

**HUMAN RESOURCES DEVELOPMENT IN THE
WATER & ENVIRONMENTAL SANITATION
SECTOR IN INDIA**

FINAL REPORT

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**Under Assignment to the
Department for International Development - India**

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ABBREVIATIONS

| | |
|--------|--|
| AE | Assistant Engineer |
| AFPRO | Action for Food Production |
| AIILSG | All India Institute of Local Self Government |
| ASCI | Administrative Staff College Of India |
| ATI | Asian Institute of Technology |
| BHC | British High Commission |
| CA | Constitutional Amendment |
| CAPART | Council for Advancement of People's Action and Rural Technology |
| CBO | Community Based Organisation |
| CE | Chief Engineer |
| CIDA | Canadian International Development Agency |
| CPHEEO | Central Public Health Engineering and Environmental Organisation |
| DFID | Department for International Development |
| Dy | Deputy |
| EE | Executive Engineer |
| ESA | External Support Agency |
| GJTI | Gujarat Jalseva Training Institute |
| GoAP | Government of Andhra Pradesh |
| GoI | Government of India |
| GoM | Government of Maharashtra |
| GoWB | Government of West Bengal |
| GSDA | Groundwater Survey Development Agency |
| HRD | Human Resources Development |
| HSMI | Human Settlements Management Institute |
| HUDCO | Housing & Urban Development Corporation of India |
| IIPA | Indian Institute of Public Administration |
| IRC | International Water and Sanitation Centre, The Hague |
| IT | Information Technology |
| Jt. | Joint |
| K&WDP | Kalahandi Water and Development Project |
| MH | Ministry of Housing |
| MHRD | Ministry of Human Resource Development |
| MRAE | Ministry of Rural Affairs and Employment, GoI |
| MUAE | Ministry of Urban Affairs and Employment, GoI |
| NGO | Non Governmental Organisation |
| NIRD | National Institute of Rural Development |
| NIUA | National Institute for Urban Affairs |
| NRTC | Nashik Research and Training Centre |
| NSS | National Service Scheme |
| NYKS | Nehru Yuva Kendra Sangathan |
| OECF | Overseas Economics Cooperation Fund |
| PHD | Public Health Department |
| PHED | Public Health Engineering Department |
| PRED | Panchayati Raj and Engineering Department |
| PRI | Panchayati Raj Institution |
| PRRD | Panchayati Raj and Rural Development Department |
| RDD | Rural Development Department |
| RGNDRM | Rajiv Gandhi National Drinking Water Mission |

| | |
|--------|--|
| RWSS | Rural Water Supply and Sanitation |
| SCF | Save the Children's Fund |
| SE | Superintending Engineer |
| Secy | Secretary |
| SEUF | Socio-Economic Unit Foundation |
| SIDA | Swedish International Development Agency |
| SIRD | State Institute of Rural Development |
| TISS | Tata Institute of Social Sciences, Mumbai |
| TOT | Training of Trainers |
| TTTI | Technical Teachers Training Institute |
| UK | United Kingdom |
| UN | United Nations |
| UNDP | United Nations Development Programme |
| UNESCO | United Nations Educational, Scientific and Cultural Organisation |
| UNICEF | United Nations Children's Fund |
| UPG | Urban Poverty Group, DFID |
| USAID | United States Agency for International Development |
| UWSS | Urban Water Supply and Sanitation |
| WB | World Bank |
| WEDC | Water Engineering Development Centre |
| WES | Water and Environmental Sanitation |
| WESG | Water and Environment Sanitation Group, DFID |
| WHO | World Health Organisation |
| WSP-SA | Water and Sanitation Programme – South Asia |
| WSSD | Water Supply and Sanitation Department |

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This report has been prepared by a team of consultants comprising Kevin Tayler¹, Ineke van Hooff² and Archana Patkar³ in collaboration with Mr Nigel Kirby, Engineering Adviser at the Water and Environmental Sanitation Group (DFID-India) and task manager for this study.

The team wishes to acknowledge the contribution of sector professionals, government officials and other sector personnel from the government, the private and not-for profit sectors, who provided the valuable information, insights and suggestions that have informed the study and this report. A list of those consulted is provided in Annex 4.

Four workshops were conducted as part of the consultation process, at the state level in Andhra Pradesh, Maharashtra, West Bengal and Orissa. Senior administrators, practitioners from governmental and non-governmental organisations and representatives from the private sector and academia, identified issues of relevance to the sector and also discussed the strengths and failures of current capacity building initiatives in WES in their respective states. A key theme for the state workshops, was the prioritisation of state-specific HRD needs for the sector in order to ground the consultation process in concrete recommendations that participants identified as being locally relevant. The detailed proceedings of the state workshops are set out in the Second Phase Report.⁴

Findings of the consultation process were discussed at a national workshop held in April 1999 which was organised in collaboration with the Ministry of Urban Affairs and Employment and the Rajiv Gandhi National Drinking Water Mission of the Ministry of Rural Development. This workshop was attended by state and central government representatives, representatives of training institutions, private sector professionals, DFID and a large number of external support agencies.

The national workshop was followed on the second day by a meeting of donor agencies active in the WES sector, chaired by DFID. The representatives presented a profile of their organisation's capacity building activities in the sector. The consultants presented their initial findings and recommendations in the form of a menu of options that would add up to a comprehensive strategy for HRD in the sector. Brief discussions and suggestions on the way forward followed.

The team is especially indebted to the staff of the Water and Environmental Sanitation Group (New Delhi and Nasik), who supported the entire process with discussions, guidance and participation in the state and national workshops. Special thanks are due to Nigel Kirby of WESG-DFID – the task manager of the study, for his close involvement and continued support right through the five-month period.

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⁴ Second Phase Report, 15.03.99, Findings and Recommendations from the State-level Workshops

PREFACE

**Department for International Development
Water and Environmental Sanitation Group
British High Commission**

The British Department for International Development sees support for human resource development in the water and environmental sanitation sector as a long term commitment. In the last decade DFID India has supported training courses in:- Groundwater Management for Rural Water Supply, Solid Waste Management, Urban River Basin Management, Management for Sustainability and Management Development for Senior Urban Public Health Officials. DFID India is also supporting the UNDP/World Bank Regional Water and Sanitation Group in training for urban sanitation management. Some of these courses are based around specific project requirements; others arise from a more general collaboration in the sector.

All training courses supported by DFID India are intended to be transferred to Indian training institutions, assisting in the development of sustainable centres of excellence. Three of the above courses are now run without further support from DFID.

DFID India is now looking carefully at the success or otherwise of training initiatives it has supported in the sector, and re-evaluating our potential role in human resources development. Substantial reviews of the Management Development for Senior Urban Public Health Officials and Groundwater Management for Rural Water Supply courses were carried out in 1998.

Both reviews came up with a number of recommendations for DFID to extend its involvement in human resources in the sector.

WESG, in collaboration with the Ministry of Urban Affairs and Employment, and the Rajiv Gandhi National Drinking Water Mission, have commissioned this study to look at the human resources development needs across the sector, assess the extent to which these are being met by government, donor and other initiatives, and identify where best DFID and other donors in the sector can place their limited resources.

In November 1998, DFID India commissioned a consultancy to look in detail at the Human Resource Development needs in the sector as a whole. In partnership with a number of other interested stakeholders in the sector, four state workshops were held in Andhra Pradesh, Maharashtra, West Bengal and Orissa. The study concluded with a National Workshop, which aimed to develop, with the Ministries of Urban Affairs and Employment and Rural Areas and Environment, a strategy for human resources development in the sector.

This report is a summary of the results of these workshops and of the consultancy team's analysis of the data they collected. It presents a range of recommendations for all those who have taken

PREFACE

**By Mr. B S Minhas, Jt. Secretary,
Ministry of Urban Affairs and Employment,
Department of Urban Development, Government of India**

Urban Water Supply and Sanitation in India is essentially the responsibility of the State Government and the Local Bodies. The urban population is likely to reach 300 million by 2001, which will continue to be served by the Public Health Engineering Departments, Water Supply Boards and Urban Local Bodies under severe constraints. The burgeoning urban population has given rise to acute problems of supply and demand of the basic amenities, particularly safe drinking water supply and sanitation and its adverse effect on public health. The mere setting up of Water Supply and Sanitation systems is not enough. It is necessary to ensure that all these are managed efficiently and maintained properly for trouble free operation at optimum level. For this purpose, the personnel at all levels, who are involved in the execution, operation and maintenance of the installations and schemes ought to be equipped with the requisite technical knowledge and managerial skills and also kept abreast with the latest developments in the field from time to time.

At present, the Ministry is providing financial assistance for conducting about 70 Training courses in the field of Environmental Engineering, including Post Graduate degree courses. A large number of institutions have been conducting Short Term and Refresher Training courses round the year, which have proved to be highly beneficial for the Engineers and Technical staff. It is estimated that about 20583 personnel from the State Governments and Uts have been trained under the Ministry's programme till 31.3.98. Despite the concerted efforts made by the State Governments and the Ministry, the number of trained staff available is far short of the estimated requirement for effective management of the systems.

The erstwhile Overseas Development Administration, UK, now the Department for International Development and the British Council has been one of the active partners of the Government of India in providing advanced training facilities in planning, design, operation, maintenance and management of Urban Water Supply and Sanitation in the UK. It is estimated that around 600 in service engineers and professionals have benefited from these courses.

Other International agencies, such as the WHO, UNDP / World Bank, JICA and SIDA have also been providing valuable assistance for advanced training abroad under their respective programmes.

Though DFID, WHO and other external support agencies have been supplementing the efforts of the Government of India in providing training facilities in a limited way, it is felt that the development of some training centres as Centres of Excellence would go a long way in institutional straightening and capacity building in the Water and Environmental Sanitation Sector. It would be advantageous to have a network of such centres to serve the interests of this vast country.

We welcome the initiative taken by the DFID and their consultants to conduct a detailed study on HRD for this sector. The findings and recommendations of the study should help in focussing the attention on the needs of the Human Resource Development in the Water and Environmental Sanitation Sector.

PREFACE

**By Mr. Ajay Nayak, Dy. Secretary,
Rajiv Gandhi National Drinking Water Mission,
Ministry of Rural Affairs and Employment, Government of India**

Rural Drinking Water Supply is a state subject and is undertaken by the State Governments under State Minimum Needs Programme (MNP). The efforts of the States are supplemented by the Central Government under the centrally sponsored scheme of Accelerated Rural Water Supply Programme (ARWSP). Since its inception, an expenditure of about Rs. 9250 crore under ARWSP and Rs. 13100 crore under MNP have been incurred to provide drinking water facilities in the rural areas of the country. More than 3 million hand pumps and 116500 pipe water supply schemes have been installed under these programmes. In spite of the impressive coverage, the problems of re-emergence of a large number of not covered habitations / partially covered habitations out of covered habitations have been causing a great deal of concern. The factors contributing to re-emergence of not covered habitations are mainly the vast depletion of ground water level. Sources going dry and defunct due to deforestation, heavy emphasis on new construction and poor attention to maintenance, non-involvement of people in operation and maintenance and neglect of traditional water management practices.

Realising the inadequacies of the Programme, the Government of India has recently restructured it by incorporating the following three basic principals for ensuring sustainability of the sources and systems.

- Adoption of a demand responsive and adaptable approach based on empowerment of villagers to ensure their full participation in the project through a decision making role in the choice of scheme design, control of finances and management arrangements.
- Shifting the role of Government from that of a provider to that of a facilitator.
- Partial capital cost sharing either in cash or kind or both and 100% responsibility of O&M by user.

Similarly, the Centrally Sponsored Rural Sanitation Programme has been revamped. The restructured Centrally Sponsored Rural Sanitation Programme propose to move away from the principal of state wise allocation of funds primarily based on poverty criteria to a demand driven campaign approach with a view to achieve at least 50% coverage of rural population by the Ninth Plan. The programme will be implemented as community led and people centred. Revised programme lays special emphasis on awareness generation, meeting the demand with alternate delivery mechanism and a much higher degree of beneficiaries' participation. Total Sanitation Campaign (TSC) approach is being launched from the year 1999-2000.

PHEDs / Boards are the primary executing agencies for commissioning water supply schemes at the state level. In about 12 states, sanitation is being looked after by departments such as Rural Development / Panchayat Raj etc. In spite of the fact that water and Sanitation should go together, the integration does not exist at the implementation level. Moreover, PHEDs as organisations are not

attuned to the socio-political concerns at the grass root level which are essential for ensuring sustainability of sources and systems under the water supply schemes. Therefore, it is necessary to strengthen and restructure the existing PHEDs / Boards so as to transform them into multi-disciplinary organisations capable of handling Sanitation, HRD, IEC and MIS activities as well. The Government of India would be providing financial assistance to the state in this endeavour. To begin with, sectoral reforms would be introduced in two-three districts identified by the State Government on a pilot basis. It is expected that with the experience gained in the process of implementation of sectoral reforms in these districts, the State would expand the scope of reforms in the entire states.

The role of HRD becomes critical in the institutionalisation of these sectoral reforms. Presently, the National Human Resource Development Programme mostly confines itself to train and harness the human resource of the departmental hierarchy i.e. sector professionals. This needs to be changed to include training Panchayats, NGOs, and user groups so that they are able to operate and maintain the systems at the grass root level. Being partners in the Rural Water Supply and Sanitation Sector for a long time, DFID – India and other external supporting agencies can play a vital role in supplementation efforts of the Mission to achieve the goal of successful grounding of reforms during the Ninth Plan Period.

EXECUTIVE SUMMARY

The Context

1. In urban and rural India alike, the water and environmental sanitation sector is characterised by poor and inequitable coverage and unreliable service. The main reasons for this are the lack of accountability and transparency in water boards, public health departments and utilities and poor management across the sector. Service delivery is dominated by a highly inefficient public sector, which is supply driven and lacks customer orientation.
2. For effective service delivery that is both efficient and equitable, existing arrangements for rural and urban WES will have to be restructured. The process of restructuring will have the twin objective of creating commercially viable organisations that have a social responsibility to deliver reliable, good quality services to more consumers in a cost-effective manner.
3. The 73rd and 74th Constitutional Amendments (CA) have substantially increased the responsibilities and powers of district and urban local bodies in providing water and sanitation services. Capacity building of chairpersons, councillors, corporators and mayors has emerged as a mammoth task for the sector. Orientation, exposure and training in planning and management, particularly financial management have been identified as key areas for human resource development in the sector in order to enable this shift in responsibilities while improving services to consumers.
4. Clean drinking water is universally recognised as a basic need of human beings. The Dublin Principles recognized and emphasized the economic value of water in addition to its intrinsic social value. They stressed that all human beings must have a basic right to clean water and sanitation at an affordable price. Managing water as an economic good is an important way of achieving efficient and equitable use, and of encouraging conservation and protection of water resources.⁵
5. In India, users have traditionally relied on the government to provide water and sanitation free of charge. For the most part, this provision of services has been done without consulting users or involving them in planning and design. This has meant that users have little ownership of infrastructure and services that have been provided to them leading to dysfunctional systems and wasted investments. With burgeoning populations and the need to rationalise expenditures while providing universal access to basic water and sanitation, the government of India is unable to continue providing services without recovering costs and ensuring sustainability. In this scenario, HRD assumes particular significance with the twin goal of educating users about their rights and responsibilities and building capacities for effective service delivery.

⁵ The Dublin Statement, International Conference on Water and Environment, Dublin, Ireland, January 1992.

Current Situation

6. Human Resource Development in the sector today, is limited to ad hoc training for managers, operators and junior staff without any linkages to the overall organisational framework within which the training is likely to be effective. There is an all pervasive lack of information about how HRD can help revitalise the sector and prepare it to meet the challenges put in place by the changing policy environment and more demanding consumers.
7. This low profile of HRD is reflected in various ways - i) low demand for HRD services due to a lack of awareness about what human resource development can bring to an organisation, to an employee, to the consumer and to the sector as a whole; ii) no conscious plan to link personal development (including training) to organisational needs; iii) low value accorded to capacity building efforts for personal and professional development by trainees as well as managers; iv) little evaluation of personal development or enhanced productivity in performance appraisals.
8. Personnel policies for government organisations across the country and across sectors are based on seniority and length of service with little recognition and no rewards reserved for innovation or customer satisfaction. Although state government departments have a degree of flexibility and power to change the way of working of say the state WSS board, the initial impetus to undertake reform has always come through external catalysts in the form of funding with conditionalities attached e.g. Hyderabad Metro Water Board. Such cases are still a mere handful in the Indian scenario.
9. The above factors set in motion a vicious circle, whereby potential trainees, who have limited information or autonomy to exercise choices as regards training options and place a low value on training. In turn, training institutions are severely limited by their lack of autonomy and unable to develop and market a range of quality products that will invigorate demand and impact on the sector.
10. The HRD function and the vision that comes with it is largely absent in the public sector arrangements for water and sanitation delivery. The training or personnel officer entrusted with this function, is normally an executive engineer with little interest or aptitude for the job. Human resource development is a tool toward achieving better services for consumers through more financially viable and customer-oriented, organisational arrangements that are effective and sustainable. In order to achieve this, human resource development must be comprehensive and include the gamut of elements that inspire and motivate personnel while upgrading skills, by providing a pleasant working environment that respects knowledge, encourages innovation and rewards results.

Approach

11. Poor access to water and environmental sanitation services and the reasons for these occur across the country rather than being restricted to particular states. Most external support agencies are guided by geopolitical considerations as well as by relationships in extending their support to certain states. In addition, resources in the form of institutions, individuals or innovative approaches and demonstration projects are spread across the country. In the past, this proven quite difficult and it is recommended that an identified champion take the responsibility for creating the initial momentum and promoting the idea.
12. Traditionally, human resource interventions in the sector have been heavily supply-driven. The lack of an HRD function in organisations as well as in externally supported projects has led to poor understanding of what good HRD can bring to the sector. An uninspired and ill-suited training officer (often an engineer who would rather be in the field), is the main reason for uninspired trainees and mismatches between trainees and course objectives. This is compounded by the lack of any post-training support or encouragement to individual trainees and the complete isolation of the performance appraisal process from individual or organisational performance.
13. HRD interventions should aim to create a demand for training by:
 - Creating awareness about the need for change in the sector
 - Developing awareness as to how HRD can help in the process of change and
 - Disseminating information on the resources available to support that change
 - Improving the quality of the supply of HRD products and services
14. The HRD strategy will aim to create a mass of dynamic change agents to take forward the reform agenda in various states across the country through more effective, financially viable, customer-oriented WES arrangements. This vision must be shared by key stakeholders in the sector including those specifically involved in human resource development activities.
15. The study has been guided by the following key assumptions:
 - HRD is seen as one elements of an overall capacity building strategy, which includes elements of restructuring and reform where necessary.
 - The HRD strategy will be guided by the need to move towards a demand-responsive approach to services.
 - It will be anchored in existing initiatives where possible, building on their strengths and working to overcome their weaknesses.
 - For training, the focus will be on institutions or groups that have the capacity and autonomy to change, renew and develop in a dynamic and demand-responsive manner.

Recommendations of this Study

16. This study on HRD in the WES sector in India endorses the need for urgent and comprehensive capacity building efforts in the sector that will support the current climate for change and better services with enhanced technical and managerial capacity to respond effectively to local demand. The study recommends the formulation of a comprehensive framework for human resources development, straddling the urban and rural sectors and implemented in various states across the country so as to create a critical mass of change agents who can spur innovation and reform in the sector.
17. The overarching objective of this strategy would be to ensure better services to urban and rural consumers, through the development of a body of more responsive, customer-oriented sector professionals and institutions alike. It will be operationalised through a range of interventions at national and state level that will target practitioners, managers and decision-makers across the sector.
18. Previous studies have all identified the following key levels for training in the sector:
 - Senior levels (decision-makers, policy makers)
 - Middle level (managers, technical staff)
 - Junior levels (technical staff)
 - Elected officials
 - Private sector professionals
 - Practitioners/professionals from NGOs
19. This study endorses the need to target the above groups but emphasizes the need to adopt a human resources development perspective where training is just one important element of personal and organisational development and where the individual is seen as part of an organisation and eventually a sector. The study has identified an additional critical target group - the consumer. Rural and urban consumers need to be educated in their rights and responsibilities vis-à-vis water and environmental sanitation services.
20. The key elements of the proposed approach to developing the capacity of HRD services in the sector are:-
 - identification of delivery mechanisms- institutions, groups or cells that demonstrate a commitment to becoming demand-led and responsive
 - analysis of content of services and products currently available – whether these are academic or short courses, training materials, events or workshops
 - the methodology of delivery - user-friendly, appropriate and interactive methodologies designed to encourage participation and dialogue

SUMMARY OF RECOMMENDATIONS

1. **National Framework and Strategy for HRD** - There is a strong expressed demand from the states for the formulation of a national HRD policy and strategy for the sector that will facilitate coordination and networking, draw up guidelines and mobilise resources for

effective HRD at the state level. In addition, it is felt that the nodal Ministries of the GOI, can set in motion and facilitate the process of curriculum reform so urgently needed for the rural and urban sectors. Development of national policies should be accompanied by necessary budgetary allocations and management arrangements.

2. **Forum for inter government and donor coordination** – In order to ensure a coordinated approach in the sector, a forum to facilitate collaboration between donors and key government agencies is needed. The forum will act as a sounding board for HRD related initiatives with a view to safeguarding the interests of the sector as a whole, while encouraging individual donors to invest in states or areas that interest them most. It will also facilitate sharing of ideas and approaches, lesson learning and partnerships.
3. **Resource and Innovation Centres** – The need for establishing a well-functioning network of resource centres across the country that offer high-quality training, documentation, research and advisory services in specific sector areas such as low-cost sanitation, solid waste management, community management of WES, health promotion has been endorsed across the states. These centres will develop case studies, disseminate information, bring together sector actors and offer innovative training packages targeting the different levels of sector personnel. In order to continuously update and renew their products and services, these resource centres will be developed as outward looking organisations whose target group extends beyond state boundaries and eventually targets neighbouring countries in the region.
4. **HRD products and services** – For the most part, these will be developed by the resource and innovation centres. Tailor-made visits, advisory services, workshops and discussion fora and audiovisual documentation designed specifically for middle and senior level professionals will create awareness and encourage lesson learning, dissemination, dialogue and debate. Training of trainers, refresher courses, on-the-job training, peer review and performance evaluation will help cascade the effects of training as well as create a conducive environment for application of new learning and ideas. The development of appropriate programmes and curricula for managerial and technical training, including those currently sponsored by the rural and urban ministries, will be an important part of this component.
5. **Networking** – Lack of information sharing and dialogue between academics, practitioners and administrators was identified as an impediment to the reform process. Support to networking for lesson learning, information on resources and approaches available and for dissemination of information will be an important step in building communities where various stakeholders in the sector including informed consumers, communicate with each other on an ongoing, informal basis, sharing ideas, experiences and lessons. A vibrant network can act as a springboard for advocacy and reform, helping to create and sustain a certain pace in actions for change.
6. **Showcase of Best Practise** – The sector currently suffers from a dearth of role models and examples of rhetoric that has translated into results. Administrators and practitioners alike are demanding exposure to these models of best practise –so that they can

experiment or even dare to dream constructively. Elected officials need to see alternative ways of working and the corresponding support that can ensue from the electorate. It is recommended that a dynamic showcase of best practise in the sector be developed with cross-sectoral and regional benchmarking and dissemination of lessons.

7. **Innovation and Institutional Development Fund** – In order to be able to seize opportunities for HRD in the sector that are particularly innovative and promising without having to confine ideas in a projectised framework, an innovation fund should be set up to respond to opportunities expeditiously. This fund will support – pilot studies, action research and documentation with a view to promoting best practise in the sector.

Table E.1: Summary Matrix of Recommendations

| |
|---|
| <p>Objective: To develop and implement a human resources development strategy for the water and environmental sanitation sector in India that will facilitate the delivery of more efficient and reliable services to consumers, especially the poor.</p> |
| <ul style="list-style-type: none"> • Formulate and implement a national strategy for human resource development in the sector. Emphasize collaboration and encourage a common purpose, not just between rural and urban ministries of the GOI but equally between donor agencies active in the sector, academia, professional associations, practitioners and the private sector. |
| <ul style="list-style-type: none"> • Develop a network of resource centres that offer high quality training, information, research and documentation services in response to demand created by the current reform climate in the sector. This will include institutions offering short courses for sector professionals and NGOs and groups offering capacity building services. |
| <ul style="list-style-type: none"> • Development and adoption of technical/managerial curricula and programmes including diploma and degree courses for sector professionals. Adaptation of existing programmes as well as, design and marketing of new programmes would both cater to demands for specific training in the sector as well as aim to fill existing gaps in public health engineering courses. |
| <ul style="list-style-type: none"> • Support networking in the sector in order to create a sense of community and professionalism. The aim of networking is twofold – i) contacts that are useful and valuable ii) sharing of information, knowledge and experiences leading to ongoing learning for those interested and active in the sector. |
| <ul style="list-style-type: none"> • Create an innovation and institutional development fund for HRD. This fund may support thematic discussion for a, exposure visits, documentation of innovative interventions, investigation of opportunities and HRD-related pilot projects including organisational/institutional development opportunities. |
| <ul style="list-style-type: none"> • Create a showcase of Indian and international best practise with particular emphasis on the region i.e. South Asia. Demonstration and exposure of working models with satisfied consumers would help to convince decision-makers and act as living reference points and benchmarks. |

1. ASSESSMENT OF CURRENT SITUATION

A. BACKGROUND AND CONTEXT

- 1.1 There is an emerging consensus on the sense of urgency required in improving access to safe drinking water for all and the need to extend basic sanitation facilities to the rural and urban poor. While these aims are reiterated in policy documents, including the Ninth Five Year Plan and all the major sector-focussed studies undertaken to date – this calls for a massive leap in capacity within organisations responsible for service delivery and operations and maintenance in rural and urban areas in the country.
- 1.2 The recent DFID Water and Environmental Sanitation Sector review⁶ estimates that 5% of India's population does not have access to safe drinking water while about 46% have an inadequate supply. It suggests that only about 10% of the population has access to basic sanitation facilities. Even where improved facilities are provided deficiencies in operations and maintenance has led to irregular supply, poor quality water, unused latrines, blocked drains, accumulated solid and liquid waste and a poor living environment.
- 1.3 The Government of India is committed to a significant programme of decentralisation, the framework for which is provided by the 73rd and 74th Amendments to the Indian Constitution. Under these amendments (CA), zilla parishads and municipalities have been empowered with original constitutional status and powers. The CA, did not in itself define the functional responsibilities of municipalities.⁷ This was left to individual states and the pace of devolution of powers thus, varies by state. Among the matters which states may devolve to local bodies are water supply for domestic, industrial and commercial purposes and public health, sanitation conservancy and solid waste management. The CA also requires district and metropolitan level planning in the provision of WES.
- 1.4 These policy changes have significant implications for HRD in both rural and urban areas by creating a critical need for motivated and knowledgeable staff at the local level. At the same time, there is a need to provide basic orientation to the large number of councillors and ward members and Panchayat members who have been appointed under the new legislation
- 1.5 Ultimately, every district, block, town or city-level agency will have to re-invent itself as a financially viable, consumer-oriented organisation that is responsive to user's demands. This means that the organisation will have to have the autonomy to analyse its performance and make the necessary changes in staffing and organisational set-up to perform effectively. This will necessitate a hard look at staff performance, size, skills and effectiveness as well as the willingness to take difficult decisions such as staff redeployment, retraining or even retrenchment.

⁶ WESG-DFID 1998, Water and Environmental Sanitation Sector Review

⁷ UWSS Sector Review, Vol. 1, pg.19

Box 1.1: HRD in the Rural Sector

To make RWSS effective, efficient and sustainable in the decentralised situation under the Panchayati Raj, both the local administrations and the community, as well as the water agencies at state level need to be supported to transform into institutions capable of performing the new functions assigned to them.

India – Water Resources Management Sector Work, World Bank / GOI Workshop Draft Report on Rural Water Supply and Sanitation, by V Rehoej, E Glennie, S Abeyratne, J Sjorslev, organised by MRAE – RGNDWM, GOI and Water and Power Consultancy Services Ltd.

- 1.6 The emphasis on productivity and efficiency is not linked to organisational survival alone, but in the WES sector becomes a critical issue as regards coverage. Cost savings and efficiency should translate into the ability to reach and service more consumers and guarantee a basic level of service to those who are unable to pay.
- 1.7 The current organisational set-up that dominates service delivery (including water boards, PHEDs, WSSDs and PRRDs) is predominantly made up of engineers and administrators with a few health professionals at middle levels. There is a dearth of trained managers who can effectively meet the financial and operational challenges that are an essential part of the institutional reform process towards more efficient service delivery. Management development training was identified as the single most important requirement for administrators and senior engineers in all the four states visited by the consultants.

B. THE CURRENT SITUATION

- 1.8 The single most important resource available to the water and sanitation sector in the country is its human resources. Workers in the sector run into thousands of engineers, hundreds of administrators at various levels, medical officers, community development workers and elected officials. A plethora of engineering colleges – government-sponsored as well as private offer public health engineering degree and diploma courses. Training institutions of various kinds offer short courses on sector-related issues. Also, management, financial and institutional development consultants are increasingly available to the sector.
- 1.9 Most of these resources are part of organisations that are characterised by poor management, overstaffing, lack of clarity and transparency and lack of direct interface with the customer. Service delivery in water and sanitation, is entirely the responsibility of a highly inefficient public sector, which is supply driven and lacks customer orientation. As such, length of service rather than performance and customer satisfaction, determines rewards and promotion and the HRD function is largely absent. This is reflected in the low priority accorded to training by managers as well as trainees themselves and the low profile of human resource development in the sector.

- 1.10 The situation in service delivery organisations such as water boards and public health departments is mirrored in government-sponsored academic or training institutions such as engineering colleges or state training institutes. The academic environment is divorced from ground realities and the needs of users. Civil and environmental engineering curricula focus primarily on expensive and difficult to maintain, piped water supply schemes that often exclude the poor by virtue of their prohibitive capital and high maintenance costs. Public health engineering curricula have inadequate emphasis on community participation and communication skills. The educational ethos in the country has traditionally placed a high value on academic degrees. However these degree-holders are often unable to communicate effectively with users of WES services or to incorporate indigenous knowledge and insights into planning and design, in order to ensure that services are appropriately designed to respond to local demand and to bring health benefits to users.
- 1.11 Capacity building efforts in the sector have been largely confined to short training courses offered in-country or abroad and linked to time bound projects and hence designed mainly to enhance project implementation efforts. A combination of project experiences, dialogue and debate through fora and workshops and more recently the devolution of responsibilities envisaged by the CA have together emphasized the need to orient sector administrators, elected officials, professionals, academics and researchers in the need for appropriate, affordable facilities that respond to the needs of users, especially poor women and children. There is recognition at the national level of the urgent need to develop a comprehensive HRD strategy and guidelines of the urban and rural, water and environmental sanitation sector.

Government Policy & Role

- 1.12 The Ministry of Rural Development⁸ set up the Rajiv Gandhi Drinking Water Mission whose mission objective was to “provide a multi-level cadre of adequately motivated, skilled and trained personnel in the Rural Water Supply and Sanitation Sector” in order to ensure “sustainability of water supply and sanitation projects” and “optimally productive utilisation of sectoral investments and concomitant enhanced benefits to rural masses”.⁹ The Mission aims to accelerate access to drinking water supply in rural areas, promote a demand-driven approach to sanitation and support the states through HRD cells that will coordinate and manage WES capacity building activities.
- 1.13 The RGNDWM has identified seven national institutions for the training of trainers and plays a support and monitoring role. (See First Phase report for details). Increasingly involved in policy formulation for the sector, the RGNDWM has recently formulated broad guidelines for the provision of affordable and cost-effective sanitation and drinking water options for rural areas.

⁸ Formerly the Ministry of Rural Areas and Employment

⁹ Project Profile for National HRD Programme, December 1994

- 1.14 The Ministry of Urban Development¹⁰, GOI, The Ministry of Urban Affairs and Employment (MUAE) is the central government ministry with overall responsibility for urban water and sanitation. It is also partly responsible for financing a number of anti-poverty programmes with a WES component that are implemented at the local level, such as the Swarna Jayanti Rozgar Yojana (SJSRY). See First Phase Report for details.
- 1.15 The CPHEEO organises diploma and graduate training in public health engineering. Through this programme grants are provided to recognised engineering colleges and training institutions across the country.
- 1.16 The Department of Personnel and Training, of the Ministry of Personnel, Public Grievances and Pensions is responsible for preparing the training policy for the civil and public services and coordinating implementation of government training programmes, including liaison with state governments. In 1996, the DOPT developed a National Training Policy, which recommended that the department take the initiative in networking training institutions and resources and in developing a database covering the entire spectrum of training activities and institutions. The Department has identified its role as that of a clearing-house for training-related matters. In practise, however, the DOPT has been most effective when it is a partner in project implementation. It has had a limited role in overall HRD policy formulation, revision or implementation.

Details of the various HRD initiatives at national and state level are provided in the First Phase Report of this study.

External Support Agencies

- 1.17 Several external support agencies have a substantial capacity building component tied into their WES infrastructure projects. These do not have a life beyond the project and are rarely evaluated for the value added by the HRD elements. As such, they have fulfilled the limited objective of increasing project efficiency within the lifecycle of the project. Despite shared objectives in critical areas such as cost recovery, gender, appropriate technology and management, donor coordination has, however been poor, leading to ad hoc interventions, poor impact and underutilised opportunities to further the reform agenda and bring better services to the poor.
- 1.18 **Department for International Development**
The Department for International Development, like other donors has had an explicit capacity building component in most of its projects. Besides specific project-related skills building, recurrent themes have been gender, management development and communication skills. In addition, it has sponsored overseas training for short courses as well as degree and diploma courses for senior managers and officials from

¹⁰ Formerly the Ministry of Urban Areas and Employment

government. It has also sponsored exposure visits for administrators and elected officials. Other project-related initiatives have included workshops and seminars.

- 1.19 DFID has also supported the capacity building initiatives under the India Training Network in collaboration with the Rajiv Gandhi National Drinking Water Mission and the Dutch Government. Other sector groups have also undertaken various initiatives. Of particular relevance to this study is the recently completed (1994-1998) Indo-UK Regional Engineering Project in collaboration with the Ministry of Human Resource Development, GOI. Under this initiative eight, regional engineering colleges were selected for strengthening in institutional management, teaching methodologies, curriculum development, institute-industry interaction, library and MIS.¹¹
- 1.20 The Water and Environmental Sanitation Group – DFID has managed the transfer of various specialised training programmes from an overseas institution to a designated Indian institution with the support of the nodal ministry concerned. This model had the dual objective of transferring a particular skill or expertise identified as missing in India as well as strengthening the Indian training institution in the process. In 1998 three of these courses were evaluated in order to analyse value added and their impact on sector performance. The various initiatives are detailed below.
- 1.21 Other External Support Agencies have supported project-related training and overseas training for sector professionals. The Water and Sanitation Program for South Asia is the only organisation which has capacity building as a very major and explicit part of its overall mandate. The current and planned activities of some key players in the sector are given in the table below.

Table 1.1: Current Portfolio of HRD – Related Activities¹²

| Organisation | HRD – Related Activities & Interest |
|----------------|---|
| Aus Aid | <ul style="list-style-type: none"> • New Pipeline of project in WES – (MDSUPHO) • Urban: Bangalore, Shimla, Shikkim, Megalaya • Rural: Madhya Pradesh, Himachal Pradesh • India Australia Training & Capacity Building Project – A\$ 12 Million over 3 years (1998-2001) Focal areas include Environment, Health & HRD. No activities in the future. |
| DFID | <ul style="list-style-type: none"> • Study on HRD in the WES sector in India (current) • Management Development for Senior Urban Public Health Officials • Solid Waste Management (transferred to AIILSG – Mumbai) • Ground Water Management for Rural Water Supply (transferred to GJTI, Gujarat) • Management for Sustainability (transferred to NRTC, Nashik) |

¹¹ K. Tayler, I. Hooff, A. Patkar, HRD in WES in India, First Phase report, pg. 20

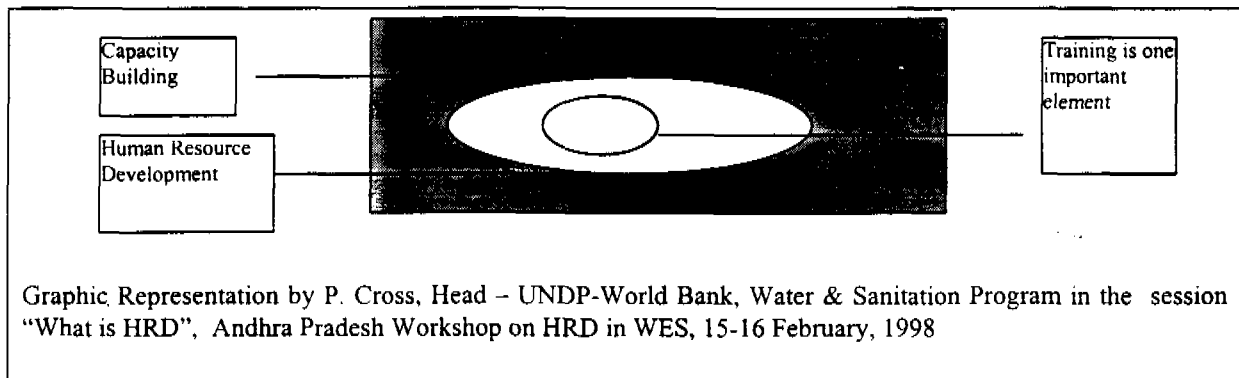
¹² Drawn up by participants at the donor meeting on HRD in WES in India – New Delhi, 20/04/99

| | |
|----------------------------------|--|
| | <ul style="list-style-type: none"> • Support to Regional Engineering Colleges (completed 1998) • Project related training |
| European Commission | <ul style="list-style-type: none"> • Two projects: Environment and Pilot demonstration initiatives through NGOs • HRD in WES as component of several bilateral projects • Currently in identification phase of an Environment Sector Programme which will include: awareness, training centre, integrated area based environmental management, etc |
| Royal Netherlands Embassy | <ul style="list-style-type: none"> • MSC & Diploma Courses in RWSS (in The Netherlands) • Exposure visits (India & Netherlands) • On job training of project personnel • WID & Gender sensitivity • Project Planning & Management |
| UNICEF | <ul style="list-style-type: none"> • Capacity Building at state / district / village levels – 50 types of courses • Capacity Building – WES (rural), sanitation, hygiene, MIS, social mobilisation, communication • Capacity Building as required to achieve MPO Program / Project Objectives |
| USAID | <ul style="list-style-type: none"> • Major bilateral programmes on Planning / Implementation & Delivery, O&M of Environmental Infrastructure (FIRE) • TA and Training to Financial Institutions / ULBs / Training Institutes – training on slum up-gradation, community based environmental sanitation initiatives • Training on WSS Project Development, Financing on public – private partnership basis – creation and promotion of demonstration models • Training programmes on – environmental management tools, project developing and financing • TA / Training – decentralisation, urban governance, urban management |
| WSP – SA | <ul style="list-style-type: none"> • Capacity Building for Municipal Managers • Capacity Building for Solid Waste Management • Capacity Building for project staff in RWSS sector |

2. HUMAN RESOURCE DEVELOPMENT AND THE WATER AND ENVIRONMENTAL SANITATION SECTOR

A. HRD – THE CONCEPT

Figure 2.1: What is HRD?



- 2.1 This study would like to shift the sector’s attention from a narrow focus on training to a wider focus on capacity building. This would bring us to a more difficult and less easily achievable interpretation of HRD that includes institutional strengthening. HRD efforts with public sector organisations which are grossly overstuffed and inefficient, with very long response time, would necessarily include elements of restructuring and i.e. typically government organisations such as PHED’s, water boards, municipalities, district councils or other arrangements. In order to have credibility and to be able to act effective ambassadors of HRD, providers of such services would have to look at their own organisational efficiency and effectiveness. i.e. create an environment that encourages creativity, action and quick response time while ensuring that services are of the highest quality.
- 2.2 The most important element of this interpretation is the implication it has for policy. In order to enhance capacities and bring out the best in people and organisations, good information flows, flexibility and competent leadership would be required in order to encourage individual action and quick response times. While private sector organisations active in the sector have already made this their company credo¹³, the task appears daunting for the public sector. Autonomy to make sound decisions and act in a manner that is best for the company and its clientele is an organisational vision that must be formulated and pursued in the interests of better coverage and quality of service in the WES sector.
- 2.3 Institutional strengthening for the sector would include:
- i) building of individual capacities as well as those of teams

¹³ Introduction to SHRENCO, “your waste is our Business”, Shriram Engineering and Construction Company Ltd.

- ii) enabling tacit knowledge and skills to be used
- iii) rewarding innovation and performance
- iv) enhancing the quality and scope of what the organisation does
- v) enhancing the customer-oriented nature of sector organisations/professionals
- vi) equipping individuals and organisations to respond to the exigencies of the hour and to change and evolve as required
- vii) priority to consumers and responsiveness to demand as recognised measures of achievement

Box 2.1: Concept of Capacity Building

Capacity building is about more than training. It concerns, as the bottom line, getting things done. In the end there should be water in pipes, accessible housing, security, employment or whatever is the issue locally. Capacity building is about making the conditions right for this to happen. This includes training for men and women, but has to go beyond this to ensure that organisations are able to support individuals by giving them adequate respect, pay, responsibility and conditions which encourage the motivation and energy that is necessary to make a difference. Organisations also have to learn how to work more cooperatively and in partnership with others. They do not work in a vacuum, but are supported, or sometimes limited by institutional frameworks of conditions and regulations.

Annex 1 of Report, Proceedings and Recommendations of Policy Workshop on Training Strategies for Capacity Building of Municipal Governments – October 20-21, 1997 by Peltenburg M., Davidson F, Teerlink H, Building Capacities for Better Cities: Discussion Paper for Habitat II, Institute for Housing and Urban Development Studies (HIS), Rotterdam, May 1996, pp.1-5,

B A DEMAND-BASED APPROACH TO HRD

- 2.4 The one single factor that constrains the development of more effective approaches to HRD for the WES sector is the fact that most current HRD initiatives are supply, rather than demand - driven. Unless effective demand can be created, no amount of investment in HRD is likely to achieve significant impact.
- 2.5 In order to create a demand for good quality training, the HRD strategy will have to be three-pronged:
 - i) start by creating a demand for improved training for WES in target states
 - ii) develop the capacity of training institutions to respond to this demand; and
 - iii) ensure that the training is linked to change and development within organisations so as to develop a holistic approach to HRD
- 2.6 There are two aspects to the first. One is to ensure that the organisations from which trainees are drawn, demand state-of-the art training (interactive methodologies and updated course materials). This would be seconded by qualitative monitoring of WES projects and benchmarking of services to evaluate use, maintenance and sustainability which in itself would generate a demand for better quality inputs into projects.

- 2.7 The second aspect is to ensure that their demand is informed in the sense that they are aware of their training needs. This suggests a need for an organisational training needs analysis linking personal and professional development on the individual front to increased efficiency and effectiveness on the organisational front.
- 2.8 As such the approach adopted by proposed actions on the demand side will be to:
- i) create awareness and recognition of the need for change in the sector;
 - ii) develop awareness of how HRD can help in the process of change;
 - iii) disseminate information on the resources available to support that change
 - iv) support the development of quality products and services that will enhance and sustain the demand.
- 2.9 Recognition of the need for change must be linked with the current reform agenda, which emphasises decentralisation based on increased financial and managerial autonomy and accountability within WES organisations. This implies a shift towards flexible and responsive management systems and structures. It also implies the need for a more effective interface with consumers – including better communication, participatory planning involving communities and an increased role for consumers in on-going maintenance and monitoring of systems.
- 2.10 Action to develop demand for training is faced by two inherent difficulties. The first is the relatively poor quality of much of the training that is currently available, which inevitably restricts demand. The second difficulty is the fact that many government organisations operate through entrenched bureaucratic systems that emphasise hierarchy and adherence to rules at the expense of flexibility and original thinking. In these circumstances, there is a temptation to ignore the need to create the conditions within government departments that will create a greater demand for training.

Box 2.2: Means of Building Demand

It will not be possible to build capacity unless the organisations concerned want to build it and know what they need. It is very important to stimulate this through the stimulation of the development of *capacity building strategies* which are themselves integrated into urban development strategies at national, city and local levels. Coupled with this must be an improvement of the organisational and institutional framework within which people operate.

Annex 1 of Report, Proceedings and Recommendations of Policy Workshop on Training Strategies for Capacity Building of Municipal Governments – October 20-21, 1997 by Peltenburg M, Davidson F, Teerlink H, Building Capacities for Better Cities: Discussion Paper for Habitat II, Institute for Housing and Urban Development Studies (HIS), Rotterdam, May 1996, pp.1-5

- 2.11 A concerted effort will also be required in order to ensure that capacity building efforts correct the gender balance in the sector as regards HRD. This is particularly

critical on the demand side where latent demand for skills development, training opportunities including formal academic training is further constrained by gender-insensitive conditions at training centres, male dominated faculty and a complete lack of awareness that there is a need for change. Women trainees and trainers are in the minority and often severely inconvenienced and demotivated by facilities, courses and conditions – including a nominations process, that have been designed exclusively for men.

Box 2.3: Poor Female Participation in the Management for Sustainability Course

The participation of women on the course has been very poor (one or two, per batch) Women participants are usually drawn from the Tata Institute of Social Sciences or the Health Department. All MFS female alumni met expressed a keen interest in attending the course and stressed that opportunities for quality training are rarely offered to women. They also stressed that it was no problem at all for women to attend training courses of longer duration provided that they were intimated sufficiently in advance, with detailed information about lodging and boarding facilities, etc. The sixth MFS course held in May 1998 had one female participant, a revenue officer from the Maharashtra Jeevan Pradhikaran, who was informed officially of her nomination on the weekend before the commencement of the course. As regards availability of female participants, there are only two women engineers of Deputy Engineer rank and about 20-25 at Junior Engineer level in MJP.

Patkar, A./August 1998, Review Report – Phase 1 of the Management for Sustainability in Water Supply and Sanitation Programmes Course transferred with DFID support from IRC (Netherlands) to the Nashik Research and Training Centre – Maharashtra, India.

- 2.12 Given the complete lack of women in senior positions in the sector across the country (with the exception of the IAS cadre), this gender imbalance extends to WES organisations. The 33% reservation for women elected officials attempts to correct this imbalance in the polity but also highlights the urgent task of building capacities in order to empower women to assume responsibility and discharge their functions effectively.

C. SUPPLY-SIDE ISSUES

- 2.13 Initiatives aimed at developing 'demand' for HRD will only be effective if the services that are on offer are perceived as relevant and available in a form that suits the needs of potential client organisations. In a market-driven situation, a discerning and demanding client will only give a service one chance before moving on to try a competitor's offerings. Various services in the market are designed following careful market research to determine client profiles preferences and needs. The choice of the buyer is fairly rational and based on several criteria including brand and reputation for quality, perceptions of potential value added, access – convenience and price and in today's market clients are increasingly demanding services tailored to suit individual requirements. This will hold true in a situation where there are a range of choices available, good information flows and the buyer of the service has the freedom to make a choice. The benefits of this scenario are obvious – the buyer feels positive about the decision and feels that the service will add value, which is why s/he makes

the decision to pay for it. The seller is aware that there are alternatives available in the market and that the chosen service must match expectations. The client is demanding as s/he has paid a price in the expectation of receiving a quality service.

- 2.14 HRD services in the sector, however, are offered in almost complete isolation from the customer. Numbers of persons to be oriented or the supply mechanisms for grassroots level training have been predetermined in a highly centralised manner to correspond to departmental mission statements and goals. The other components of a successful HRD strategy apart from training are entirely missing in these training plans. In fact there is no government cell, line ministry or department in the country today that is discharging an HRD function in the complete sense of the term. This holds true at the national level and is only mirrored at the state level. While, several states have competent government training institutions, these institutions have no HRD function that can play an advisory role on organisational matters, personal development or ongoing learning.
- 2.15 Recognition of the need for the HRD function exists and has been a recurrent theme in discussions with senior administrators with experience in the sector. They have emphasized the fact that this function is absent in the public sector as a whole and would require reorientation of public sector functioning. Water supply and sanitation is a state subject and states are well within their power to reorganise water boards or departments. Each staffing level comes with its own set of legal and unwritten prerequisites and disincentives to perform. A willingness to change and meet the resistance that will accompany change is perhaps the biggest challenge facing the sector today.

D. TRAINING

- 2.16 As regards training, a general theme that has emerged from meetings and workshops is the need to improve the 'product' on offer at training institutions. There are several aspects to this:
- i) the **focus** of training - is it what 'client' organisations want?
 - ii) the **structure** of training - does it provide what is wanted in a way that suits the schedules of potential trainees?
 - iii) the **content** of training - does it respond to need?
 - iv) training **methods** - are they interactive and effective?
- 2.17 Answers to some of these questions will be informed by conducting an organisational and training needs analysis by representative 'client' organisations. Such an analysis would:
- a. Link training to the situations and issues encountered in the work environment
 - b. Continuously amend and adapt content and delivery on the basis of feedback from trainees
 - c. Link formal academic training to exposure in the field to ensure that skills are relevant and marketable.

- 2.18 Following this, there is likely to be a need to strengthen training organisations and improve the product that they offer. Actions to achieve this must:
- i Increase in the number of skilled trainers available to these institutions.
 - ii Improve the quality of training - including the content and the methodology used.
 - iii Change the focus of training to make it more responsive to user needs.
 - iv Market training services and products widely
 - v Improve management of the training process, designed to ensure that the resources available to achieve quality outputs are available.
- 2.19 Underlying all these actions, there is a need to increase the autonomy of training institutions. Most of the training institutions active in the sector¹⁴ are almost entirely funded by grants from the state or central government. Without the need to raise revenues, institutions have no incentive to monitor the market and tailor products and services according to demand. Training for the rural water and sanitation sector in many states is entirely funded by the Panchayati Raj and Rural Development Division or the Urban Development Department. The Director of the Department will normally never sample the Institute's products and has little direct feedback as regards quality or relevance of training.
- 2.20 This benevolence towards Institutes does not come without tight strings attached. Despite the random nature of posting any available superintending engineer or administrator as head of a state training institute, there are instances where a dynamic individual with an interest in HRD has taken the initiative to change matters for the better. Such instances are extremely rare as these institutes suffer from a complete lack of autonomy. Attempts at cost effectiveness, restructuring or repositioning are severely constrained by inability to revamp faculty or improve facilities due to limited powers and insufficient funds. Most training institutions have limited professional staff but are burdened with a large number of ancillary staff. The latter are often unable to contribute meaningfully to the efficient operation of the organisation. The lone change agent has to face several, often insurmountable hurdles and either resigns to the circumstances or is unceremoniously transferred.
- 2.21 Without this increased autonomy, institutes are unlikely to have the power to sustain the proposed reforms after the withdrawal of any external support. One response to this articulated need for increasing autonomy has been to register key training providers as independent societies. This route has already been taken by the All India Institute of Local Self-Government (AIIILSG) in Mumbai and by the Socio-Economic Units Foundation (SEUF) in Kerala. It should be noted that although this move has brought a degree of autonomy as regards course calendars and content, it has done little as regards the client. All these institutes continue to be funded by grants from central and state government or external support agencies without any incentive to rationalise expenditure or performance. Only a true market orientation would force such institutions to examine the quality of their products and services and to treat their

¹⁴ K. Tayler, I. Hooff & A. Patkar, First Phase Report, Study on HRD in the WES Sector in India

trainees as highly valued customers. On the demand-side an important consideration is the need for trainees to pay for services, have access to a range of choices and thereby demand state of the art services.

- 2.22 The more recent advent of the private sector into the area of capacity building is promising in terms of providing alternatives and thereby increasing the number of choices available to the trainee. Companies are increasingly aware of the changes in approach that will be required to tap a large and potentially lucrative market. This has necessitated a gradual re-orientation in some companies towards consumer-focussed approaches and products. Both Excel Industries and Ion Exchange India have responded to this shift by setting up training institutes that will furnish a resource bank of trained individuals, sensitive to the needs of different types of consumers. This rather than diluting the company's core competence is seen as expanding its eventual area of operation and clientele, setting up an example of best practise for the industry, generating contacts within the public sector and thereby more business as well as branding the company as a 'socially responsible business'.

Box 2.4: Means of Increasing of Capacity Building

The most important stimulus for improving capacity building services is to have demanding clients who have budgeted to pay for a quality service. It is also necessary to significantly increase the capacity required to serve the substantial growth in demand. It is also important to widen the range of sources of capacity building services.

Annex 1 of Report, Proceedings and Recommendations of Policy Workshop on Training Strategies for Capacity Building of Municipal Governments – October 20-21, 1997 by Peltenburg M, Davidson F, Teerlink H, Building Capacities for Better Cities: Discussion Paper for Habitat II, Institute for Housing and Urban Development Studies (HIS), Rotterdam, May 1996, pp.1-5

- 2.23 The National Training policy developed in 1996 by OOPP recommended that 1.5% be earmarked from each department's salary budget solely for the purpose of training. However, the manner in which this allocation is administered is important. The HRD function staffed by qualified professional, is absent in state and central government departments as well as in NGOs. The HRD post is normally manned by a person designated as Training Officer – a post that is viewed as an unattractive desk job, which adds little value to personal career graphs. As such, an array of training officers from administrative assistants to senior –level engineers are entrusted with the task of matching names to training courses offered by designated government training institutes.

E. EARLIER STUDIES AND RECOMMENDATIONS

- 2.24 The 1998 Urban Water Supply and Sanitation Sector Review conducted as part of the World Bank-supported, India Water Resources Management Sector work identified a

three-pronged approach to promote nation-wide reform in the sector while allowing and encouraging local flexibility:

- i) systemic changes – changes which will liberate local initiative while ensuring that initiatives are designed for the common good;
- ii) innovations through windows of opportunity that will be supported with appropriate incentives along with dissemination of information about international best practices and
- iii) demand-led capacity building - to develop local capacity for a variety of activities.¹⁵

2.25 The corresponding study for the rural water supply and sanitation sector emphasised the urgent need to strengthen institutional capabilities including training at all administrative levels to facilitate the devolution process.¹⁶

2.26 The Seminar on 'Capacity Building for Urban Governance' organised by the Ministry of Urban Affairs and Employment and the National Institute of Urban Affairs emphasized the need for strengthening of technical, financial and managerial capacities of municipalities at the local level. It also stressed the need for proper orientation of elected representatives and training of municipal staff in order to equip them with adequate skills and capabilities for effective service delivery.¹⁷

2.27 In 1997, The Human Settlements Management Institute of the Housing and Urban Development Corporation (HUDCO) organised a two day policy workshop on "Training Strategies for Capacity Building of Municipal Governments" in collaboration with the Decentralized Training for Urban Development Project (DTUDP). The workshop recommended the formulation of an operational national training strategy, which would build the capacity of urban local bodies to implement the 74th CA. It aimed to do this by improving collaboration and convergence between existing national training institutions (such as HSMI, NIUA, IIPA, AILSG, TCPO) and the various state level training institutions such as the Administrative Training Institutes (ATI) and the Regional Centres for Urban and Environmental Studies (RCUES) across the country.¹⁸

2.28 In 1996, The Government of India, through the Ministry of Personnel, Public Grievances and Pensions constituted a Working Group to formulate a National Training Policy, which would help meet the challenges of development – social, economic and political. This policy sets out operational guidelines for induction and in-service training at all levels of the Civil Service from the lowest level to the policy and decision-making levels. Budget allocations for 1.5% of departmental budgets for training purposes. The report emphasizes at the outset that "*Training, ..., needs to be*

¹⁵ Urban Water Supply and Sanitation Report, Main Report, June 26, 1998 pg. 69-71

¹⁶ World Bank/GOI, Rural Water Supply and Sanitation Report, India Water Resources Management Sector Work, 1/17/97

¹⁷ Report of the Seminar on Capacity Building for Urban Governance, 3-4 April, 1997, Bangalore

¹⁸ HSMI-HUDCO, Policy Workshop on Training Strategies for Capacity Building of Municipal Governments, Report, Proceedings and Recommendations, pg.4, October 20-21, 1997

*viewed in proper perspective vis-à-vis the other elements of the personnel management system and not as a panacea for achieving organisational excellence.*¹⁹

- 2.29 In 1996 the UNDP-World Bank, Water and Sanitation Program and the Government of India undertook a joint review of the Indian Training Network, whose objective was to establish a live, sustainable network of concerned institutions mutually supporting each other to improve training performance, learn from experience, show awareness and initiative to address the major obstacles to improving capacity towards better service delivery in the sector. The findings of the review however, confirmed the overall perception that the Indian ITN 's achievements have fallen well short of expectations.²⁰ As regards the international Training Network, many centres in South Asia have been unsuccessful, there are however, some examples in Africa where centres are functioning well.
- 2.30 Along with DFID, external support agencies such as Danida, GTZ, RNE, UNDP, the World Bank, USAID and UNICEF have invested in capacity building efforts in the sector with a view to improving the quality and effectiveness of services provided through their projects. These efforts have been largely confined to short training courses offered in-country or abroad and linked to timebound water supply and sanitation projects. Assessment of impact has rarely included an explicit assessment of HRD inputs and their impact on the sector as a whole. The Water and Sanitation Program for South Asia, is the only national level organisation with a significant and explicit capacity building mandate targeting senior policy makers and managers in the urban and rural WES sector.
- 2.31 Indo-Dutch development cooperation has traditionally included the rural water supply and sanitation sector as one of the focus areas for support. Since 1993, following the recommendations of a mission²¹ to analyse and quantify training needs and target audiences in five states, the Netherlands Assisted Program (NAP) in India has undergone some revisions - The NAP will no longer support large scale piped water supply schemes but rather focus on the enhancement of capacities of a number of Indian sector training and education institutions.²² Pilot projects will be continued and will act as laboratories of innovation and as testing grounds for new approaches. The Dutch Programme will support sector Training and Education Institute only if there is a priority for the Indian Government.

¹⁹ Department of Personnel, Public Grievances and Pensions, National Training Policy, 1996, New Delhi

²⁰ India ITN Review, July 1996, pg. 4

²¹ M.W. Blokland, C.A. van Wijk-Sybesma, J.Narain, Training in the Netherlands Assisted Water Supply and Sanitation Programme in India - Strategy Paper, December 1993

²² Indo-Dutch Cooperation in Rural Water Supply and Sanitation, A Discussion Paper for a New Strategy

3. FINDINGS AND RECOMMENDATIONS OF THIS STUDY

3.1 The following is a summary of the key findings of the study based on the consultation process. Included in the list are findings and recommendations from workshops conducted for the state level in the four states of Andhra Pradesh, Maharashtra, West Bengal, Orissa and the national workshop in New Delhi.

A. OVERALL HRD NEEDS IDENTIFIED

3.2 The primary HRD need identified was that of restructuring of development of NGOs and government departments, active and involved in the sector. Key weaknesses identified for both governmental and non-governmental models were poor management skills, poor transparency, accountability, and lack of demand-led, consumer-oriented approaches. In addition, inappropriate skills—technical, interpersonal and social, were identified as problems in many cases linked to a mismatch of job descriptions with what was required of the organisation.

3.3 For effective service delivery, on an equitable and efficient basis, organisational restructuring of the various existing arrangements active in the sector for WES, was identified as a prime need.

3.4 Sector practitioners, administrators and elected officials alike agreed on the importance of creating a showcase of best practices to demonstrate the advantages of consumer-oriented, commercially viable organisations that are able to deliver reliable services to more people in a cost-effective and sustainable manner

3.5 Raising the profile of HRD in the sector should also create pressure to link performance to rewards and recognition with an emphasis on utilisation of existing resources more effectively through redeployment or retraining.

3.6 Most organisations consulted agreed that the problem was not one of lack of technical expertise, but rather about appropriate application of technical – often bookish knowledge and the sheer lack of management skills in the WES sector

3.7 Orientation and awareness raising of the users/consumers was underlined as a key area for HRD interventions. Educating the consumer about rights and responsibilities would increase the demand for reliable, good quality services and would also provide the impetus to reform institutions and policies in the sector

3.8 Professional associations whether in technical areas (e.g. civil engineers) or cross cutting areas such as participatory methodologies, are weak and do not perform a quality control, benchmarking function. The potential of electronic networking has yet to be realised in the development world and this applies to WES as well. Interestingly, some small NGOs are finding it easier to link up with the outside world via the net,

rather than with inward looking neighbours, helping them build international linkages while sharing experiences and research findings. This is invaluable, given the paucity of wide ranging development literature *easily available* to a small organisation.

- 3.9 There is growing interest in the private sector in building bridges with government and development agencies. Large corporates such as the Tata group of companies have historically always had a social agenda, but this now being systematically institutionalised with advertising firms, banks even engineering firms seeking to project a social responsible dimension to their core business. This has resulted in various initiatives – various projects, partnerships and networks have spawned recently, particularly in AP and Maharashtra. A large proportion of these initiatives seeks to enhance individual capacity and empower people to make choices once they have skills to offer. The most interesting among these are the public-private partnerships which form a growing trend and which are the most promising from the point of view of this study as they build on the core strengths of each partner and in the process enhance capacity and skills.

B. TRAINING

- 3.10 There seems to be an overwhelming consensus that training alone, will not have any impact on the sector's ability to deliver good services to the poorest and richest consumer alike. The problem is one of *human resources development* --involving a multiplicity of factors – from the size and mandate of organisations to recruitment procedures and job charts to accountability. These elements need to be further linked with the complexity of factors involved in bringing about reform and the ability to translate skills acquired during training into positive action
- 3.11 The need to create a demand for training was identified as the underlying cause of ineffective, poorly perceived and supported training initiatives. Most training institutions are supported by grants from the central and state governments and donors and have very little incentive to market their offerings, actively seek clients or upgrade facilities and services
- 3.12 The preoccupation with training hundreds of officers of any one cadre in government has entirely ignored the need to link skills acquisition, personnel motivation and performance to an enabling organisational environment. Since HRD departments within organisations function as mere administrative cells and do not pay any heed to personal development issues or skills development, employees are neither motivated nor guided to embark on a path of ongoing learning and self-enhancement. While this is true mainly for government agencies and line departments, the private sector is largely able to motivate employees and link skills development and performance to a system of rewards, recognition and increased productivity
- 3.13 Training institutions are plagued by limited autonomy and the inability to attract professional trainers or retain good faculty members. The need for complete

restructuring so that training institutions were able to position themselves as attractive propositions by prospective employees as well as potential clients was stressed by participants representing govt. and non-governmental training providers.

- 3.14 The client (trainee) has little or no choice due to various reasons: Employees are often directed towards by superiors in a highly bureaucratic system which perceives training as something to be suffered but not critical to productivity or performance.. This is compounded by the fact that information on various courses is often inaccessible because it is routed through senior officers in the department (in the case of government) or simply out of the reach of smaller NGOs or individuals
- 3.15 The range of training courses offered all over the country have very little opportunity for self-evaluation or upgradation. The lack of information sharing accentuates this problem so that several training providers are complacent about the quality of the courses on offer, without any opportunity for benchmarking. The states of Andhra Pradesh and Maharashtra are rich in training providers (government, autonomous and private), offering a plethora of innovative programmes often tailored to suit the client. Training Institute with the potential to develop into higher quality resource centre are located in various states across the country. There is no dearth of training expertise in areas such as gender, PRA, communication skills, etc. However some of the best trainers are not linked into any training network or association and are as such, often isolated. In addition, some of the most promising institutions are constrained by their restrictive charters from developing their core competencies further
- 3.16 A very concrete problem in the Indian context, endorsed by participants in all states was the need for trainers to upgrade their communication skills and training methodology i.e. to keep in step with developments and new interactive training methodologies, teaching aids, effective practices, etc.
- 3.17 The need for evaluation of the quality of training, regular self-evaluation of quality of services as well as occasional third party evaluation was also stressed
- 3.18 A database of training resources, with details of skills, experience, clients, etc. would facilitate sourcing of appropriate resources
- 3.19 There is a complete absence of a culture of networking between training providers and/or alumni (who have undergone specialised training, etc.). Networking would provide an ongoing opportunity to share experiences, learn lessons and maximise the benefits of a time-bound training experience. This was felt to be important in the national as well as international context

C. PARTNERSHIPS

- 3.20 The key recommendation to emerge from the workshops, is the need to engage the private sector in partnerships with NGOs, Govt. and donors. More opportunities to

interact, share information and collaborate were needed in order to make available to the WES sector a range of skills and expertise

- 3.21 Partnerships should be built on the basis of core competencies, recognising the strengths and weaknesses of partners, but working towards common objectives and goals
- 3.22 A need for thematic fora and workshops where sector practitioners, academics and government officers could come together to share experiences was expressed in all states. In Orissa, this was stated to be a particularly pressing need at both state and district level

D. DOCUMENTATION AND DISSEMINATION

- 3.23 Support for i) documentation of models and examples of successes and failures as well as ii) developing documentation skills among implementing agencies (NGOs or govt.) was identified as a critical gap in the sector.
- 3.24 The lack of user friendly, easily accessible information on new approaches, initiatives in the pipeline, people and events in the sector, literature and research findings called for better and wider dissemination of information to a range of target communities.
- 3.25 Documentation is particularly important for establishing directories of best practise that can show the way forward and these should be cross-sectoral and international in nature, extrapolating relevant lessons for WES in India.

E. SPECIFIC PRIORITY AREAS FOR THE SECTOR

- 3.26 While the rural sector under the aegis of the Rajiv Gandhi National Drinking Water Mission, has created HRD cells to facilitate improved service delivery, the urban sector has made no such coordinated attempt. In addition the State Institutes of Rural development also contribute to related skills development, orientation and training for rural water supply and sanitation. It was felt that there is a need to formalise the HRD coordinating function in the urban WES sector as well.
- 3.27 The 74th Constitutional Amendment (CA) has substantially increased the responsibilities and powers of urban local bodies, in providing water and sanitation services. Capacity building of councillors and corporators, chairpersons and mayors has been identified as an important area to target training and exposure in tariff setting, planning and management of UWSS. Likewise the 73rd CA has created the need for the orientation of a vast number of elected officials at the district and gram panchayat levels.

- 3.28 Restructuring of HRD cells, was thought to be essential for two reasons: i) to utilise resources earmarked by the GOI effectively for rural WES; ii) to define for themselves a coordinating and mentoring role for HRD in the sector and iii) working models of active HRD cells developed in states where the environment is right, could then be used to replicate the approach in other states.
- 3.29 Appropriate technology or rather, the ability to design, implement and maintain useful, cost-effective and sustainable services with communities, has been identified as a key gap in the degree and diploma courses currently available. Revamping of the university curriculum (public health engineering or environmental engineering) is seen as a priority, albeit difficult, area for HRD reform.
- 3.30 Expertise in gender training and sensitisation, targeting organisations as opposed to individuals and packaged in a non-threatening, locally acceptable manner (and not perceived as a donor - driven agenda), needs to be developed and showcased for the benefits it can bring to the sector.
- 3.31 Professionals in the water, wastewater, solid waste, latrine business need to become managers with a view to increased efficiency and better services to customers. Management training is a premier need for the rural and urban sectors. In addition, the absence of management training designed specifically for not-for profit organisations such as NGOs, was felt to be a gap.
- 3.32 Health and hygiene promotion was identified as a particularly neglected area in terms of resources available (short and long courses, consultancy services, resource centres, etc.). There is a need to revamp diploma and degree programmes and to offer short courses targeting sector professionals.
- 3.33 The need for setting up centres of excellence in various sectoral specialisations such as low-cost sanitation, solid waste management, domestic wastewater management, etc. was endorsed by participants, especially academics, specialist NGOs and government. These centres of excellence could link action research on actual projects into research and development, documentation and dissemination of lessons learnt.

F. KEY ELEMENTS OF A HRD STRATEGY FOR THE SECTOR

- 3.34 **National Strategy** – Formulation and implementation of a national strategy for the urban and rural WES sectors in collaboration with the national ministries identified, external support agencies, NGOs and private sector organisations. The key elements of this initiative have been identified as:
- Development of a comprehensive HRD strategy for the rural and urban WES sectors including support to role definition of the RGNDWM and Central Public Health and Environmental Engineering Organisation (CPHEEO)

- Internal capacity building of key personnel of key national organisations
- Support to identified HRD cells in the rural sector and support to the RGNDWM to document and scale-up these models
- Formalisation of an urban HRD function at the state level for the Urban sector
- Coordination and collaboration between external support agencies in WES
- Setting up of an inter government and donor forum for coordination and collaboration on HRD initiatives.

3.35 **Resource and Innovation Centres** – Each such centre will deliver a range of services namely – advocacy, research, advisory services, information, documentation and training. The strategy will be to establish of a well-functioning network of resource centres across the country that offer high-quality services in specific sector areas such as low-cost sanitation, solid waste management, community management of WES, health promotion, etc. These resource centres will be a combination of existing training institutes with potential for such activities as well as groups, NGOs, academic or private sector initiatives that indicate such potential. It is envisaged that these centres will include non-sector institutes with core strengths relevant to the WES sector such as the Indian Institutes of Management. These centres will develop case studies, disseminate information, bring together sector actors and offer innovative training packages targeting the different levels of sector personnel. In order to continuously update and renew their products and services, these resource centres will be developed as outward looking organisations whose target group extends beyond state boundaries and eventually targets neighbouring countries in the region.

3.36 Key elements of this initiative will include:

- Competitive selection process of resource centres at the state level
- Support to formulation of business plan
- Analysis of financial resources & restructuring for sustainability
- Revamping of human resources (faculty and support staff)
- Resource centre development (library, IT, documentation support)
- Revamping of products and services
- Rational infrastructure development
- Identification of client base and marketing of services
- Networking and sharing of resources with other centres and academic institutions
- International sharing and benchmarking
- Positioning in the region as a centre of excellence

3.37 For an institution to function as a centre of excellence, it must necessarily be international in its focus. In order to benefit from sectoral experience sharing and benchmarking, the HRD strategy will have to be outward looking. This would ensure that institutions and groups that were identified as resource centres are able to incorporate lessons and tools from neighbouring countries, invite in international expertise where appropriate from developing and developed countries and eventually market products and services within the region and internationally.

3.38 **HRD products and services** – To a large extent, these will be developed by the resource and innovation centres. Different centres will focus on developing services based on core competencies i.e. health promotion, water resources management, management development for rural or urban WES, etc. These will include:

- Tailor-made visits
- Advisory services (HRD and technical)
- Workshops
- Discussion fora
- Audio-visual documentation
- Tailor made Training packages
- Short and long training courses
- Refresher courses
- On-the- job training
- Peer review and performance evaluation

3.39 Specific thematic areas for which a demand has been identified at the state level are:

- Management development in the urban sector
- Management development in the rural sector
- Pricing strategies, tariff setting, billing and accounts
- Health promotion
- Low-cost sanitation
- Water resources management

This would include adaptation of existing curricula and training available in the sector, including diploma and degree courses as well as the design and implementation of new programmes aiming to fill gaps in the sector.

3.40 **Showcase of Best Practise** – The reform process currently suffers from a dearth of role models. While CEOs and commissioners are quite clear about the need for reform of their organisations, they are unsure as to how to go about it. The demand for exposure to models that function well and that can be emulated is very strong among managers, decision-makers and even elected officials.

3.41 It is recommended that this demand be addressed by:

- Commissioning studies on institutional arrangements in WES in India and abroad
- Commissioning studies on the reform process in other dynamic sectors
- Commissioning studies of best practise under various specific themes
- Commissioning studies and exposure to best practise in HRD (institutions or initiatives)
- Dissemination of these studies in user friendly formats for different target groups
- Support to exposure visits for managers, decision-makers and elected officials
- Support to ongoing interaction between identified role models and other sector institutions

- Regular updating and dissemination of a dynamic showcase for the sector
- 3.42 **Networking** – Lack of information sharing and dialogue between academics, practitioners and administrators was identified as an impediment to the reform process. Support to networking for lesson learning, information on resources and approaches available and for dissemination of information will be an important step in building communities where various stakeholders in the sector including informed consumers, communicate with each other on an ongoing, informal basis, sharing ideas, experiences and lessons. A combination of print, television and electronic media would target different groups of practitioners and consumers. Networking strategies will include:
- Working with professional associations
 - Regional Events at state level - workshops, fora, seminars
 - Newsletters
 - Alumni associations – academic (PHED courses), professional (e.g. managers or SWM professionals)
- 3.43 Keeping in view the importance of impact of the HRD strategy on the decision-making and managerial levels in the sector, it is recommended that the Internet be utilised as a powerful tool to open up the debate, disseminate ideas and experiences and provide vital information and contacts. The Internet based strategy will aim to develop communities of WES practitioners and professionals while promoting HRD services for the sector. Important elements of this strategy include:
- Marketing & advertisement of HRD services
 - Directory of training providers and clients
 - Alumni networks
 - Private sector and government advertises products and services
 - Topical discussion fora, Chat groups
 - Events calendar
 - White papers, Policy developments
 - Projects in the sector, case studies
 - Linkages to international WES institutions, initiatives
 - Examples of best practise showcased
- 3.44 The networking strategy should learn lessons from the ITN experience in India and build on successes and experiences (see below).

Box 3.1: Operation of Networks

To be effective, networks require the following conditions to be present:

- i) Clear objectives and strategies to be shared by all the members
- ii) A shared general set of values, culture, language and shared commitment to approaches to achievement of objectives.
- iii) A simple structure that provides for adequate guidance and governance.
- iv) A strong and enlightened leadership.
- v) An incentive structure such that there is a perception of benefits by all parties.
- vi) Clear accountability for actions.
- vii) Procedures for resolving problems and disputes by an objective party.

UNDP-World Bank Water and Sanitation Program & Government of India, The Indian ITN- report of a Joint Review, July 1996

3.45 Innovation and Institutional Development Fund -- Human resource development is an ongoing process of adaptation, willingness and ability to respond to the changing times and realities in the most appropriate manner. Confining support to a projectised framework that closely defines each intervention would result in the loss of opportunities and momentum. It is proposed that an innovation fund to investigate and support innovative experiments in HRD, action research and documentation, pilot initiatives or HRD-related studies be set up to encourage best practise in the sector. In addition, the most challenging aspect of HRD is the organisational change and restructuring process required to support innovative ideas and initiatives.

3.46 Donor agencies with ongoing projects in water and environmental sanitation, have a comparative advantage in that they will be able to seize opportunities and support innovative ideas that emerge and link them to projects, which will act as testing grounds as well as provide a certain momentum and demand for change. DFID can build on the synergies available across sector groups i.e. the Andhra Pradesh Urban Services for the Poor project, coordinated by the Urban Poverty Group-DFID has a huge capacity building component. Similarly, the Maharashtra Water and Environmental Sanitation Project will provide opportunities for HRD interventions on the supply and demand side, including possibilities for crucial institutional development and restructuring. In Orissa, similar opportunities for HRD initiatives will emerge with the Western Orissa - Rural Livelihoods Project managed by the Rural Development Group -DFID.

G. RECOMMENDATIONS FROM THE NATIONAL & STATE WORKSHOPS

Table 3.1: Detailed Recommendations from the National Workshop

Recommendation

Objective: To develop in consultation with key stakeholders, a national policy for HRD in the WES sector which:

- i) highlights core issues relevant to both rural and urban areas**
- ii) facilitates preparation of state plans of action**
- iii) backs these up with appropriate institutional and financial support**
- iv) facilitates networking and access across states to resources available**

- Increased collaboration of External Support Agencies to include HRD in all support

- a. Set up inter ministry/ donor agency steering committee
- b. Let states formulate policies first
- c. Promote interaction of stakeholders at different levels
- d. Develop NGO networking at different levels
- e. Develop NGO networking at different levels
- f. Create effective mechanisms for interaction/exchange of experiences and coordination between stakeholders
- g. Create forum at state and national levels, initiative by concerned departments
- h. Identify retired individuals, not associated with any department
- i. Enhance capacity with existing institutions

- Support the setting up of recognised for a

- j. Networks – traditional and electronic
- k. Regular monitoring, involving the key stakeholders and stakeholders
- l. Maintain database on key trainers

- Increased priority to human resource development

- m. Exchange visits with other HRD professionals in other WES concerns overseas
- n. Initiate dialogue/awareness for acceptance of HRD as a high priority area
- o. Expose positive impacts and “cascade” effect of HRD
- p. Sensitise stakeholders
- q. Promote understanding through awareness building

- Increased interest and participation from the private sector

- r. Cost recovery approach
- s. Mixed management (private/government)
- t. Commercialise HRD by offering incentives/terms/packages and open discussion
- u. Encourage trainers to start package of services

- *Develop a common understanding among stakeholders in the sector*

- v. Mass awareness campaign to promote common understanding
- w. Develop resource centres to provide support in techno-managerial areas and guide these areas
- x. Make policy simple – which ordinary people can understand and act upon
- y. Joint reviews/ planning workshops/training and meetings of key actors
- z. Consultation and participation of local communities for focus on priority groups
- aa. Elaborate basic common guidelines

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| <ul style="list-style-type: none"> • <i>Increased financial commitment to human resource development</i> bb. Donors provide 'seed' money to high profile initiatives cc. Better allocation of resources dd. Better resource management ee. Preparation of plan of action with support of ESAs ff. Develop cost effective options within available means gg. Link supply with community contributions hh. Promote HRD through private sector ii. Fully utilise available funds, create demand for additional funds, move planning commission for additional funds jj. Management reform to use resources more efficiently |
| <p>Recommendation</p> |
| <p>Objective: To Create national centres of excellence</p> |
| <ul style="list-style-type: none"> • value addition for the trainers • good engineering, cost effective, develop HRD at all levels • coupled with the network • building the local capacity, sustainability • dissemination of tried practices and lessons learned • national level apex body/cell is required • filling the gaps, building the capacity at grass roots level, TOT • strengthening of the existing system • establish national cell to look at urban issues • new role definition of CPHEEO, linkage with RGNDWM • linking institutions with different skills • 'MIS' system, information, dissemination, accreditation of training institutes • monitoring of the centre of excellence by paymaster |
| <p>Recommendation</p> |
| <p>Objective: To create and promote a demand for high quality HRD services in the sector through combining consumer orientation with a social mandate for institutions/consumers/operator groups</p> |
| <ul style="list-style-type: none"> • people's demand, advocacy group • train HRD personnel in sciences/skills in effecting behavioural change • caste and gender attitudes negative • training for process facilitation • creating a strong pressure/consumer groups (urban environment) • co-ordination • have participatory HRD interventions, inter-sectoral in nature • establishment of process facilitators within institutions • information exchange |

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| Recommendation |
| <p>Objective: Effective and accessible networking at National level for improved:</p> <ol style="list-style-type: none"> 1) Knowledge sharing 2) Decision making 3) Action |
| <ul style="list-style-type: none"> • Establish/strengthen a central body <ol style="list-style-type: none"> a) existing institute (for instance CAPART for rural and HUDCO for urban) supports networks b) establishment of a new body to support networks |
| <ul style="list-style-type: none"> • Networks should develop a 'mission statement', objectives and framework |

Table 3.2: Detailed Recommendations from the State Workshops²³

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| Recommendation |
| <p>Objective: To develop autonomous accountable, consumer- oriented organisations, which work together in a coordinated manner for better service delivery in rural areas</p> |
| <ul style="list-style-type: none"> • Disseminating information on budgets/achievements • Co-ordination with other organisations and partners? • Re-orientation of staff? • Pilot different structures through demonstration projects • Donor agency support to multi disciplinary teams in short term • Take small, sure steps • Employ staff able to create public awareness • Drafting multi-disciplinary personnel (eg. Health, sociologists) into the organisation • Appoint multi disciplinary teams and ensure their training |
| Recommendation |
| <p>Objective: To establish customer-focussed urban utilities which sustain services over time</p> |
| <ul style="list-style-type: none"> • Prioritise WS as two urgent services • Developing corporate plan mission orientation • Institutional strengthening through consultancy and training • PP Partnership • Consumer awareness (General education) • Develop good MIS • Autonomy and decentralisation |

²³ State Workshop in Andhra Pradesh, Maharashtra, Orissa, West Bengal.

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| <ul style="list-style-type: none"> • Direct involvement of public with utilities • Legal reforms • NGO involvement • Water resource management |
| <p>Recommendation</p> |
| <p>Objective: Restructuring of HRD providers in order to create high quality cost-effective, client-centred autonomous HRD service providers</p> |
| <ul style="list-style-type: none"> • Institute performance management systems for professional staff • Incentives (Finance, certificate, recognition) for high performance • Institutionalisation of the HRD concept • Water Board Autonomy • Contract HRD services based on performance • Expose political leadership to market-based practices • Persuade the WSES authorities to outsource |
| <p>Recommendation</p> |
| <p>Objective: Monitor the quality of training by developing a cost-effective assessment of whether training is translated/implemented into relevant and effective action on the job</p> |
| <ul style="list-style-type: none"> • Accreditation for Training Institutions (periodic evaluation) • Develop Model Institutions from existing institutions and transfer learning • Phase training with job experience, build feedback into training • Feedback forms from trainees and employees • Qualitative training at grass-root level • Low trainer, trainee ratio • Remove govt. mandate on numbers for training • Direct trainers skills training (DTS) • Exposure of trainers to the job • One time training to be abolished |
| <p>Recommendation</p> |
| <p>Objective: Improve networking between training providers/HRD consultants towards more effective WES services</p> |
| <ul style="list-style-type: none"> • It should be well managed • Learn from other experiences e.g. gender mobility of trainees • Initial support to this network • Increase information - transparency • Through Internet • Leave it to the market |

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| <i>Recommendation</i> |
| Objective: To institutionalise partnership for action / achieving agreed results |
| <ul style="list-style-type: none"> • Participatory analysis of field experience / realities • Effective coordination of resources available • Consultative process for formulation of policy • Review of existing policies, Govt. resolutions, procedures etc • Identify scope for participation • Awareness and advocacy • Identification of measurable indicators within the monitoring process • Linking between NGOs and supported organisations • In the project planning and design provide for user response studies on cost sharing • Cross sensitisation among experts like technician, social, managerial, administrator • Investigate good models of networking and learn from it and understand critical intervention • Develop support services for NGOs • Review and monitoring process involving user, implementing agency and external agency • Clarity about objective roles and responsibility • Technical courses should include relevant practical cases and should have field placement |
| <i>Recommendation</i> |
| Objective: Utility Organisation should be responsible for providing WES services and should have a commercial orientation with the government having primary responsibility for ensuring provision of WES and universal minimum access to services |
| <ul style="list-style-type: none"> • Support development of consumer forums • Use mass media • Support Development of citizen's charters • Formation of local groups • Create lobbies within political circles • Link up with networks of elected officials • Demonstrate cases (exposure) • Exposure of elected officials to examples in different sectors • Exposure at different levels within an organisation to build up a critical mass • Documentation of best practices for dissemination • Develop examples through partnership (Local govt. PSOs, ESAs, Banks) • Utility must look at environment sanitation water and sewerage • Gradual phased approach • Context specific approach • Build capacity of local bodies to procure services |
| <i>Recommendation</i> |

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| Objective: Creation of a demand for training |
| <ul style="list-style-type: none"> • Participants to contribute financially or otherwise to training • Create HRD cell within the organisations to identify Training needs and standardize the norms • HRD cell must have representation from all the stakeholders • Some accreditation system for accountability and competency • Training resource centre |
| Recommendation |
| Objective: Promotion and scaling up of environmental sanitation initiatives |
| <ul style="list-style-type: none"> • Bring in accountability • Assigning the responsibility • Need based research • HRD focus on users need • Assigning the roles • Project demonstration • Research on opportunities, technologies available and method to tap them • Make project reports • Sell them to potential buyers / users • Centre of excellence (sensitivity to creative ideas) • Create a forum • Dissemination of information and knowledge • Awareness campaign • Networking with institutions |
| Recommendation |
| Objective: Community Participation in WES – in order to create an enabling environment where everybody will have an opportunity to participate and take part in the common decision making process as active contributors for their development. |
| <ul style="list-style-type: none"> • Proper resource based planning • Proper coordination • Gradual building of organisation for sustaining projects/plans • HR unemployed graduates can be trained to increase capacity for installing/maintenance /organisation • Right to information • Existing plan provisions can take care of the gaps |
| Recommendation |

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| Objective: Increase capacity of NGOs to ensure better WES projects in rural areas |
| <ul style="list-style-type: none"> • Support of Training Institute • Identify Training Institute (preferably among NGOs) • 7-8 Training Institute in Orissa (technical, man, etc) • Identification and establishing of pool of best trainees in the state • Exposure visits 'best practice' |
| <i>Recommendation</i> |
| Objective: To achieve better coordination between different agencies for effective service delivery |
| <ul style="list-style-type: none"> • Certification and Accreditation of NGOs • District level workshop to be organised by HRD Cell in 1999 – 2000 • Restructuring of HRD Cell (independent status) • TOT – to develop a pool of local resource persons • Policy on NGOs |
| <i>Recommendation</i> |
| Objective: To encourage, promote and create space for women to be actively involved in all aspects of human resource development in the sector |
| <ul style="list-style-type: none"> • Communication strategy, e.g. leaflets, wall paintings, visual aids, media • Organise Training at village level • Advocacy at all levels, e.g. state, district, block, panchayat, village • Village level meetings • Women committee, village / block / district / state • Street plays • Folk media • Promote use of existing infrastructure, e.g. school, panchayats, community center • Exposure visits • Sharing experiences • Training schedules – acceptable to women • Including messages in school curriculum • Target Training Programmes • Support establish of women Training Institute • Provide informal Training tools • DFID • Mobilise donor, e.g. DFID • Better Management of resources (funds) • Identify criteria for selection of women trainers • Provide childcare / crèche • Support attendance, motivation, involvement of women, e.g. incentives, facilities |

ANNEXURES

ANNEX 1

KEY NOTE ADDRESS

**Shri B S Minhas, Jt. Secretary,
Ministry of Urban Affairs & Employment, Government of India**

Distinguished Delegates, Participants, Ladies And Gentlemen

It is my privilege to address this august gathering today on Human Resource Development in the Water and Environmental Sanitation Sector in India. I take this opportunity to extend a warm welcome to the delegates from the State Government, Union Territories, Central Ministries, *International Organisations and Sector Professionals*. All of us have assembled here to consider the adoption of suitable strategies in the National Workshop to promote effective, sustainable and affordable HRD for the sector with the support of the DFID and other International Organisations.

Urban Water Supply and Sanitation in India is essentially the responsibility of the State Governments and the local bodies. The urban population is likely to reach 300 million by 2001, which will continue to be served by the Public Health Engineering Department, Water Supply Boards and Urban Local Bodies under serve constraints. The burgeoning urban population has rise to acute problems of supply and demand of the basic amenities, particularly safe drinking water supply and sanitation and its adverse effect on public health. The mere setting up of water supply and sanitation system is not enough. It is necessary to ensure that all these are managed efficiently and maintained properly for trouble free operation at optimum level. For this purpose, the personnel at all levels, who are involved in the execution, operation and maintenance of the installations and schemes ought to be equipped with the requisite technical knowledge and managerial skills and also kept abreast with the latest developments in the field time to time.

EFFORTS OF GOI

We realise that adequate trained manpower at all levels and periodical updating of skills in the Water Supply and Sewerage Departments are essential ingredients for the sector. The erstwhile Ministry of Works and Housing, now Ministry of Urban Affairs and Employment and the CPHEEO have played a pivotal role in supplementing the training needs of the State Governments and Union Territories since 1956. As per available statistics, at the beginning of the International Drinking Water and Sanitation Decade in 1981, about 9,800 Graduate Engineers and 15,800 Diploma Engineers were working in this vital sector and occupying positions ranging from the senior most to the lowest operational levels in the water supply and sanitation departments. It was estimated that at the end of the decade programme, around 28,700 Graduate Engineers and 52,800 Diploma Engineers would be needed to meet the growing requirements of the sector. This required substantial efforts by the State Departments to mobilize the trained manpower. The Ministry also provided a thrust to this programme by recognizing a number of reputed Engineering colleges, training institutes and providing grants in aid for imparting advanced technical knowledge, operational an managerial skills for the benefit of the in service personnel.

At present, the Ministry is providing financial assistance for conducting about 70 training course in the field of Environment Engineering, including postgraduate degree course. A large number of institutions have been conducting short term and refresher training course round the year, which have proved to be highly beneficial for the engineers and staff. It is estimated that about 20,583 personnel from the State Government and UTS have been trained under the Ministry's programme till 31/3/98.

Despite the concerted efforts made by the State Government and the Ministry, the number of trained staff available is far of the estimated requirement for effective management of the systems.

EFFORTS OF DFID

The erstwhile Overseas Development Administration, UK, now the Department for International Development and the British Council have been the most active partners of the Government of India in providing advanced facilities in planning, design, operation, maintenance and management of Urban Water Supply and Sanitation in the UK. It is estimated that around 600 in service engineers and professionals have benefited from these course since the beginning till date.

EFFORTS OF OTHER INTERNATIONAL AGENCIES

Other International Agencies, such as the World Health Organisation, UNDP/World Bank, JICA and SIDA have also been providing valuable assistance for advance training abroad under their respective programmes. It is hoped that these programmes, which are limited to a few training slots at present, would continue and grow in the years to come.

NEED OF THE DAY

The 74th Constitutional Amendment has increased the responsibilities and powers of the urban local bodies. There is a concomitant need for capacity building of public representatives and enlightening them on proper planning, management, cost recovery and commercial practices in the water and sanitation sector. The ability to use appropriate technology, designing cost effective schemes and maintaining sustainable services are other areas of concern, which need to be gone into in greater details even if it may attract change of curriculum at the University level.

Professionals in water, wastewater and solid waste management sector need to become managers in order to increase the efficiency and provide better service to consumers. The NGOs, which are active in the sector need to be harnessed with proper training facilities and their role as partners for a common cause should be encouraged by the urban local bodies.

Though DFID, WHO and other external support agencies have been supplementing the efforts of the Government of India in providing training facilities in a limited way, it is felt that the development of some training centres as Centres of excellence would go long way in institutional strengthening and capacity building in the Water and Environmental Sanitation Sector. It would be advantageous to have a network of such centres to serve the interest of this vast country.

CONCLUSION

We welcome the initiative taken by the DFID and their consultants to conduct a detailed study on HRD for this sector. Four workshops have been held in Andhra Pradesh, Maharashtra, Orissa and West Bengal. The findings and recommendations adopted in these workshops would form the basis for discussions and adoption of suitable strategies in the National Workshop. I am confident that with the vast experience and expertise available in this Forum, it should be possible to draw up a meaningful action plan and support for much needed reforms in the sector. I wish this Workshop success in its deliberations.

Thank You.

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ANNEX 4 DOCUMENT CONSULTED

1. *Case study on Resource Centre Development Processes and Experiences (STREAM): Towards an Enhanced Role of Resource Centres in Capacity Development* – Report of the first Sounding Board Group Meeting Nov 23-24 1998. IRC International Water and Sanitation Centre.
2. *Finding and Recommendation from the State Level Workshop: Human Resources Development in Water and Environmental Sanitation Sector in India* – Second Phase Report 15 March 99. By IV Hooff, A Patkar & K Tayler, DFID.
3. *Ground Water Management for Rural Water Supply (India)* – Project Review Final Report March 1998. By Department for International Development DFID.
4. *Guidance Manuel On: Water Supply and Sanitation Programmes* – Draft Final Report July 1998. Department for International Development.
5. *India – Water Resources Management Sector Review: Urban Water Supply and Sanitation Report* – Vol I Main Report 18321 June 26 1998. World Bank Report, Rural Development Unit SA-WB in cooperation with MUAE GOI & DFID.
6. *Indo – Dutch Cooperation in Rural Water Supply and Sanitation* – Discussion Paper for a New Strategy.
7. *Management Development for Senior Urban Public Health Officials (MDSUPHO – India)* – Project Review Final Report Feb 1998. By R Amster & A Patkar, DFID.
8. *MORAE* – Project Paper 5 Oct 1998. By A Shah, T Shah, M K Shah & A S Mathew.
9. *National Training Policy* – 1996. Training Division Department of Personnel & Training Ministry of Personnel, Public Grievances & Pensions GOI.
10. *Policy Workshop on Training Strategies for Capacity Building of Municipal Governments: Report, Proceedings & Recommendation* – Oct 20-21 1997. Human Settlement Management Institute HSMI.
11. *Seminar on Capacity Building for Urban Governance* – Report Vol. XVIII No. 1(1998). Urban India.
12. *The Indian ITN* – Report of a Joint Review July 1996. UNDP – WB Water and Sanitation Programme and GOI.
13. *Training in the Netherlands Assisted Water Supply and Sanitation Programme in India* – Strategy Paper Dec 1993. By M W Blockland, C A Van Wijk-Sybesma & J Narain.
14. *Urban Environmental Sanitation and Water for India: Capacity Building for National and Municipal Decision-Makers*. A proposal for funding by the British Government-DFID submitted by RWSG – March 1998.
15. *Water and Environmental Sanitation Sector: Human Resources Development Study* – Inception Report. By K Tayler & A Patkar
16. *Water and Environmental Sanitation Sector: Human Resources Development Study* – First Phase Report. By IV Hooff, A Patkar & K Tayler
17. *Western Orissa Livelihoods Project* – Draft Report 22 Dec. PEC (99)1 India, Department of Agricultural Go Orissa & DFID.
18. *Workshop on India – Water Resources Management: Rural Water Supply and Sanitation* –Sponsored by WB & GOI, Draft Report Prepared by V Rehoj, E Glennie, S Abeyratne & J. Sjorslev. Organised by MRAE GOI and Water and Power Consultancy Services (I) Ltd.
19. *Your Waste is Our Business* – Shriram Engineering and Construction Company.

