Report of the Technical Expert Group (TEG)
on
Rajiv Gandhi National Drinking Water Mission

To,

Dr. Raghuvansh Prasad Singh
Hon'ble Minister, Rural Development
Government of India,
Krishi Bhavan, New Delhi

Hon'ble Minister

I am honoured to present the report of the Technical Expert Group (TEG) which was commissioned by the Ministry of Rural Development, Department of Drinking Water Supply to review the Rajiv Gandhi National Drinking Water Mission.

The group, as constituted, consisted of a very highly experienced and dedicated group of experts. We were fortunate to have experts with very rich national and international experience in the area of water and sanitation and they brought their considerable expertise from the field as well as policy making areas.

The tasks that were given to us would normally have required a detailed study of at least a year. However the team members gave their valuable time and even in spite of limited support and many logistical problems, it was possible to finalise the report in the shortest possible time.

It was the unanimous and sincere feeling of all the members of the TEG that unfortunately, excepting the name of Rajiv Gandhi being attached with the name of the Mission, his vision, goal and spirit are missing from it. For me personally it was a journey down memory lane and a sad experience. It is painful to see that the enthusiasm, innovation, experimentation, participation, communication and inclusiveness of the early years of the Mission are not only non-existent now but completely forgotten with no lessons learnt. The Mission has been converted back to the same old central programme with more and more funds allocated over the five year plans but with almost no reforms initiated to make their application effective.

The major challenge for the TEG was therefore to suggest ways by which to restore the Rajiv Gandhi spark back to the Mission which in its early days saw pioneering initiatives in rain water harvesting, development of watersheds and ground water recharge as in Jhabua and the promotion of roof water collection as was so successfully

achieved in Mizoram and a collaborative effort to encourage NGO involvement in the sector, some of which are being 'rediscovered' now.

The only way to introduce the energy and commitment of those early days of the Mission and to meet the new challenges that have emerged is to develop a completely new paradigm as well as a new dynamic structure to take the country forward to a new level. We believe that the leadership should come from the Minister himself, heading a Council with the state ministers as its members among others. It is also essential to shift from the current approach based on the concept of 'problem' villages and instead focus on the poorest and problematic areas, with the state governments as the leaders and planners for the work in their states, and evaluation of progress being done by independent bodies.

Partnership with civil society and the private sector must be one of the goals of the new mission objective as should the introduction of a proper water management policy with regulatory control on extraction and pollution of the water environment. Linkages with other ministries and areas of intervention like health, education, industry and urban development must be re-established and a holistic approach for water management must be taken and initiated by the government.

Without these the sustainability of the ultimate goal for water and sanitation for all will never be achieved

We hope that these recommendations will be taken seriously and in the spirit with which they are made so that the huge financial commitment that the Government of India is making in the water and sanitation sector will begin an irreversible process leading to real and positive change in the lives of million of poor in India and the provision of safe water and sanitation for all in our country.

I also take this opportunity to thank the members of the team, and all the people we met through this short period for their interest and the advice that was given to us. I also specially thank my colleagues Ravi Narayanan and Sudarshan Iyengar who worked in the core drafting committee and the other members Dr. Susheela, Dr. Chakravarty and Mr. Ajay Shankar for their time and participation in the activities, field visits and deliberations of the TEG in spite of their busy schedules. Ravi in fact was the main writer on behalf of the group and very carefully captured all views as presented before us.

We are also grateful to the interest and time taken by the Hon'ble Minister Dr. Raghuvansh Prasad Singh and Ms. Santha Sheela Nair, the Secretary of the Department with the team. Shri Bharat Lal of the Mission helped the group with his personal effort and in spite of being pulled in different directions was able to provide much needed support.

We offer this report as a sincere effort to help empower, strengthen and enable the Mission to fulfil its goals in future.

Gourisankar Ghosh
Chair, Technical Experts Group (TEG),
Rajiv Gandhi National Drinking Water Mission

Tuesday, 29 January, 2008

Index

Executive Summary

Introduction

Background

The Problem Analysis

Way Forward

Recommendations

Conclusion

Annexes

Annex – I (Order for setting up of the TEG)

Annex – II (Background of the TEG members)

Annex – III (Details of meetings & field visits by the TEG)

Report of the Technical Expert Group
on
Rajiv Gandhi National Drinking Water Mission

******

Executive Summary

Introduction: The report by the Technical Expert Group (TEG) set up by the Government of India to recommend the future direction of the Rajiv Gandhi National Drinking Water Mission is in four main parts. It is based on a series of field visits, discussions with senior officials responsible for drinking water supply at state and central levels, scrutiny of documents and reports on the subject of drinking water supply and the Mission (? Not clear) from both government and non government sources. Submissions by various stakeholders in the water and sanitation sector including civil society organizations, academia and multilateral agencies were also reviewed. Its findings and recommendations are based on a fundamental analysis of the issues in the sector and the current state of the mission.

Background: The report is set against a background of a serious loss of momentum in the Mission, fragmentation of the core structure, and a palpable sense of drift in the whole organization which has taken place as new challenges face the nation in the water and sanitation sector. It is noted that the Mission's function has been largely reduced to fund allocation and disbursement.

Problem Analysis: Although the most immediate symptoms of the issues facing the sector manifest themselves in serious problems of sustainability, both of the source and those caused by weak operation and maintenance systems and practices, and water quality there are seven fundamental causes for this. They include threats to source sustainability caused by unregulated ground water extraction and serious biological and chemical contamination of water sources by pollution, inadequate attention to operation and maintenance, lack of integrated planning and funding, serious lags in sanitation provision, deficits in technical and managerial capacity and reliable information and the inappropriateness of the current role played by the Mission. These are serious problems of a fundamental nature which require a complete paradigm shift in the way the Mission approaches its tasks. The TEG has cautioned that overemphasizing one or two pet programmes such as watershed development programme of some technical quick fixes should be avoided looking to the diverse nature of the problem in different parts of country.

Recommendations: The recommendations of the TEG are based on the three principles of subsidiarity, integration and knowledge accretion, and dissemination. Riding on these principles are specific recommendations on policy and structure.

Policy recommendations are based on the need to integrate various streams of central funding and move away from a project based distribution of funds to block grants to states **based on robust medium term strategic plans** which address

the problems described above. The principle of subsidiarity here is to promote and encourage village, district and state plans, in that order, to determine the application and utilization of funds. Village level water and sanitation plans based on the development of the local source should form the basis of WATSAN programme in the entire country.

The recommendation on structure proposes a three tier structure to address water and sanitation issues as a combined national effort under the unambiguous direction of the Minister Rural Development. The principle of integration demands that all three tiers need representation form both government and non government sources to harness the best experience in the country.

The first tier is a national Council to develop an integrated approach to policy development and guidance which includes states, other central ministries and non government organizations.

The second tier is a governing board which directs the central effort in water and sanitation and ensures adherence and accountability to national policy goals and performance.

The third tier is the Mission itself, embedded in the Ministry of Rural Development which needs above all senior and dedicated leadership **built around a definite strategy with measurable objectives.** The principle of knowledge means that the Mission would aim to become a knowledge and dissemination centre **with a strong emphasis on public sharing of information.**

Conclusion: The Technical Expert Group (TEG) has considered and recommended a paradigm shift. It promotes bottom up approach and recommends shift from target setting scheme to problem solving stakeholders programme. The radical nature of the recommendations will require strong political will and the commitment to apply all the recommendations in an integrated manner. Any attempt to apply the recommendations in a piecemeal manner will inevitably dilute their impact.

Report of the Technical Expert Group (TEG)
on
Rajiv Gandhi National Drinking Water Mission
*****

INTRODUCTION

This report has been organized in four main sections, apart from the introduction. It starts with a detailed note on the background, essential to set the context for the rest of the report including the recommendation. This is followed by the Problem Analysis which provides the basis on which the main recommendations of the Technical Expert Group are based. The Section entitled 'Way Forward', which is next, describes the approach on which the Recommendations are set out. The Recommendations themselves, divided in two parts, deal with changes to Policy and Structure which are necessary to deal with the issues raised in the sections on the Background and the Problem analysis.

The terms of reference for the Technical Expert Group (Annex–I) set out by the Government of India are addressed in broad terms by the Recommendations, which bring out the fundamental issues that need to be tackled. The composition and the background of the members of the group, is in Annex–II. This report does not attempt to go into the kind of detail which the twelve separate clauses in the terms of reference might warrant. It was difficult to do so in the short time given to the TEG, and the level of support made available to it. Nevertheless, the recommendations have been made on the basis of three field visits to Gujarat, Bihar and West Bengal, discussions with all the Secretaries and Technical heads of the Public Health Engineering Departments of the state governments, inputs from UN and other multilateral agencies and from civil society apart from discussions with members of panchayats. A meeting with the Minister, Rural Development was extremely helpful to understand his vision and expectations out of this TEG. In addition, the TEG has received a large number of written submissions and scrutinised several reports both from the above sources and the Government of India. Though the group felt more field visits and discussions were necessary, this report is being submitted based on the feedback so far received and through our personal experience and analysis since the Ministry demanded an urgent submission.

The TEG also feel that as only the name of Rajiv Gandhi remained with the mission and not his spirit, vision and leadership, it is better to submit the report at the earliest as the final recommendations are not likely to differ significantly from the current submission. If the Government is committed to bring in a paradigm shift as recommended, then that can be achieved with this report. Having said that, this report is not an end in itself but a beginning of a process for change, a change in mindset and would represent a significant paradigm shift if implemented in accordance with its spirit.

1. BACKGROUND

Sixty years after independence India finds itself in a situation where, despite investing huge funds, a very large number of its citizens, many of them are poor and vulnerable, are not assured of a safe and reliable supply of drinking water and acceptable sanitation facilities. Despite exponential increases in financial allocations to this mission, the goal of sustainable access to safe drinking water has not been reached. Undeniably progress has been made in several states over the years, but the overall situation has not improved significantly commensurate with investments. The consequences of this situation have enormous health, nutrition, education and economic impacts and it would be no exaggeration to term it as a silent emergency.

1.1 The Mission's Original Mandate

The **National Drinking Water Technology Mission** (later to be renamed the **Rajiv Gandhi National Drinking Water Mission – RGNDWM)** was the brain child of Prime Minister Rajiv Gandhi in 1985 to bring in the best of Indian technology to the service of the poor. As he claimed in Parliament, it was intended to harness the most sophisticated technologies in a simple manner in the service of the poor in India's villages. He further emphasised that although the Mission was entitled as a 'technology' mission it was primarily a societal mission with the objective of improving the lives of ordinary persons in rural India through the application of all available knowledge and technologies, with their full participation in the process.

While there was clearly a goal of coverage of a certain number of villages in its first five years, the main focus was to use a project based approach to launch issue based sub-missions and (pilot) district based mini missions to harness integrated water management for sustainable development at the village level and also to deal with important water quality and technical problems caused by fluoride and iron**.** The promotion of ground water recharging and harvesting was also an important part of the Mission and was initiated at the personal intervention of the late Rajiv Gandhi. In fact the Mission was the first instrument to address many facets of the ground water management problem in India in close collaboration with the Ministry of Water Resources through Central Ground Water Board (CGWB) and also through many other Council of Scientific & Industrial Research (CSIR), Space and Defence Research laboratories.

However, the Mission mode then had not categorically delineated or focussed on the role of the community to which the Mission was to provide services. Perhaps the emphasis was on the techno-managerial solutions. In the years to come it was realised that without active community partnership in owning and managing the water resources and sanitation, sustainability in the sector could not be achieved. It may not be out of place to mention that the internal mission related debates in those years prompted the late Rajiv Gandhi to initiate the Panchayati Raj reforms which resulted in the recognition of the Panchayats as a constitutional tier in the administration.

1.2 The Current Situation

Unfortunately after the initial five years and especially with the driving force of Rajiv Gandhi missing, the whole unique experiment was transformed into a routine water supply programme (ARWSP – Accelerated Rural Water Supply Programme) with increases in allocation of funds. **While the fund allocations were accelerated, the capacity of the Mission dwindled in spite of its conversion into a full fledged department headed by a Secretary**. The original concept of shifting the subject from the Ministry of Urban Development to the Ministry of Agriculture (Department of Rural development) was to integrate the rural water supply in the process of rural development and to put it at the centre of the process of sustainable rural development.

Regrettably the creation of a new department within the Ministry of Rural Development (MRD) instead of helping to highlight the subject, has actually isolated the department as an appendix to the main ministry. The further divide of the office between four buildings of Krishi Bhavan (office of the Minister and Financial Adviser), Nirman Bhavan (Office of the Secretary), NBO Building (Internal Finance Division) and Paryavaran Bhavan (Office of the Mission Director & Joint Secretary) has isolated and crippled the functioning of the Mission completely. Moreover, many functions viz. Establishment and Administration, IEC activities, Pay & Accounts office, Monitoring & Evaluation activities, etc. are carried out by the Ministry of Rural Development offices located at Krishi Bhavan who definitely bureaucratically do not feel responsible to the Secretary of this department. Enormous time of staff and officers gets wasted in shuttling between different buildings. The records do not show any substantial brain storming discussions and meetings for innovation, new knowledge and approach. The Mission is largely engaged in bureaucratic struggles to process files for financial approval. The whole mechanism is a far cry from the days of Mission mode in its phase of the first five years.

While the creation of a separate department for water supply has helped **in** bringing the importance of issues of water supply directly to the attention of the Planning Commission and to other high offices through the office of Secretary, Drinking Water Supply, it has created problems in management since, with the reduced strength of the Mission and without any true Mission mode of functioning the department has not been able to lead or guide the state departments with authority or provide any kind of intellectual leadership**.** There is little to suggest that even lessons learnt from the original mission have been internalised.

With the introduction of several new and sometimes overlapping central water and sanitation schemes and administrative changes over the past ten to fifteen years there is now a palpable sense of drift and uncertainty about the role and position of the Mission. Changes to the external environment both in the economic sphere (such as growing and competing demands for water by the agriculture and industrial sectors) and in the political sphere with the institution of Panchayati Raj (which currently has little say in the Mission); have added to the complexity of the situation. It is clear that under the current system and structure there is little chance that the overriding national priority of providing and assuring reliable water and sanitation services especially to rural India can be achieved, especially to poor communities and families. This will perpetuate a condition which continues to hobble the growth and inclusive development of the nation.

The Group also noticed that there was an inherent tendency in the Government **in trying to** find magic bullet solutions to solve complex problems. For example the success of domestic roof water harvesting (a very innovative and important initiative which requires continued support) can best be assured by understanding the distinction between roof water harvesting (which needs its own systems of financial support and response to maintenance challenges) and issues related to water harvesting as part of a watershed approach. Not surprisingly, the watershed approach has caught on and the other divisions of Rural Development Department at the central as well as the state levels appears to have seen it as a sure solution for the water problem. However, the general experience has been that the watershed programmes when actually implemented become farmers' minor irrigation schemes with almost no priority for drinking water. Without any regulation of the ground water and water pricing, rain water harvesting does not have adequate impact where it has been tried in large parts of India and needs a serious evaluation. Unfortunately rain water harvesting is currently generally viewed as essentially a type of watershed project. From a water and sanitation perspective, overemphasis on watershed development and not on the roof water collection by the government departments is to miss the wood for the trees.

A similar situation exists in terms of the search of new technologies to solve water quality problems. There are several water treatment technologies that are now available in the international market and are being vigorously promoted to government departments, ministers and senior officers as providing simple ready made solutions to the often complex situations that exist in India. It is always important to carry our rigorous and comprehensive technical, social and economic analysis of suggested solutions before promoting them on a large scale. If sustainability in the water and sanitation sector is viewed mainly on techno-economic considerations and not assessed for socio-cultural and institutional aspects then such an approach would be self-defeating. At the ground level such approaches are likely to lead to infructuous expenditure and disproportionate benefits to a few favoured providers of such technologies

Further the current direction of effort is biased towards new schemes to construct more and more assets and to judge the success or output in numbers rather than on developing and supporting processes which lead to sustainable long-term results.

1.3 Summary of Current Position

To summarise:

i.) The Water Mission has lost its spirit, vision and knowledge base with which it started; in other words it is currently not in a mission mode.

ii.) The lessons learned from the first phase have been lost and forgotten

iii.) Though some success has been achieved in recognition of the rain water harvesting for drinking water security as back as in 1986 in Jhabua, Kutch, Tamil Nadu, etc. the Mission virtually lost its contacts and coordination capacity with other departments (CGWB, etc.) and ministries, S&T, CSIR etc. **Nor is there currently any real technical expertise with the**

Mission. Even the two approved senior adviser positions (Ground Water and Public Health Engineering specialists) at Joint Secretary level created way back in 1987 and supposed to be filled on a priority basis remain vacant. Similarly, for related technical issues on sanitation, linkages with health and nutrition departments or with CGWB on ground water management have almost been non-existent

iv.) There is confusion in the leadership of the Mission as it has been converted into a department and the Secretary **cannot function effectively without** a **dynamic and knowledgeable team to help in policy development and planning**. There is also a clear overlap in the work function and role of the Secretary and Mission Director who is currently at Joint Secretary level.

v.) Without clear advice and leadership from the Mission the state departments are not focusing on the real target communities or trying to find sustainable solutions to the problem. Instead their endeavour seems to be to try to get more funds from the Centre**. There is hardly any impact analysis done of the programme undertaken and the performance is merely judged through counting number of installations**

vi.) With increased industrialisation and demand from agriculture sector the domestic water supply is facing a serious crisis of quantity, quality as well as management issues which the current Public Health Engineering Departments (PHED) are neither equipped nor empowered to deal with

vii.) There is relatively poor understanding of the serious and complex nature of the water problem in the top policy making levels of the government, possibly accompanied by a reluctance to accept the problem. This has resulted in the department being blamed for many ills which fall in the domains of other ministries. In short, there is a huge gap in the understanding of water and sanitation issues at all levels in the Government and **the kind of advocacy and sustained effort to overcome these barriers cannot be initiated by the Mission in the absence of the kind of capacity, experience or commitment that is required. The Mission has stopped its advocacy and communication campaign and does not have any strategy at present.**

Clearly given the litany of failures described above and the fundamental importance of safe drinking water and sanitation to the health and well being of people which in turn have crucial impact on the economic and social development of India, it is important to initiate a fundamental process of reform for the mission which is based on a multi-disciplinary approach.

The specific steps that are needed can best be understood if they are seen to be solving the specific problem areas which are described in the next section**.**

2. THE PROBLEM ANALYSIS

Given the size and diversity of India it is difficult to arrive at a detailed and specific analysis which is applicable throughout the country. However, in broad terms the problem can be presented in the following seven dimensions.

2.1 Sustainability

First is the serious issue of the threat to water security caused by:

i.) the threat to the sustainability of water sources by the unregulated use of ground and surface water compounded by a lack of comprehensive and updated 'water maps' that can be used to make informed choices about water allocation The Ministry of Rural development and the state PHEDs have no control on this most important source issue and yet are expected to develop and maintain 'sustainable' schemes. This has been further aggravated by encouragement of free electricity to farmers which has resulted in sharp drop of water tables and seasonal fluctuation of water supply and non-functioning nature of water supply schemes in certain parts of the country. **No schemes based on ground water can expect to function or be sustainable in such circumstances.**

ii.) the emergence of water quality issues with biological and chemical contamination as serious problems almost everywhere due to indiscriminate and untested use of ground water, pollution of the water environment by solid and liquid waste disposal as well as indiscriminate industrialisation with these issues receiving little attention. Excessive use of groundwater for agriculture without any effective control and regulation has led to water drawl from high arsenic and fluoride strata creating quality problems for drinking water. Similarly there is almost no control on the industrial waste water discharge polluting the ground water and even surface water. Allowing high water consuming industries even in dark areas is a sign of the conflicting interest and lack of balance between unbridled economic growth in the country and the sustainability of a fragile environment with serious consequences for sustainable development in rural areas.

iii.) the seeming lack of a holistic approach by the Ministry of Water Resources to water management problems from a river basin perspective and the persisting and uncontrolled upper river pollution due to discharge of urban wastes (such as the case of the Ganga Yamuna basin) and the inevitable impact on the rural and downstream urban populations with serious **health and environmental problems**. There is no formal mechanism or regular interaction between the two ministries and not even between the Central Ground Water Board (CGWB), The Pollution Control Board and the RGDWM.

2.2 Operation & Maintenance

Second is the persistence of repeated operation and maintenance failures without any involvement and ownership of the community are causing a huge drain on national resources with perverse financial allocations (the current system of

funding projects which aim to recover from slippages in coverage at periodic intervals) doing little to encourage a rigorous regime of operation and maintenance.

2.3 Integrated Planning and Funding

Third is the multiplicity of water and sanitation schemes with their own funding streams and accompanying conditions, the structural separation of the administrative units responsible for drinking water and sanitation in the Ministry of Rural development and variable interpretation of the role of Panchayats in different states which lead to:

i.) A lack of integrated planning of mutually dependent water and sanitation schemes accompanied no doubt by wastages in expenditure, and

ii.) A mismatch between the expected roles and actual capacities of Panchayati Raj Institutions (PRIs).

2.4 Capacity Deficits

Fourth is the serious and general lack of technical and managerial capacity at key levels at central and state levels but most crucially at Panchayat level, results in uneven performance with poor regions, districts and communities receiving the poorest level of service. The current situation and status of the Public Health Engineering studies and research in India is extremely poor and thus creates a serious gap in capacity and knowledge in this crucial area.

2.5 Information Deficits

Fifth, the lack of a reliable and integrated data system is a serious impediment to tracking performance and ensuring a transparent system of accountability. This is compounded by the fact that the current system of monitoring neglects process issues and concentrates almost entirely on tracking ‘bricks and mortar’ structures irrespective of their usage by communities. There appears to be no disaggregation of information on the impact of water and sanitation on poor communities or families or by gender.

2.6 **Sanitation Deficit**

Sixth, given the huge lag between drinking water and sanitation coverage in India, it is important to recognize the dimensions of this issue, as one of particular importance. Part of the current state of affairs has to do with the fact that while there has been considerable attention to the completion of physical structures, the proper and hygienic usage of such facilities requires a big behavioural shift which is less easy to achieve if approached in a ‘target’ mode. Sound environmental and personal hygiene, and community sanitation has not been on the traditional agenda in Indian society in general and rural environs in particular. Sacredness or piousness score over cleanliness and hygiene. Unfortunately, at the government level drinking water and sanitation are planned and implemented by different divisions with very little or no coordination, let alone integration. In the PHEDs engineering dominates and public health is missing. Similarly there is almost no effort by the Health ministry or department to actively get involved in the campaign

of supply of safe water and sanitation environment though it is still the biggest killer of children and cause of malnutrition. The last time we saw a successful collaboration between these two wings of the government was in the eradication of guinea worm from India!

2.7 Appropriateness of Roles

Seventh, there is inappropriateness in the role of the central RGDWM and the Ministry which attempts to micro manage schemes at state level through its control of financial disbursements, with its diminished technical and managerial capacity.

2.8 Attitudinal Issues

All these problems are compounded by structural, policy and attitudinal issues including

i.) A tendency in most states to opt for top down approaches and a lack of meaningful participation by users (a result of the attitude of PHED and other departmental staff in some states).

ii.) A lack of co-ordination between key departments such as rural development, health and Panchayati Raj at central and state levels.

iii.) A disturbing lack of capacity and policy coherence at national and state levels to address the larger issues of water management, conservation and allocation.

iv.) A lack of serious attempts at the state levels (excepting a few like Gujarat and Tamil Nadu) to bring in reforms in their operations and way of planning and implementing the projects.

With some notable exceptions these problems can be said to represent the situation in many states in India to some degree.

3. WAY FORWARD

Again given the size and physical, economic, social and cultural diversity of India, it is difficult to prescribe universal and detailed solutions for every part of the country. Nevertheless there are approaches which, with enough room and scope for local and regional variations like the ones witnessed in Gujarat and West Bengal could begin to address the above problems and issues. None of these can be seen to be 'magic bullets' and all will take time for benefits to be seen and felt.

3.1 Bottom Up Approach

The first and primary task is to approach the problems from a 'last mile' perspective with the interests and well being of people with their sense of ownership and control as the issues of paramount importance. This orientation will guide the overall direction and emphasis of the recommendations of the Technical Expert Group. The recommendations that are set out cover the major areas for attention which include the policy, structural and capacity domains. Some of recommendations are generic in nature and fall outside the remit of the RGNDWM. Nevertheless they are relevant to the larger issues of water resource management which include drinking water. We hope that these recommendations are brought to the notice of the Planning Commission and the Prime Minister's Office. Some of the recommendations may be radical and may not seem to be politically acceptable but need to be openly discussed

3.2 Integrated Perspective

The TEG noted in its problem analysis that there was no effective and meaningful dialogue between the central and state parties and even between the different central ministries on the issue. **Hence, the time is right for the Ministry of Rural Development with the Planning Commission's/ PMO's (Prime Minister's Office) support to take the initiative in consultation with the states in an open dialogue to develop a national consensus where the representatives of the civil society and private sector should also take part.** The need is to develop a national consensus to address the problems and seek solutions within a holistic perspective of sustainability and equity. Our recommendations are an attempt to start that process and hopefully the Ministry of Rural Development which has taken this initiative to constitute the Technical Expert Group will take this opportunity to take that lead. Our recommendations fall within the constitutional arrangements of the country and the broad directions set out in the 11th Five Year Plan with the common goal of the betterment of the lives of ordinary rural population and towards sustainable development. A serious consideration of these recommendations before the start of the plan and implementation in its true spirit will hopefully help in achieving the goals and sustainability.

Within these parameters, our recommendations are as follows.

4. RECOMMENDATIONS

4.1 Policy

4.1.1 Recommendation:

In order to ensure that the inextricably linked issues of water and sanitation are dealt with in a coherent manner within the context of an integrated water management approach, all the funds disbursed by the Government of India and pertaining to water and sanitation should be dealt within a holistic manner in a Mission mode.

Operationalisation of Recommendation:

All funds allocated for drinking water and sanitation schemes within the administrative jurisdiction of the Ministry of Rural Development, under different programmes (Swajaldhara, ARWSP (Normal), ARWSP (DDP), Sub-Mission, TSC, etc.) should be merged and disbursed from one source i.e. **the Governing Board of the Rajiv Gandhi National Drinking Water and Sanitation Council as the new form of the current RGNDWM should be called (details of the proposed new structure are in the recommendation dealing with structure).**

Funds allocated under other programmes such as NREP, watershed development and rainwater harvesting, check dam programmes, etc. should be dovetailed with the funds for drinking water and sanitation (with these two programmes always working in tandem) and all such funds should be converged at the district and village level.

4.1.2 Recommendation

The basis for fund allocation to states should be fundamentally revised. It should not be made on a piecemeal basis dependent on approval of individual projects. Instead it should be based on a block allocation to each state de-linked from the concept of the problem villages to each state as explained below.

Operationalisation of Recommendation

Funds should be disbursed to states on completion and approval of medium (5 year) strategic frameworks. Each state framework should be based on answers to one question -– "What are the barriers that prevent all the people of the state from receiving reliable and affordable quality water and sanitation services?" It is expected that answers to the above question would then lead to a framework which would include:

i.) clear and measurable objectives to address the issues of coverage especially of poor families and communities with a specific strategy to improve effective sanitation coverage;

ii.) specific steps to address issues of sustainability in all its aspects such as a robust approach to technical operation and maintenance systems to ensure

reliability and continuity of service, environmental protection of water sources including ensuring water quality and continuity of supply, equitable provision of services especially to poorer and socially backward communities and institutional sustainability through capacity building of Panchayat level institutions;

iii.) institutional mechanisms to ensure co-ordination with water resources/ agriculture, health, education and other water user departments and co-ordination with the National Rural Health Mission with agreement on joint indicators (e.g. incidence of certain kinds of water borne disease etc.) which go beyond the currently better understood problems of biologically induced illnesses such as diarrhoea to those emerging ones caused by chemical contamination of ground water caused by fluoride, arsenic and nitrates.

iv.) a system of independent evaluation as was prevalent for the Rural Development schemes in its early years using the services of academic institutions, research bodies and NGOs and private organisations including participatory processes such as social audits which bring in civil society and academic institutions;

v.) schemes to build technical capacity at Panchayat, district and state levels; and

vi.) A set of indicators to cover all the above processes as mentioned in (ii) above. Further, a set of health and nutrition indicators should also be formulated in consultation with the National Rural Health Mission and some composite indices should also be evolved to monitor the efficacy of Watsan and rural health cover programmes with special reference to water borne diseases.

In order to ensure continuity, the base level of funding for each state should be maintained at current levels. Additional allocations should be made on the basis explained below.

i.) Funds allocated to each state should depend on a combination of factors which would include the number of people to be served and difficulties caused by water quality (fluoride, arsenic contamination etc.) and water scarcity problems and not on the current concept of problem villages which are identified as Not-covered (NC), Partially-covered (PC) or Slipped-back categories and Quality–affected. The current practice of funding leads to repeated funding for the same habitations without any incentive for operation and maintenance and indigenous innovation such as looking for local sustainable sources.

ii) The first charge on the use of centrally allocated funds (on a fully grant basis) would be for the process oriented activities of the state's strategic plans such as developing local drinking water source, periodic water resource mapping, integrated village level water and sanitation plans including school and public building sanitation, decentralized testing facilities, co-ordination mechanisms, ongoing technical training of staff at village, district and state levels, development of resource institutions and evaluations and capacity building. It is recommended that village or habitation is not the unit for funding, but it is the problem as a whole

that will be considered. However, the number of habitations may be mentioned in the state project document when coverage is to be reported.

iii) 50 per cent of the eligible funds would be disbursed straight to the states in the beginning of every year. The balance (some of which may be on shared cost basis) would be disbursed on the basis of independently verified progress and quality of performance against the indicators of the strategic plan. This approach would ensure that monitoring of progress would become a major activity, beyond the current number based exercises.

While not compromising with the principle of financial sustainability and especially the importance of sound operation and maintenance practices, it is very important to ensure that policies and conditionalities recognise the vulnerability of poor families and communities. Funding and user charges must be designed in such a way that does not lead to their exclusion from safe water and sanitation services.

4.2 Structure

4.2.1 Recommendation

A fundamental change is needed to the structure and working of the RGNDWM. This is a matter not only of making changes at the centre but also of working in a comprehensively decentralized manner. Simply and categorically put, it is a paradigm shift. The section below explains the recommended working of the process from the village level upwards and finally arrives at the optimum arrangement of the Mission at the centre.

Operationalisation of Recommendation

4.2.2 At Micro Level

The micro level unit or structure that will ensure sustainable drinking water and sanitation programme planning and implementation is the *Pani Samiti*. It is the village (Panchayat) level organization that will have a formal existence. It should be formed by the Gram Sabha in each Panchayat and must be adequately represented by all sections of population and women. Sanitation has to be an integral part of the work that the Samitis should be handling. The core functions of the Pani Samiti would

i.) Identify the water and sanitation problems by PRA or some such participatory method;

ii.) Make as assessment of the present status and gaps;

iii.) Identify the local traditional and new sources backed up with basic water quality testing protocols.

iv.) Prepare plans and get them approved technically. The plan must carry both drinking water and sanitation components. Plans having only one component should not be considered for funding;

v.) Prepare operation and maintenance plan and work our monetary requirements;

vi.) Work out the capital cost requirements and get the funds from the state;

vii.) Mobilise local funds if necessary; and

viii.) Implement the projects both in drinking water and sanitation sectors including solid waste management.

4.2.3 At District Level

The micro plans prepared for the villages/ habitations need to be then compiled at the district level where a coordinating agency with technical support cell can be functional may be under the PHED structure. The PHED structure can provide technical support and channel funds based on the district plan for project and for maintenance.

For the problem areas, the district PHED structure should scout for water sources and prepare plans and work out the financial implications. The Kachchh Navnirman Abhiyan in Gujarat experience suggests that even communities have insights into technical solutions as some among them understand the local geology well. Hence the PHED should also consult the local knowledgeable persons. Otherwise the tendency would be, as is largely the experience, PHED comes with long distance ground or surface water pipeline schemes that are not sustainable. The problem solving here should aim long term sustainable alternatives. If the problem solving capabilities at district level are not adequate, the central level innovation cell should come to help. The central level agency, the Mission, should keep compiling and documenting novel and innovative experiments from all over the country and even internationally, and should be able to guide the people in the problem area where local situations don't yield solutions.

The creation of district wise water quality testing facilities as referral centres and also for training and capacity building nodes is an essential part of a comprehensive water quality approach. A certificate course should be introduced in each district level university's chemistry department with a superior laboratory and 12^{th} standard school children with a science background and science graduates should be trained. After standardising the quality testing protocols, test kits should be given to these trained young persons at village cluster centres. If we combine the routine blood and urine as part of pathological tests then a small pathology lab in each of these centres can help generate new set of entrepreneurs earning a living and serving society. The district level laboratory may be used as a referral for complex and difficult case and random test centre.

Putting up village level structures has certain limitations at present in terms of lack of capabilities with the communities. Government structures will continue to have limitations in running the last mile where people and the state meet. It is here that the non government and community based organizations have an important role to play. There is one more reason why these agencies will have to be brought in.

At the ground level there will be inter regional variations in problems and communities' perceptions in assessing the problems and solving it. The government structures with their uniform approaches will not be able to grasp these variations and hence the NGOs will help in bringing people and government together. This is particularly true in the case of sanitation where experience suggests that successful sanitation promotion has almost invariably been associated with initiatives where NGOs have played an active part.

4.2.4 At State Level

The state level structure will then be left with two types of tasks.

i.) Compile the problem area issues and address them at the state level and prepare plans based on the appropriate technologies applicable at the local level. Presently, there appears to be artificial restriction on technology as well as cost pattern as imposed by the Mission office at the Centre.

ii.) Compile district level plans for projects and for operation and maintenance and work out the financial and technical implications

iii.) Allocate the funds provided from the centre among the districts in accordance with the above priorities and mobilize its own resources either to match the central funds or to generate its own.

iv.) Monitor the entire programme and provide feed back to grass roots and to the centre.

v.) Make a special effort through communication and special promotion to bring the issue of sanitation and hygiene to public attention through concerted campaigns and the close involvement of the education department to provide adequate school sanitation and develop hygienic habits and practices at a young age to bring about a generational shift in behaviour.

4.2.5 At Central Level

Both constitutionally and in terms of field realities, water and sanitation are state subjects with the onus for action unarguably at the village, district and state levels. In such a situation defining the role at the Centre becomes a challenge. For all the reasons mentioned in the sections on 'Background' and 'The Problem' nothing less than a fundamental change in the current structure and role of the current Mission would suffice. The new structure should be one which combines policy making, co-ordination and knowledge leadership incorporating the vast experience that exists in academia, civil society and the private sector in the country. **Making the Ministry of Rural Development the nodal point for a national water and sanitation effort which includes achieving and moving ahead of the millennium development goals** (MDGs) **should be the objective.** The recommended organizational structure should be flexible and yet work within the Ministry. There is already an almost similar example of CAPART within the Ministry of Rural Development. **With this approach in mind the recommendations on organizational structure follow.**

The Rajiv Gandhi National Drinking Water Mission to be renamed as the Rajiv Gandhi National Drinking Water and Sanitation Mission should have three bodies to authorise, advise, coordinate and execute policies and activities at three levels:

i) The Council

At the apex level there **should** be a Council. To avoid confusion we recommend calling the body as **Rajiv Gandhi National Drinking Water and Sanitation Mission Council.** The Council should be headed by the Minister, Rural Development as Chairperson. It should include State Ministers in charge of Drinking Water Supply and Sanitation, other concerned central Ministers (Minister for Water Resources, Health, Agriculture, Panchayati Raj, Environment & Forests, Urban Development and Commerce & Industry), the Planning Commission with representative experts from civil society, functional domains such as water management and public health and private sector apex bodies. The function of the Council would be to review general progress in water and sanitation provision in the country, set macro policy development direction as it impacts on water and sanitation and act as the top political policy framing body in the water and sanitation sector. The Council could meet twice a year with the Prime Minister attending once a year. The purpose of the Council is essentially to ensure that water and sanitation gets the kind of unified political commitment that is required. The Council should be served by a Governing Board as described below.

ii) The **Governing Body**

The Governing Body of the Council, accountable to the Minister, Rural Development, should serve as the Executive Committee of the Council and ensure

a) the implementation of the policy directions set by the Council, and
b) hold the Mission accountable for the delivery of its strategy including the allocation of central funds in the manner described in the 'Policy' section.

It should include twelve to fourteen members with a balance between government and non government representatives. The Government members should be the Secretaries of Water Resources, Health, Agriculture, Panchayati Raj, Environment & Forests, Urban Development, Industries, Education and the Planning Commission. The non government members should be chosen from experienced practioners from civil society (NGO), public health, media, integrated water resource management, water quality and the private sector. The Governing Body should meet quarterly.

The Secretariat of the Mission

The Mission itself should be an autonomous body like CAPART at it was at its inception but should have its own process of financial and administrative sanctions within its budgetary allocations like any independent authority. It should be headed by the Mission Director. The Mission Director would effectively be the

Member-Secretary of the Council and the Governing Body. The first line of accountability should be to the Governing Body and through that to the Minister, Rural Development. He or she should be at the level of Secretary to Government of India but should also act as ex-officio Secretary of Department of Rural Development. The Secretary should have full responsibility to provide the administrative and financial support to the Mission. **The Mission Director should be supported by a strong multi-disciplinary team of at least six experts drawn from the areas of water resource development and management, public health engineering and technology, public health, community mobilisation and communications, economics and Information Communication Technology.** These experts should be at an appropriate level to attract talents from all areas **including academia, civil society and the private sector**, if necessary on deputation. These positions will be over and above the already approved secretarial staff as in today. However there should be at least two Joint Secretaries to assist the Mission Director/ Secretary – one for water and the other for sanitation.

One of the first tasks of the Mission Director should be to develop a comprehensive Mission Strategy with achievable and measurable goals which should be both quantitative and qualitative.

Apart from the tasks associated with the delivery of the strategy the mission would be responsible for a.) the introduction of new ideas and approaches (both technical and managerial) through the promotion and support of innovative projects and schemes, b.) oversee the proper allocation of the funds as described above in the section on 'Policy', c.) ensure that data collection is properly administered and results disseminated in an open and transparent manner, and d.) track developments and innovations within India and in other countries to keep up with 'best practice'. **It would also be important for the Mission to commission several independent studies/ research periodically on important issues such as the impact of user charges on poor families, the impact of improved water quality and sanitation on livelihoods and health , the impact of climate changes on water supply and sanitation and its preparedness with the changing environment, the impact of untreated waste water and industrial pollution on water quality, pricing of water in the water and sanitation sector and its relationship with pricing in water sector as a whole, among other issues to ensure that its policies and practices are resulting in the inclusive spread of water and sanitation services and are contributing to general well being and rural development.** These tasks would move the mission beyond an administrative role to one where its value addition is based on knowledge accretion, co-ordination and oversight.

The proposed structure of the Mission is given in the Appendix.

4.2.6 Communication and Participation

It is also absolutely essential that the mission develops a functional and active water and sanitation portal that allows the people of India to freely participate in water and sanitation related issues and encourage advocacy as well as knowledge dissemination in the sector. The portal should be professionally organized and managed so that there is open access to its contents and citizens have the opportunity to express their views on relevant water and

sanitation issues including complaints through a bulletin board or a similar mechanism which can then be linked with various states for redress and appropriate. If similar initiatives already exist in the country then the Mission to take steps to collaborate with them. For that reason professional communication and IT specialists are required within the mission to act as anchors though the actual service may be provided externally. The build up its knowledge base and the provision of this instrument for its dissemination together with active people's participation should be measurable goals for the mission **which would also be a positive and practical endorsement of the Right to Information Act.**

4.2.7 Role of External Support Agencies

The Council should be the nodal point for co-ordination and first port of call for all initiatives supported by major UN agencies, bi-lateral and multilateral funding organizations working in the rural drinking water and sanitation sector. In relative terms the financial contributions that these organizations make to the sector are small compared to the funding allocations of the government. Nevertheless they can and do support technical, financial and institutional innovation and proposals for sector reform which might be worth consideration. The TEG hardly finds any justification for bi-lateral supported projects which create more confusion than helping the Mission. The recent studies of ten states on rural water supply as initiated by the World Bank at the encouragement of DEA is a good example which can help the mission in formulation of its policies for the future. UNICEF, though was involved deeply in development of appropriate and affordable technologies resulting in the development of India Mark II hand pump is almost out of water supply programmes and must focus on its old strength of development of such technologies through Private Public Partnership in both water and sanitation.

5. CONCLUSION

The Technical Expert Group after a careful scrutiny of the terms of reference decided to complete a task that was possible within the time and resource constraints of its mandate. The terms of reference themselves with 12 clauses, some of them repetitive and some straying into the areas of income generation, expected a level of detail that was not reasonably possible within the limitations mentioned above. It was for this reason that the TEG's approach was to identify the fundamental issues mentioned in the terms of reference rather than address on a clause by clause basis.

Therefore, the Technical Expert Group has approached its task on a first principles basis, so that its recommendations are based on a clear analysis of the fundamental issues involved. There has been no attempt to gloss over problems in the interests of discretion. Some of the comments may appear to be critical and sharp but we feel that frank criticism accompanied by suggested solutions is a necessity not just for Mission alone but also for the overall water and sanitation situation in the country in the light of the continued apathy or inability of policy and decision makers to catch the bull by its horns in addressing fundamental issues in the sector. We hope this report will be made public to create a debate which would help to develop a national consensus. The TEG feels it important to be open in recognising problems before moving to solutions in a major paradigm shift.

Three major principles have guided the analysis and recommendations of the TEG.

i.) ***The first is the principle of subsidiarity.*** **We sincerely urge the devolution of authority (accompanied by the requisite capacity) and finance to the point which is closest to those that are affected by decisions, in this case the people of rural India. This is entirely consistent with constitutional arrangements and common sense. Central authorities cannot, indeed must not, attempt to micro manage projects in rural India. That is a task best left (with the requisite support) to citizens and their governing arrangements starting from the village unit upwards. It is for this reason that the recommendations on policy changes have been framed as they have been.**

ii.) ***The second is the principle of integration*****. If we are to recognize the complexity of all the issues relating to the universal access of water and sanitation services to the citizens of India then it is important that there is an inclusive approach that brings together decision makers and implementers of projects and schemes to address fundamental issues. It is for this reason that the recommendations on structural changes have been made, to ensure a nodal point for all decisions and initiatives together with a mechanism for wide consultation and advice.**

iii.) ***The third principle is the importance of knowledge.*** **It is for this reason that there is a heavy emphasis on the need for resources for**

technical capacity building and also the need to bring in experience from non state sources and international organizations to ensure that innovations and best practices in both technology and managerial practices and organizational arrangements are available for application in India if found appropriate. The Mission should emerge and function as the Centre for excellence and professionalism in Water and Sanitation in the country with active linkages with the academic institutions and private sector experts. The team of experts who are to support the Mission Director should be drawn from civil society, academia and world of expert practitioners and they should be on a fixed tenure basis. The Mission should work as the trouble shooter for the entire country with respect to a frank appraisal of conventional technologies and approaches (which are sometimes non – functional) with the courage to promote non-conventional approaches where necessary and appropriate and to act as a pioneer in addressing water quality problems. Government should also take special care even in the selection of personnel at all levels from the generalist categories, so that only those with adequate background, experience and above all commitment or in other words real movers and shakers are selected to work in a mission mode.

Taken together these principles and recommendations will fundamentally change the water and sanitation paradigm in India. Implementation will require a strong political will. The recommendations made above are designed to work in an inter-dependent manner towards that objective. Implementing them in a selective fashion such as making changes to administrative structures without attending to the policy dimensions would diminish the impact of the recommendations.

Given the measure of the challenge and the need to swift and decisive action the TEG urges the Government of India to consider these recommendations and take steps to ensure that implementation starts as early as possible, preferably by the beginning of the 2008-09 financial year would be ideal since budget allocations could then be made in line with the above recommendations.

(Gourisankar Ghosh) **(Ravi Narayanan)**

(Dr. Sudarshan Iyengar) **(Dr. A. K. Susheela)**

(Ajay Shankar) **(Dr. Indira Chakravarty)**

January 29, 2008
New Delhi

Annex – I

F. No. A–11013/ 10/ 2007–08/ DWS-I

Government of India

Ministry of Rural Development

Department of Drinking Water Supply

Rajiv Gandhi National Drinking Water Mission

****

9th Floor, Paryavaran Bhavan,
CGO Complex, Lodi Road,
New Delhi – 110 003

Dated August 16, 2007

ORDER

Subject : Setting up of a Technical Expert Group (TEG) to examine various emerging issues in drinking water and sanitation sector and suggest measures to tackle the new challenges - regarding

The National Drinking Water Mission (NDWM) was set up in 1986 as one of the six Technology Missions to bring in the best of modern technologies integrated with the traditional knowledge to help the rural communities of the country to tackle the vagaries of the monsoon and the repeated drought and resultant water scarcity. The main thrust was on societal issues with the main objective of socio-economic development of the rural poor with the help of modern technology. Later, the Mission was renamed as Rajiv Gandhi National Drinking Water Mission (RGNDWM). In the last two decades, a number of initiatives were taken leading to impressive achievements and many lessons learnt.

2. Twenty years on, new issues have emerged in the rural water and sanitation sector within the broader framework of the water management issues as being actively debated in the country. The indiscriminate use of water by other sectors as well as uncontrolled discharge of waste water and affluent to the water environment has not only increased the cost of supply of safe water but also made a number of sources created under the Mission defunct primarily due to lowering of water table and deterioration of water quality. The Mission has no control on these crucial factors affecting the end result and yet are continuously asked to ensure the sustained supply. A new focus and strategy are required in the face of growing un-sustainability and stress in the sector.

3. Absence of an integration of rural sanitation, health, hygiene and water supply resulting in increased disease and malnutrition, increasing pollution of water bodies and over-exploitation of ground water sources, increasing water quality problems results in negligible impact on health and in an exponential increase in the number of the problem habitations. The lack of reforms in the capacity and institutional structures in the State Public Health Engineering Departments to meet with the new challenges and non-involvement of rural community and PRIs, make the efforts unsustainable. The ever expanding and competing demand of water from other sectors need to be examined with specific reference to the capacity of the existing Mission to address the current complexities in the rural water and sanitation sector.

4. After discussion at various levels on possible remedial measures, it has been decided to constitute a high level Technical Expert Group (TEG) to study all aspects of the current rural water and sanitation scenario and suggest/ recommend appropriate measures

which can be taken up by the Ministry immediately. The TEG will consist of the following:

i.)	Shri Gourisankar Ghosh, Founder Mission Director; Ex-Chief, Water & Sanitation, UNICEF, New York; and former Executive Director, WSSCC, WHO, Geneva	- Chairman
ii.)	Shri Ajay Shankar Former Principal Adviser, Planning Commission and Secretary (IPP), Ministry of Commerce & Industry, Government of India	- Member
iii.)	Shri Ravi Narayanan Ex–CEO, Action Aid and Ex-Director, Water Aid, UK	- Member
iv.)	Prof. Indira Chakravarty, Director, All India Institute of Hygiene and Public Health, Government of India, Kolkata	- Member
v.)	Mr. Sudarshan Iyengar, Vice Chancellor, Gujarat Vidyapeeth, Ahmedabad	- Member
vi.)	Dr. A. K. Susheela, Former Professor & Head, Department of Community Medicine, All India Institute of Medical Sciences, New Delhi	- Member

5. The TEG will have the following Terms of Reference (TOR) :

i.) Analyze the status of the ongoing programmes and identify issues and emerging challenges in enabling the rural community to have access to adequate safe drinking water and sanitation on a sustainable basis in all parts of the country;

ii.) Identify critical linkages with other sectors for optimal impact on poverty reduction and better health for the poor through increased impact on access to safe drinking water and sanitation/ hygiene facilities and recommend improved operational and institutional linkages with other programmes like NRHM, watershed development and management, housing and industrial development, new research areas in science & technology, rural employment & NREGA, etc.;

iii.) Review and recommend steps for better integration between drinking water supply, sanitation and hygiene with health at the grass root level and recommend a strategy to channelise the efforts and resources properly to achieve the universal goal of safe drinking water and sanitation to all by 2012 in India;

iv.) Identify existing gaps in water and sanitation technologies and its usage, new R&D efforts and latest advances; integrated water and sanitation management; surface, ground and rainwater management; technological advances and, adoption and formulation of suitable strategies to bridge these gaps;

v.) Suggest methodology/ agencies/ structures which can address issues to bring in technology information and knowledge translated for the people after assessing the capacity in the states as well as PRIs;

vii.) Assess future human resource demand with suitable knowledge and skills in the sector and strategy for human resource development at all levels. Suggest role/ responsibility and methodology that may be adopted by the Mission/ Agency for empowering local bodies/ user groups, village communities to plan, implement, gain ownership and control of drinking water and sanitation systems at village/ habitation level;

viii.) Taking into consideration of all existing relevant legal/ regulatory aspects/ issues involved in water quality, drinking water standards, sanitation, public health, prevention of pollution of drinking water sources, withdrawal of water for other purposes affecting drinking water availability, preservation of drinking water sources, etc. and recommend necessary steps to rectify the same, if necessary;

ix.) Suggest mechanisms for control / regulation and enforcement of public health and pollution control requirements.

x.) Review the activities and the contribution of international and bilateral agencies and recommend possible areas of their activities to increase impact of their limited support to help best the efforts of the ministry/ mission and recommend better coordination mechanism for improved interventions for increasing regional and international collaboration, any new mechanism for betterment of the partnership with bilateral and multilateral agencies, civil society, NGO/ CBO, private sector, State Governments, R&D institutions and PRIs;

xi.) Identify areas for private sector partnership especially for promotion of small private entrepreneur participation and for sector development as well as for local level economic activity for income generation.

xii.) Review the present structure of the Mission, its relationship and functioning within the ministry, inter-se relationship with State Governments and its agencies including allocation of resources. Review the existing knowledge base, structural deficiencies and present inadequacies to respond to emerging issues and challenges and suggest appropriate restructuring/ strengthening of the Mission/ department to fulfil the goals;

xiii.) Suggest/ recommend any strategy or plan not specifically mentioned above, which in the opinion of the Group could contribute in achieving the goals of the Mission.

6. The Technical Expert Group will be serviced by the RGNDWM, Department of Drinking Water Supply. The Group may have to visit and hold meetings/ discussions with State Government and PHED officials, sector professionals, civil society, NGOs, academicians, UN and other bilateral agencies, etc. The Mission will facilitate these meetings/ discussions and travels.

7. Non-official members of the Group will be entitled to TA/ DA as per Government of India Supplementary Rules 190 applicable to the members of the High Powered Committee.

8. Members of the Technical Expert Group would be paid a sitting fee of Rs.1,000/- per meeting per day. However, the sitting fee will be paid only for attending meetings of the Group. On other visits, TA/ DA as per Government of India Supplementary Rules 190 would be applicable.

9. If the members use their personal communication or resources for the work of this Group, then that expenditure will be reimbursed.

10. The Group may co-opt any other official and or non-official, either as a member or resource person or invitee, who could be useful in its work with the consent of the Secretary, Drinking Water Supply.

11. The Group will submit its first interim report within 60 days and the final report within 120 days from the date of this order.

12. This issues with the concurrence of AS&FA vide diary No. 3654/ ASF dated 10.8.2007.

(A. Bhattacharyya)
Joint Secretary to Government of India

1. **Shri Gourisankar Ghosh,** A-8, Sector-19, NOIDA, Gautam Buddha Nagar, NCR, 201 301
2. **Shri Ajay Shankar,** Secretary (IPP), Ministry of Commerce & Industry, Udyog Bhavan, New Delhi – 110 001
3. **Shri Ravi Narayanan**, 6, Palace Cross Road, Bangalore – 560 020
4. **Prof. Indira Chakravarty,** Director, AIIPH&H, Kolkata
5. **Prof. Sudarshan Iyengar,** Vice Chancellor, Gujarat Vidyapeeth, Ahmedabad
6. **Prof A. K. Susheela,** Executive Director, Fluorosis Research & Rural Development Foundation, B-1, Saransh, 34, I. P. Extension, Delhi – 110 092

Copy to :

i.) PS to Minister, Rural Development,
ii.) PS to MoS (RD-P), Rural Development
iii.) PS to MoS (RD-S), Rural Development,
iv.) Sr. PPS to Secretary, DWS/ PPS to Secretary (RD)
v.) PPS to AS&FA / PS to AS (LR)
vi.) PS to JS (DWS)/ Director (RWS)/ Director (TSC)/ DWS Section/ Select File

Copy also to :

Chief Secretaries of all States/ UTs

(A. Bhattacharyya)
Joint Secretary to Government of India

Annex – II

Technical Expert Group - About members

Mr. Gourisankar Ghosh

Gourisankar Ghosh is currently the CEO of FXB India Suraksha, a non profit company working for the vulnerable children affected or infected with HIV AIDS. Till recently he was the Executive Director of Water Supply and Sanitation Collaborative Council (WSSCC), in WHO, Geneva which launched the global campaign known as WASH resulting in the recognition of the sanitation goals in the World Summit for Sustainable Development, Johannesburg in 2002. He was the plenary keynote speaker on sanitation in the WSSD, Johannesburg and subsequently a member of the UN MDG Task force on water and sanitation

He was associated with the development of the new water and sanitation policy development in New South Africa since 1994. He was also instrumental in launching the African Ministers' Initiative in WASH. It is at his initiative that the SACOSAN meetings started in South Asia in Dhaka after he launched the AFRICASAN conference in 2002.

He was the Chief of Water Environment and Sanitation in UNICEF, New York for nearly a decade when the first ever-global strategy for Water and Sanitation for UNICEF was formulated in 1995. During this period he was also the chair of UN water group. He was also the member of the core group to develop the concept of the Global Water Partnership.

A former member of the Indian Administrative Service of Gujarat cadre, Mr. Ghosh is a Geologist and Economist by academic training. He was the founder director of the National Drinking Water Mission, India (1986-1991).

Mr. Ravi Narayanan

Ravi Narayanan, with degrees in Physics and Engineering from Delhi and Cambridge Universities, has had twenty years experience in the corporate sector in engineering and technology companies in India and the UK and later over twenty years in the not for profit sector working for international development organizations. He worked in various capacities as India Director, Director of International Operations and Asia Director for ActionAid and then as Chief Executive of WaterAid, an international non governmental organization specializing in water and sanitation programs in Africa and Asia. Currently a Vice Chair of the Asia Pacific Water Forum and a member of the International Advisory Group for the Singapore International Water Week, he has been a member of the World Panel on Financing Water Infrastructure (the Camdessus Panel) and the UN Millennium Task Force on Water and Sanitation. He is a life member of Norwegian Water Academy and an Associate of the National Institute of Advanced Studies in India. Ravi has been a Board member (and Chairman during its early years) since the inception of Partners in Change, a not for profit organization dedicated to promoting partnerships between the corporate sector

and civil society organizations, which he helped set up during his term with ActionAid.

Dr. Sudarshan Iyengar

Dr. Iyengar, Ph. D. in Economics, is Vice Chancellor, Gujarat Vidyapeeth, Ahmedabad, a deemed university founded by Mahatma Gandhi in 1920. He was Director of the Centre for Social Studies, Surat (2004-05) and Director of Gujarat Institute of Development Research (1999-2004). The major foci of his research have been natural resource development and management, people's institutions and role of non-government organisations in initiatives in societal development. He has had active involvement and in the resettlement and rehabilitation of Narmada dam oustees. He has actively co-ordinated NGO initiatives in the rescue and relief operations of the Gujarat earthquake, January 2001. He is the founder trustee of PRAVAH, a network of NGOs working for water and sanitation.

Dr. Iyengar has been a member of the Environmental Economics Research Committee (EERC) of the World Bank supported national project on capacity building in environmental economics. He has also chaired a sub-committee on Monitoring and Evaluation of the Watershed Development Programme of the Government of Gujarat. He was a member of the Technical Advisory Committee on Abortion Assessment Project, India and Convenor of the Ethical Consultation Group. He was member of the Advisory committee on Population Policy, Government of Gujarat. He was Vice Chairman of the Task Force on Use of Common Property Land resources in Gujarat set up by the Government of Gujarat. He is a Trustee of the Gujarat Vidyapeeth, Ahmedabad, a deemed university for education based on Gandhian Philosophy since 2000. He is a Trustee in many voluntary organisations in Gujarat and in other states. He is also a visiting faculty in different universities and research and training institutions in Gujarat. He has authored six books and published more than 50 research articles.

Prof. (Dr.) A. K. Susheela

Dr. Susheela, is a biomedical scientist of repute. She is associated with RGNDWM from the beginning till-date in various capacities as national co-ordinator for the sub-mission control of fluorosis, in-charge of the fluorosis control cell (FCC), member-secretary of a 8 member committee constituted by the Ministry (GOI) which brought-out "Harcharan Singh Committee Report 1993" highlighting the achievements in dealing with water quality with focus on fluoride and fluorosis during the first five years of the mission. She continue to deal with the subject matter in national deliberations of RGNDWM. The knowledge on fluoride and fluorosis generated in India was substantial and at the invitation from Britain during October, 1998, Dr. Susheela addressed the British Parliamentarians in the House of Commons and the Minister for Health, on the dreadful effects of fluoridation of drinking water on health based on the India experience. Since 1998, "Fluorosis Research & Rural Development Foundation" in Delhi set-up by her is assisting state water supply agencies and other line departments to deal with the disease. Her efforts has led to the Planning Commission approving a new health initiative on control of fluorosis in the 11th five year plan period to be launched shortly by the Union Ministry of Health. The most comprehensive, integrated project for "Fluorosis Mitigation" is formulated by the Foundation for

implementation during 2008-2013 in two districts in Tamil Nadu as a component of a mega water supply project, “Hogenakkal Water Supply” and is financed against a loan to GOI by Japan Bank for International Corporation. Expertise available in the Foundation in dealing with fluoride and fluorosis mitigation is much sought after nationally and globally.

Mr. Ajay Shankar

Shri Ajay Shankar has an M.A. in Political Science from University of Allahabad and an M.A. in Economics from Georgetown University of Washington D.C., USA. He has taught Political Science at Allahabad University for two years before joining the IAS in 1973.

As Joint Secretary/ Additional Secretary in the Ministry of Power he played a key role in preparation and enactment of the Electricity Act, 2003 and the rules and policies under the Act. He was also instrumental in promoting private sector participation in the Power Sector and was responsible for power sector reforms. As CEO, Greater NOIDA Industrial Development Authority, he was responsible for development of one of the most attractive industrial townships. He has been Secretary to the Lt. Governor of Delhi for over 5 years. He has also been Commissioner, Kanpur and Chairman, Kanpur Development Authority.

He has rich and varied experience in the Central and State Governments in industrial promotion, the energy sector and urban management and development. Before assuming responsibility of Secretary, Department of Industrial Policy & Promotion, he was Principal Adviser in the Planning Commission looking after the water, sanitation and environment and forest sectors as well as provision of rural infrastructure through the Bharat Nirman Programme.

Dr. Indira Chakravarty

Dr. Indira Chakravarty, Director, All India Institute of Hygiene & Public Health, Kolkata has a wide range of experience and expertise for nearly four decades in the field of Public Health, Community Nutrition, Food & Water Security, Environmental Toxicology, Health Impact Assessment, Biotechnology and Medicine, during her association with various organisations of International and National repute. She has provided her valuable services in International organisations as Regional Director (South Asia) – International Development Research Centre (IDRC), Canada (1997-99) and Regional Adviser (Nutrition), South East Asia Regional Office of the World Health Organisation (1994).

Dr. Indira Chakravarty has rendered her expert advice and solutions in the capacity of Consultant for various United Nations Organisations like WHO, FAO of United Nations, UNICEF, UNDP, World Bank UN (Habitat), UNU and rendered her valuable services for the formulation and implementation of water, sanitation and health services in more than 35 countries across the globe, in Asia, Africa, Middle East, Europe, and America.

As Chairman and Member in various technical and managerial committees has at the International and National agencies she has been instrumental in formulating people-centered policies in the sectors of Public Governance, Water, Sanitation, Health, Agriculture and Science & Technology. Her endeavors have resulted in

formulation of policy documents viz. National Pilot Program on Control of Micronutrient Malnutrition (for 7 states in India), National Plan of Action on Nutrition (in Bangladesh, Maldives, Myanmar, Mongolia & south Africa), Human development Reports of UNDP (Tripura-2006 & West Bengal-2004 & 2007) and Manual for saving of Time, Energy after provision of Water (for UNICEF in Nepal & Sudan).

Annex – III

Details of meetings & field visits by the TEG