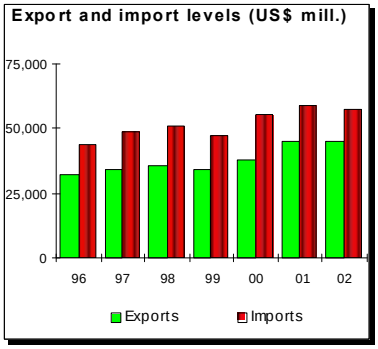
PRICES and GOVERNMENT FINANCE

	1982	1992	2001	2002
Domestic prices				
(% change)				
Consumer prices	13.6	15.6	3.9	3.1
Implicit GDP deflator	10.3	13.8	4.5	3.5
Government finance				
(% of GDP, includes current grants)				
Current revenue	..	..	19.6	19.2
Current budget balance	..	..	-8.6	-8.1
Overall surplus/deficit	..	..	-10.8	-11.8



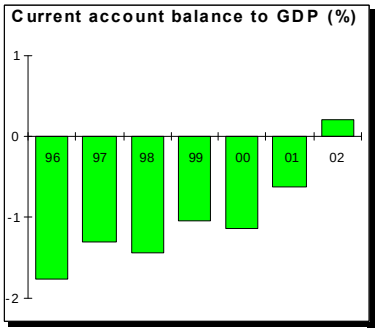
TRADE

	1982	1992	2001	2002
(US$ millions)				
Total exports (fob)	8,697	18,266	44,894	44,915
Marine products	313	585	1,396	1,218
Ores and minerals	463	930	1,155	1,214
Manufactures	5,547	13,148	34,391	33,241
Gems and jewelry	849	2,738	7,384	7,306
Readymade garments	733	2,199	5,578	5,004
Total imports (cif)	15,970	21,064	59,264	57,618
Food	1,446	275	1,443	2,044
Fuel and energy	5,832	5,325	15,650	14,000
Capital goods	2,209	4,233	8,941	9,315
Export price index *(1995=100)*	96	104	94	90
Import price index *(1995=100)*	125	110	100	93
Terms of trade *(1995=100)*	77	95	94	96



BALANCE of PAYMENTS

	1982	1992	2001	2002
(US$ millions)				
Exports of goods and services	11,457	23,288	63,764	65,201
Software exports	..	..	6,341	7,174
Imports of goods and services	17,666	24,879	75,656	73,705
Resource balance	-6,209	-1,591	-11,892	-8,504
Net income	213	-3,830	-3,821	-2,654
Net current transfers	2,314	3,783	12,798	12,125
Current account balance	-3,682	-1,638	-2,915	967
Financing items (net)	5,950	-1,757	-1,581	-12,462
Changes in net reserves	-2,268	3,395	4,496	11,495
Memo:				
Reserves including gold *(US$ millions)*	4,390	9,220	42,281	54,106
Conversion rate *(DEC, local/US$)*	9.0	24.5	45.7	47.7



EXTERNAL DEBT and RESOURCE FLOWS

	1982	1992	2001	2002
(US$ millions)				
Total debt outstanding and disbursed	22,709	85,421	99,433	97,071
IBRD	1,181	8,459	7,079	6,835
IDA	5,906	14,203	18,888	19,269
Total debt service	1,586	7,861	10,868	9,282
IBRD	137	1,170	1,423	1,089
IDA	60	242	506	565
Composition of net resource flows				
Official grants	750	461	382	336
Official creditors	1,103	2,895	-237	-264
Private creditors	829	1,467	4,103	-1,608
Foreign direct investment	0	97	2,165	2,342
Portfolio equity	0	6	3,026	2,760