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India:
Water Supply, Sanitation and Hygiene
Moving towards the 21st Century

**The Environment of the Child
in
Uttar Pradesh State**

**Water Supply and Sanitation Programmes
and
UNICEF's role and contributions**

UNICEF Lucknow
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UTTAR PRADESH

Demographic details, key socio-economic and health indicators

S.No	Indicators	Status	Source
Demographic			
1.	Population	139,112287	Census 91
2.	% of India total population	16.43 %	"
3.	No. of districts	63	"
4.	No. of development blocks	901	"
5.	No. of main villages	112804	"
6.	No. of habitations	N.A.	"
7.	No. of Gram Panchayats	58,600	"
8.	No. of towns	753	"
Socio-economic			
1.	Rural Population on % of total population	80.15	"
2.	% scheduled caste population	21.04	"
3.	% scheduled Tribe Population	0.21	"
4.	No. of Primary Schools	86539	6 th All-India Edn. Survey
5.	No. of Upper Primary Schools	19114	"
6.	No. of Secondary Schools	n.a.	"
7.	No. of Higher Secondary Schools	n.a.	"
8.	No. of Pry. Health Centres	3737	DGHS/ MOH&FW, 1994
9.	No. of Health Sub-Centres	20153	"
10.	Sex Ratio	879	Census, 199
11.	Population below poverty line	32.52	"
Health			
1.	Overall Literacy	41.7	Census '91
2.	Female Illiteracy	25.3	"
3.	IMR (per 1000 live birth) - 1996	85	SRS, 1996
4.	Under 5 Mortality Rate (per 1000)	130.3	NFHS, 199
5.	Malnutrition among children under 4 years of age (Weight-for-age)	59.0	"
6.	Children fully immunized by 2 yrs	57.9	MICS, 1995-97

The State of Uttar Pradesh is vast and complex in terms of its geographical as well as its economic, social and political aspects and is divided into 5 regions, primarily on the basis of its geographical layout. Administratively, it has 63 districts, 410 sub-divisions (or tehsils), 901 development blocks, 58,600 gram panchayats and around 112,800 revenue villages (47% of these villages have populations of less than 500 persons). The issues in water supply needs to be considered in the backdrop of the GoUP's water supply programme.

Status of WES programmes

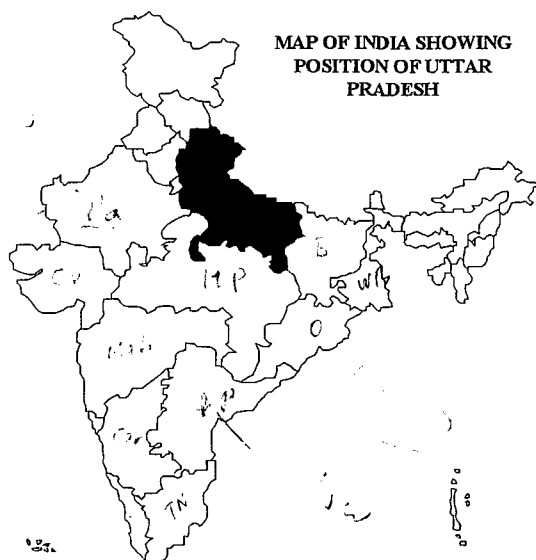
The rural water supply programme in Uttar Pradesh was initiated in 1967 in response to a severe drought. The subsequent years saw the expansion of the programme to include new areas and components. A survey in 1972 revealed that several parts of the State had severe drinking water problems; water was either scarce, or unsafe for drinking because of excessive fluoride, chloride or iron substances; besides, endemic diseases like Cholera were also significant by their presence. Drinking water supply was accorded the status of a priority sector, with substantial investments in technology and resources, but the results have not been commensurate with the efforts.

The drinking water sector in the State is confronted by a two pronged problem. On the one hand, about 37% of the rural population still does not have access to safe drinking water (1997 UPJN figures). On the other hand, an enormous physical asset base in the form of approximately 6,00,000 handpumps and 8600 piped water supply schemes (1860 of these in rural areas) has been created over the last four decades. To this, about 30,000 handpumps and several piped water supply schemes are added every year. It is expected that by the turn of the century, there would be over 7,00,000 handpumps and a very large number of piped water supply schemes in operation. The current operations and maintenance system is neither viable nor sustainable.

The planning, execution operation and maintenance of rural water supply in the State is primarily under the jurisdiction of UPJN. However, handpumps are also installed by UP Agro and local Panchayat Udyogs with no responsibility for maintenance. On the other hand, under the World

Bank programme (SWAJAL), where a critical objective is to evolve a demand driven approach to the provision of water, support organisations (mainly NGOs) are assigned the task of installation while the operations and maintenance is gradually being entrusted to village level water and sanitation committees. The funds for water supply in the State are generated through the Minimum Needs Programme (MNP), Accelerated Rural Water Supply Programme (ARWSP), Indo-Dutch bilateral programme, World Bank SWAJAL programme and special programmes for areas where the quality of water has been effected due to the presence of fluoride or iodine. The budget provisions for 1998-99 stood at Rs. 414.12 crores (Rs. 267.99 crores from GoUP and Rs.

146.13 crores from the GoI. The norms for the O & M expenditure in the State are Rs. 400-500 per handpump per year and 5% of the cost of the scheme for piped water supply. (excluding the electricity cost of operating the scheme). The annual requirement, therefore works out to Rs. 23 crores for O & M of handpumps and Rs. 49 crores for piped water schemes against the actual availability of funds for O & M at Rs. 36.69 crores. There is, thus, an uncovered gap of Rs. 35.31 crores which is one of the reasons for poor O & M.



The 73rd Amendment calls for O & M to be handed over the Panchayati Raj Institutions (PRIs). But much before the amendment was legislated, the GoUP took the decision (in 1986) to transfer responsibility of maintaining the handpumps to Gram Panchayats. Under this arrangement, money was to be made available for repair of handpumps at the nearest post office in the names of the Gram Pradhan and Gram Panchayat Adhikari. The repair work was to be approved by the executive body of panchayats and payments made accordingly. The provision of mechanics and spares at the block level was also proposed. The entire initiative was to be managed by the Panchayati Raj Department (PRD). The programme was a major failure and within a year, the maintenance responsibility had to be handed back to UPJN. UPJN had to repair 20,410 handpumps when the responsibility was reverted back to them.

Implementing agency and its limitations:

The main agency for implementing the UNICEF supported activities in U.P. is Uttar Pradesh Jal Nigam (UPJN). Established under the U.P. Water Supply and Sewerage Act, 1975, to plan, design, implement and monitor all water supply and sewerage projects in UP, UPJN falls under the administrative purview of the Department of Urban Development even while implementing the rural water supply programmes. Recently, the funding responsibility of rural water supply programmes (under the Minimum Needs Programme and the Accelerated Rural Water Supply Programme) was transferred to the Department of Rural Development. However, the Department of Rural Development has no control over the personnel functions; nor can it initiate punitive action in case of default. This lack of control has several implications on the implementation and sustainability of any initiative:

- It inhibits inter-sectoral linkages with rural development and anti-poverty programmes at the District level: The Principal Coordinator at the State level for Rural Development activities is

the Agriculture Production Commissioner (reporting to the Chief Secretary). The Commissioner controls the Rural Development, Panchayati Raj, and Agriculture departments. While the District level leadership for WATSAN initiatives is provided by the District Coordination Committee headed by the District Magistrate/CDO, UPJN functionaries are under no administrative obligation to follow the directives of the District Administration. The linkages between the DRDA, Panchayati Raj Department, Health Department and ICDS (key departments for child environment focused initiatives) with UPJN are weak.

- UPJN does not have any structural linkages with Panchayati Raj Institutions (PRIs): As the implementation of the 73rd Constitutional Amendment proceeds, the maintenance of water supply facilities at the village level shall be handed over to PRIs. In the absence of formal linkages, UPJN functionaries have no accountability to PRIs. Currently, their linkages to community structures are facilitated in UNICEF sponsored initiatives by NGOs recruited to provide the interface. It is unlikely that PRIs will take over community assets such as handpumps which were not installed for PRIs as clients. (This inference is strengthened by the enormous "hand-over" problems currently being faced in urban areas for assets created by UPJN that have to be taken over by urban local bodies.) The HRD cell of UPJN was established to create space for participation by local communities through activities such as creation of WATSAN Committees, appointment of handpump caretakers and training local handpump mechanics. The cell, currently does not possess sufficient community organising capacity to ensure the formation of sustainable grassroots structures and follows a target driven approach for community organising. It utilises the services of nearly 200 NGOs to carry out this task. NGO inspired group formation at the village level carries the risk of further alienating PRIs.
- UPJN is an agency which is mainly focussed on construction activities, like many other engineering organisations. Operation & Maintenance is an add-on task which is not really considered as the priority of UPJN. It does not receive adequate resources to undertake the required levels of O & M. Most of its actions are therefore, knee-jerk responses to breakdowns rather than based on preventive maintenance. In UNICEF supported programmes, preventive maintenance at the village level is undertaken by the handpump caretakers.
- UNICEF utilises the Rural Sanitation Unit (created under the Indo-Dutch programme) of UPJN for its sanitation initiatives in CDD WATSAN, Allahabad. This carries the benefit of integrating water supply and sanitation components to maximise health benefits. However, the GoUP's sanitation activities are implemented by the Panchayati Raj department that has no links with UPJN. Therefore, in most of the State, water supply and sanitation activities are not delivered in an integrated manner.

The responsibility for coordinating the programme as well as creating synergy between the various development initiatives lies with the District Magistrate/Chief Development Officer (DM/CDO). This does not entail day to day coordination and management. The funding for most UNICEF initiatives is routed through UPJN.

GoUP's rural sanitation programme

The GoUP's rural sanitation programme involves the construction of latrines using funds available under the Central Rural Sanitation Programme (CRSP). This programme is directed at below poverty line beneficiaries. GoI provides Rs. Rs. 1000 per latrine as its share of the subsidy, and the GoUP provides an additional (and equal share of) Rs. 1000. For population belonging to Scheduled Castes/Scheduled Tribes (SC?ST) categories, the subsidy is enhanced to a total of Rs. 2375 per unit.

The implementation of the programme is undertaken by the Panchayati Raj department through the District Panchayati Raj Officer. Beneficiaries construct the latrines themselves. They are paid the costs (subsidy) in instalments, upon completion of identified stages of work. The Gram Panchayat Adhikari is responsible for the identification of beneficiaries and managing the inputs at the grassroots level. 3.5% of the population has been covered so far under the programme. Under the 9th Five Year Plan, the total outlay for this programme stands at Rs. 160 crores.

An additional scheme for construction of women latrine complexes in rural areas is also expected to be continued in the 9th Plan period.

The IEC Cell. The IEC Cell was set up in 1996 in the Panchayat Raj Department. A consultant was appointed to head the Cell. GoI released Rs.5.4 million in March 1996, while the State released Rs. 8.0 million in June 1997. The State Institute of Rural Development was identified as the State Coordinating Agency for undertaking the social mobilisation activities.

IEC. As the four districts identified for the IEC campaigns were divided further, the campaigns are now implemented in six districts. By June 1998, elected representatives and Government officials were sensitized on the concept of sanitation and Block-level coordinators and teachers trained on motivating the communities.

Coverage:

The cumulative coverage of population with protected drinking water in the State till March 1998 is estimated to be 90.05 % (source: Data Book of Rajiv Gandhi national Drinking water Mission, 1998). Sample surveys carried out at earlier time points show lower coverage (MICS,1995-97: 71.6% ; NFHS,1992-93: 62.2%).

Coverage under sanitation (access to sanitary latrines) in rural areas has been estimated through Census (1991) which indicated a figure of 6.4%. Subsequent sample surveys indicate an increase to 10.7% in 1994 (NCAER,1994). The more recent MICS (1995-97) indicates a coverage of 33.2%.

Overview of UNICEF-GoUP collaboration in WES sector in UP

UNICEF's field office at Lucknow was established in 1972. As of mid-1998, the Field Office has a staff strength of 25. Of the 11 professional staff, one is a water supply and sanitation specialist.

In 1998, the Field Office programme expenditure is expected to reach about US\$ 7.1 million, of which about US\$ 1.7 million (24%) will be on the Child's Environment programme, in support of the State water supply and sanitation sector. It does not implement independent programmes of its own but provides support to the GoUP's initiatives, functioning within the framework of policies and programmes of the GoUP aimed at improving the quality of life of children and women in the State. The GoUP's initiatives are influenced by the State Plan for the Child (SPAC) prepared by the Department of Women and Child Development, GoUP in 1994. Water and Sanitation Goals of the GoUP for the year 2000 are:

- Safe water: Universal access to safe drinking water (one safe water source for every 250 persons within a distance of 1.6 km)
- Sanitation: Universal access to safe means of excreta disposal

The State Plan of Action (SPAC) for the period 1999-2002 is currently under preparation.

The WES programmes of GoUP that receive support from UNICEF have been funded by the Government of Netherlands since 1996. The funding is due to cease in end 1998. The total programme budget is approximately US\$2.0 million. The specific programmes in this sector are:

Community-Based Handpump Maintenance (CBHPM) : The main objective of this programme is to establish a sustainable CBHPM system as a model for replication by the Government. It is implemented through a collaboration between Uttar Pradesh Jal Nigam (UPJN) and Non-government organisations (NGOs) in Barabanki, Mahoba and Sonbhadra Districts of the Bundelkhand region in U. P. The programme involves conversion of handpumps from Mark-II to easy-to-maintain Mark-III, appointing women caretakers for each handpump, training village level handpump mechanics and monitoring water quality. Village level WATSAN Committees are formed with 5 women and 3 men as members. The programme also promotes awareness of safe practices in water usage.

Rainwater harvesting as an alternative source for drinking water: This programme envisages roof-top rain water harvesting and storage as a supplementary source of safe water through the collection of rainwater from rooftops into simple Ferro-cement structures. It is implemented through a collaboration between UPJN and NGOs. Women masons are trained to undertake the construction of tanks. Much of the construction is through voluntary labour (shramdaan). The programme is implemented in Sonbhadra, Banda and Laitpur districts of the Bundelkhand region of UP. It is intended for particularly remote and difficult areas where groundwater availability is scarce.

Technical support for developing and operationalising Management Informations Systems (MIS) for Water and Sanitation: The main objective of this programme is to ensure the availability of sector related information at national and state levels, for effective policy planning and optimal utilisation of resources. Under this programme, Gol has provided 276 computers to UPJN. UNICEF's role is to provide capacity building support to UPJN for effective utilisation of the hardware.

Borewell rejuvenation: About 14 per cent of borewells drilled in hard rock formations are unsuccessful. These can be rejuvenated, through hydro-fracturing- injecting water into the borewell at very high pressures which cleans, widens and expands the water bearing fractures in the rock formations. UNICEF support to UPJN includes supply of four hydro-fracturing units, two tractor mounted compressors, fourteen drilling rigs and one mud rotary rig for hand drilling. UNICEF provides training support to UPJN in the use of the equipment.

School Sanitation Programme: This programme aims at developing sanitary habits in school children and making the school, its teachers and students the focal points for promoting a sanitation package among households and the community. It is implemented in Haridwar district. The programme components include orientation of headmasters, teachers and Parent-Teacher Associations on the sanitation package and formation of Children's Sanitation Clubs for the environmental cleanliness in the school and its vicinity. UNICEF supports the provision of water and sanitation (urinals and toilets) facilities to primary schools in the State.

Support to UPJN's HRD cell: UPJN has established the HRD cell under the Rajiv Gandhi National Drinking Water Mission (RGNDWM) for initiatives in people centred service delivery. UNICEF provides the cell with technical support, support to develop communication material as well as hardware support. The cell directly forms WATSAN Committees at the village level through the involvement of about 200 NGOs in many districts of U.P.. It also undertakes handpump mechanic training, mason training and hygiene promotion programmes.

Rural Sanitary Marts: UNICEF supports the establishment of Rural Sanitary Marts as "one stop sanitation shops" focusing on the "zero subsidy" concept. These are promoted through ongoing initiatives of the GoUP and also as a stand alone initiative for the establishment of 150 RSMs across 24 districts of the State through UNICEF support. Orientation and training of RSM managers, masons and motivators and providing people knowledge and skills for building their home toilets are aspects of UNICEF support, in addition to providing a revolving fund for the establishment of the RSM.

CDD WATSAN : This is aimed at the control and management of diarrhoeal disease in 7 blocks of Allahabad district. It is implemented through the UPJN, supported by NGOs, and autonomous Government Institutions such as Mahila Samakhya, Nehru Yuva Kendra Sangathan and the HRD cell of UPJN. A field visit report to CDD WATSAN Allahabad is included with this report.

Fluorosis control project: In late 1997, UPJN, in cooperation with a local NGO, commenced the implementation of a Fluorosis control project in ten selected villages of Kanpur district. The activities include the introduction of domestic defluoridation, awareness creation, and health education.

The implementation of an integrated WATSAN programme for Tehri Gahrwal district in the U.P. Himalayas has recently started with funding from the Swedish International Development Agency (SIDA) .

Role of NGOs:

NGOs are utilised in most UNICEF supported programmes to facilitate the community based processes such as the formation of WATSAN Committees and training of caretakers and mechanics. The NGO sector in Uttar Pradesh is not sufficiently developed in terms of social development capacity to provide support to community processes across the State.

The main issues in the GO-NGO model for delivery of water supply and sanitation services are:

- International NGO donors have found that most local NGOs in UP operate through the charity/service delivery mode-they are yet to evolve as professional training/empowerment organisations.
- UPJN funds and monitors the activities of NGOs (in both UNICEF supported programmes and the HRD cell activities). UPJN has strong engineering capacity but lacks social development expertise within the organisation. This results in an emphasis on a target driven approach to community processes.
- Corrupt practices in NGOs are a threat to achievement of programme objectives
- NGO led processes trigger community structures that could alienate PRIs at the village level.
- NGO processes show results during the funding phase. However, after funding ceases, most NGOs are unable to sustain their interventions due to a lack of resources and commitment often leading to a collapse of group structures.

KEY ISSUES IN O & M

1. **A widening gap between investment and maintenance:** This leads to a situation in which only the essential maintenance needs are attended to. This in turn leads to restricted water availability and a breakdown approach, rather than a preventive approach, to O & M. (currently, only about Rs. 150 per handpump is available with UPJN for O & M as compared to a requirement of Rs. 400-500.) In 1991, a special

committee was constituted to fix norms for O & M. Its main recommendation was that the major concern should shift from creation of additional assets to fuller and better utilisation of the existing ones. The actual O & M expenditure allocated by GoUP is based on fund availability rather than the actual requirements.

2. **Transfer of O & M functions to PRIs:** It is envisaged under the 73rd Amendment that the O & M functions shall be eventually handed over to PRIs. However, this needs to be properly planned and the capacity of PRIs to undertake O & M built up before any transfer of functions takes place. Under the Act, Gram Panchayats need to elect a WATSAN Committee that can take on the complete responsibility of O & M. Initiatives under bilateral assistance programmes (like the Indo-Dutch Rural Water Supply Programme) may alienate the Gram Panchayats through the formation of parallel grassroots organisations at the village level (WATSAN Committees), and therefore do not represent viable models for PRI led O & M. The most critical factor is that a transfer of responsibilities of a system from an agency to the community requires a step by step approach and careful planning, in which, both, the community and the concerned agency need to be gradually oriented into the new system. Experience indicates that a structure and system which is community based with its representative institutions taking up the responsibility for O & M will only be sustainable when the entire process incorporates the elements of information sharing, accountability and transparency backed by political will.
3. **UP requires a system based on regional requirements:** The more affluent western region may afford private systems for O & M, but the poorer regions of Bundelkhand and the Hills still require partially subsidised O & M, specially for bigger repair jobs.
4. **Lack of political will:** Political will to establish a tariff collection system, especially in an insecure political environment is difficult to expect. In the absence of formal systems, the O & M shall continue to be ad-hoc and inadequate leading to gross underutilisation of the physical asset base. The Agricultural Production Commissioner who is responsible for the implementation and coordination of rural development activities agreed to transfer Rs. 100 per handpump per year to each Panchayat in the State. This is expected to be the first step towards decentralised O & M and it is expected that the Gram Panchayat shall bear the additional costs of repair. However, in the absence of capacity and political will, it is unlikely that the Gram Panchayats will be able to raise resources on their own.

UNICEF'S INFLUENCE ON GOVERNMENT SECTOR POLICY

The following table lists the programme components or strategies, which UNICEF has been advocating for in the State, and a frank assessment of the impact this advocacy has so far had on the State WES programmes.

UNICEF-GOI WES PROGRAMME OBJECTIVES (1991-98)	ASSESSMENT OF IMPACT ON STATE POLICY
Progressive reduction of subsidies to promote toilets	No change yet.
Promotion of a range of toilet design options	This is now very common in half the districts of U.P.
Use of alternate delivery system to promote sanitation.	More than 20% of districts covered with RSMs.
RSMs or production centres in 20% of blocks	20% of blocks have been covered with RSMs.
Use of the seven components of sanitation	Most common with PRD as well as UPJal Nigam HRD Cell
Safe water handling practices, as part of IEC	

UNICEF-GOI WES PROGRAMME OBJECTIVES (1991-98)	ASSESSMENT OF IMPACT ON STATE POLICY
Functioning IEC cells at State level	IEC cell active and functional in PRD
School sanitation introduced	Introduced in Haridwar.
One spot source of drinking water for 150 people	Units only coming to 150. Started 1 source for 180 persons from 1997.
Reduced dependence on UNICEF for support for State water well drilling operations	Arranging for repairs locally. Also buying local spare parts. Now depend less on UNICEF support.
Increased success rate in well drilling, resulting from the use of scientific source finding techniques	Scientific source finding is done only for drilling for wells on which power pumps will be fitted. UPJN's interest in this area has increased.
Proper well construction techniques	
Maintenance and repair of handpumps with community participation, especially women	UNICEF's support to a number of CBHPM projects has contributed to plans to hand-over O&M to PRIs in 2000.
Cost-recovery for handpump maintenance and repair	Community contributions are not coming in a big way; PRIs are fully motivated and participating actively.
Use of VLOM type handpumps (IMIII and TARA)	UPJN is not yet procuring any VLOM type pumps.
Village WatSan Committee at Panchayat level	VWSCs are active and supported by Gram Pradhans.
Use of low-cost and appropriate water supply technologies	UPJN is piloting rainwater harvesting, conversion of open wells, spring development etc. with UNICEF support.
Use of appropriate water treatment at home/community level	UPJN is piloting DD in one area.
Effective operational linkages between water, environmental sanitation and health interventions	All UNICEF supported programmes are inter-sectoral. The same approach is within the districts covered by HRD cell.
WES interventions as an effective entry point for CDD, nutrition and women's development	WES interventions have proved to be very effective in all CCA districts and the districts covered under the Goal 2000 project.
Appropriate watershed management	UNICEF supported programmes have not yet covered this field.
Effective use of well rejuvenation technologies	This is expanding in many districts, even the DMs are fully convinced and utilising the HFUs for rejuvenation
Use of Management Information Systems relevant and practical to the WES sector	With the UNICEF support and follow up MIS project approved by GOI, MIS system improved considerably.

Partners

UNICEF's partners in the State of Uttar Pradesh includes Jal Nigam- the agency primarily responsible for implementation of the Ryal water Supply programme, the Panchayati Raj Department which administers the Rural sanitation Programme, NGOs with national network like the Nehru Yuva Kendra (NYK) as well as local level NGOs.

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