

**THE RURAL WATERSUPPLY AND SANITATION SECTOR DEVELOP-
MENT IN INDIA -
IMPACT OF DONOR'S POLICY AND PROJECTS**

(Synopsis)

Thesis submitted to
The Gandhigram Rural Institute- Deemed University
in partial fulfillment of the requirements for the award of the
Degree of Doctor of Philosophy

By

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Chapter I Introduction

The Third World Development programme has given much emphasis to rural water supply and sanitation sector (herein referred as sector). The sector's focus has increased multifold particularly since the launch of the International Drinking Water Supply and Sanitation Decade (IDWSSD- 1981-90), sponsored by the United Nations Development Program (UNDP). At the United Nations Water Conference at Mar del Plata (Argentina) in 1977, a strategy for developing countries to adopt realistic approach in order to provide water and sanitation for all by the year 1990 was affirmed as, "Decade Approach". The conference further recommended that, each country should develop 'national master plans and programs for universal coverage of water supply and sanitation', which could effectively be met with extensive international cooperation.

The 'Decade' target was subsequently extended from 1990 to the year 2000 and now extended to the year 2025. Despite the tremendous interest that has been generated in developing country governments and aid agencies, and the additional sector investments that have been mobilized by the 'Decade Approach', in terms of numbers of people served, it seems unlikely that the provision of water supplies (sanitation certainly has not) has kept pace with the investment and effort. A number of explanations have been offered by the UN, Bilateral Donor Agencies and World Bank from time to time. The explanations were presented as a list of constraints categorized as inadequate funding, lack of operation and maintenance and trained personnel, inappropriate technology, poor institutional and financial management and lack of community participation in the sector development.

Chapter II Hypothesis, Objectives, areas of study and methodology adopted

Hypothesis Although the UN Bilateral and World Bank reports/statements regarding constraints on accelerating the development of the water supply and sanitation sector are valid, it is observed that the role of the donors in assisting the recipient governments starting from preparation of 'Decade Water Supply and Sanitation Master Plan' and the design of the projects they sponsor and the complexities of the recipient governments have not been adequately scrutinized.

1. The National Master Plan for Water Supply and Sanitation Programme prepared by the respective countries in collaboration with the bi/multilateral Agencies as a part of the IDWSSD programme were unrealistic and non-implementable within the specified time frame and requires much longer time than a decade.

2. The 'Decade Master Plan' prepared by the respective governments so far the donor agencies are concerned should have clearly defined the role of each of the External Support Agencies in sector development and specify the thrust areas of operation.
3. Complexity in institutional arrangements, overlapping responsibility and lack of coordination among the 'Line Department' and 'Other Related Departments' involved in sector development are very complicated and are little understood by the donor consultants specially bilateral consultants appointed from abroad for short duration.
4. Insufficient attention has been paid to the study of inter and intra-sectoral relationships between water, sanitation, health hygiene education, agriculture activities including water shed management, income generation etc. This has led to poor project planning and design adopting 'vertical project approach' and has no linkage to other related rural developmental activities. This renders the community based development projects ill conceived and unsuitable for replication.

Thus the **objectives** and **areas** of this study in the context of 'Donor Aided Rural Water Supply and Sanitation (RWSS) Sector' are as follows:

1. To review of the rural drinking water supply and sanitation sector development process that took place in India between 1981 and 2001.
2. An analysis of the design and implementation of the various donor aided projects that have been a part of this process in India.
3. A review of the respective roles of the three organizational systems involved viz., the donors, government and the community in the Donor Aided RWSS Projects.
4. Develop model viz., 'Supra Systems Model' based on integrated, inter-sectoral approach within the broad context of rural development which takes into account the role of the donors, recipient governments and the people with emphasis on coordination and community orientation in a donor funded project design and sector development process.

Methodology adopted 'Checkland's Soft System Methodology' has been adopted to review the broad environment of the rural water supply and sanitation supra system based on contemporary sector approach adopted by donor in the 'developing countries' and particularly in India. Modified 'Goodman and Love Case Study Approach' has been adopted for the analysis of External Support Agencies and NGOs supported individual sector projects in India.

Chapter III The Projects Studied

The list of the donor aided projects mentioned below are some of the most important and significant projects that were undertaken in India Post International Water and Sanitation Decade that are between 1981 to 2001 AD. The case studies depict the increasing scope and scale of activities in the sector, and the attempts to create linkages to other sectors, particularly health, education, watershed management and agriculture. At the end of each case study a list of the valuable lessons to be learned is presented. The case studies are :

- i. The Netherlands Assisted Five RWS Projects in Gujarat
- ii. UNICEF-SIDA SWACH Project in Rajasthan
- iii. ODA Assisted RWSS Project in Maharashtra
- iv. World Bank Assisted RWSS project in Maharashtra and Karnataka.
- v. Danida Assisted RWSS project in Karnataka
- vi. KfW (German) Assisted RWS project in Rajasthan
- vii. Danida Assisted DWS project in Orissa
- viii. TBS, Integrated Watershed Project in Rajasthan
- ix. World Bank Assisted SWAJAL Project in Utter Pradesh.
- x. Integrated Watershed Development Project (IWDP), Ralegoan Siddi in Maharashtra.

Chapter IV Summary of the Sector Review and Case Study Findings

Thus the present study and the main constraints in achieving the goals of the 'Decade' in India can be summarized as follows:

(a) The sector development process that is taking place is long and beyond the length of the Decade. ♦The present approach of universal coverage driven by target-norms approach is not sustainable in the long run. ♦State governments to adopt regional piped water supply schemes as a solution to rapid coverage as demonstrated in the donor assisted projects have turned out to be counter productive. ♦These schemes are not only capital and recurring cost intensive but are also complicated ones and people started depending totally on the governments for the operation and maintenance of these systems. The beginning of this present cycle of sector development in which the community began to depend on the government can be traced to the early 1980's and is still continuing.

Quite often the donor funded RWS projects did not have clearly defined objectives and were often illogically designed even with respect to their own goals at the project level. This affected the replicability and sustainability of these projects. For example, Dutch, German, World Bank and ODA Assisted RWSS projects in Gujarat, Rajasthan, and Maharashtra respectively in which the resources provided by the donor could not achieve the goals established for the project, even though the original time frame was doubled and in some case, tripled.

(b) The 'Decade Master Plan' prepared by the National Governments in collaboration with UNDP and WHO India Office was unrealistic. The available fund in the RWSS sector from 1980 to 1991 was less than half the requirement of the Decade fund (financial projections made in the Master Plan) for achieving the Decade objectives. Moreover, 'The Comprehensive Action Plan' prepared by the States in the year 1999 indicated that Rupees 440 billion (about US\$ 8.8 billion) would be required for providing safe drinking water to all the rural population in India by 2004. Based on the present trend of RWS Sector funding at best the fund that would be available for achieving the same is about Rupees 265 billion (about US\$ 5.4 billion) leaving a deficit of about Rupees 175 billion (about US\$ 3.5 billion).

(c) Despite cumulative investment of Rupees 400 billion (about US\$ 8 billion) since the First Five Year-Plan (1951-56) analysis of data from several of sources shows that between 69 to 74 percent of India's rural population take their drinking water from protected sources, leaving an unserved population of 26 to 31 percent. Study carried out by Planning Commission, Government of India (GoI) recently revealed that at any point of time about 20 per cent of the rural water supply schemes remain non-functional due to lack of operation and maintenance by the related government department. In addition to this as per the Department of Drinking Water Supply, GoI report more than 15% of total habitations are affected with water quality problems. Thus the status of coverage of rural population with safe drinking water in India is not very encouraging.

(d) One of the critical issues is that the RWSS programmes operate in isolation from programmes in health, education and water resource management. This is a reflection of the fact that water and sanitation is not pursued with the aim of reducing disease, improving hygiene, improving educational levels or reducing poverty. Morbidity and mortality due to water-borne diseases have not declined commensurate with the increase in availability of potable water supply. India still loses about 0.4 to 0.5 million children in five years due to diarrhoea alone. More over low levels of literacy and

awareness of the health benefits of improved hygiene behaviour is potential hindrance to the success of the sector program. The deteriorating groundwater situation is of critical importance to the RWS sector as it is largely groundwater dependent (more than 85%). Management of water has been through a top-down approach and has become virtually a government monopoly. A supply-side approach, exploiting additional water resources has been predominantly adopted. This approach has resulted in major economic, social and environmental costs.

(e) Due to professionalism and sectoralism, practiced by the policy makers and technocrats representing both the state and national governments, the task of planning suffers from lack of co-ordination between various horizontal and vertical departments. The points listed above were particularly apparent in the preparation of the National Master Plan on RWSS Sector Program.

(f) There is a lack of a decentralized implementation strategy, which could include involving local-self government (PRIs), NGOs and the communities in the planning and implementation of projects. The state governments have failed to make better use of alternatives such as extension services staff of different departments available at the district, block and village level and social local leaders who have a proven record in India.

(g) While the current approaches of RWS Sector Reforms and Total Sanitation Campaign drawn on the inherent strength of community management, it has been recognised that the current sector approach has inherent weakness and these need to cater for. Community management is heavily reliant on a supportive framework. Reports of the Review Missions deputed by GoI revealed that the community organizations lack the capacity to provide necessary expertise for taking up planning, design, supervision, facilitation and management of water supply schemes. In many of the 67 reform pilot projects the State Government's Water Supply Implementing Agencies were found to be carrying out the business as usual and were found implementing the RWS projects on behalf of the community. More over 80% of the RWS sector fund are still being funded for achieving universal coverage by the year.2004 in which community do not have any stake and are been 100% borne by the government including the operation and maintenance cost. This does not create the enabling environment for taking up community oriented RWS projects and in fact is the hindrance to the reform initiated in RWS sector.

Chapter V Conclusions and Recommendations

It has become clear that in order to improve rural service levels in the water and sanitation sector of a developing country a programme has to be implemented that is by necessity low cost and within the affordability and community based. However, to launch such a programme a process has to be initiated, a model, which is likely to be similar to that of the recent experience in India. It cannot be claimed that this is a universal model, however, there may be a number of facets that are similar and applicable to the situations in other countries. The model for the design of rural water supply and sanitation project presented below is based on the experiences of India, which is integrated and flexible. It is recommended that the following basic principles should be observed. Project designs should balance between providing for the basic needs of the community and the need to strengthen or build the capacity of government and local self-government to execute future projects. Internally, projects should be logically designed with a rational relationship between expected outputs and proposed inputs. This should take into account the long lead-time required by community-based projects. Emphasis within project designs should be placed upon building maintainable structures whereas; emphasis in programmes should be placed upon designing replicable projects. When sector development has reached the expansion phase, designers should seek to identify links and to integrate water and sanitation activities into other sectors particularly integrated agriculture, rural development and health projects. More specifically, project designs should take into account the following: First, that popular mass participation by the community is essential in order to mobilize the required resources for sustainability. Second, that community should be substantively involved in the decision taking at all stages of the project design and implementation. Third, that project should be simple with limited attainable objectives focused on removing one or two key critical constraints to sector development. Fourth, that the contact with communities should be through agencies that have skills in communications, in order to mobilize and organize them effectively. Often governments do not have the skills and capacity to undertake this. They should therefore supplement their effort by involving the resources of the social organization, NGOs and the private sector. Fifth, that within a project the respective roles of the parties involved should be clearly defined at the outset. Summary of the proposed 'Supra Systems Model for Rural Water Supply and Sanitation Sector Development based on Donors Supported Projects in India' is as follows:

1. Goal and Objective

Improved health and economy through the provision of improved water, sanitation and hygiene education in a broad rural development framework and adopting integrated-holistic approach linking with health, education, income generation, irrigation and watershed projects in which provision of drinking water supply can be the entry point.

2. Inputs, Outputs and Transformation Process

Finance and expertise, which is provided by the donors, is utilized for development of area specific pilot scale decentralized-integrated water and other related developmental projects. National resources are transformed into water and sanitation infrastructure by local-self governments and communities through a process of planning, designing and implementing projects and programmes. All stakeholders within the project area must be involved in making social and economic decisions affecting land and water use.

3. Key Concepts

- The Panchayats as the basic units of self-government at the village level should be involved in the planning process of the projects.
- Project designs should balance between providing for the basic needs of the community, and the need to strengthen the capacity of community and local self-government to execute future projects as partners.
- People's involvement in the programme from the decision making, execution, operation and maintenance and setting their own rules for water distribution and contribution and resolving the problems through group discussion should be ensured.
- Projects should be simple and address specific issues, but be set in a broad rural development framework.
- Partial cost sharing and full recurring costs of providing services should be borne by the community.
- Programmes should evolve adaptation from small projects.
- Projects should integrate water, sanitation, health and hygiene education and agriculture watershed management components based on appropriate technology and community management capacity i.e., social capital.
- Emphasis within project designs should be placed upon building maintainable structures. Whereas, emphasis in programmes should be placed upon designing replicable and sustainable projects.

- A full understanding of the structure needs and priorities of the community groups should be developed before embarking on a project design for implementation.
- The importance of dynamic leadership is clear. Projects should include for leadership succession training.
- Adopt holistic approach acknowledging hygiene, sanitation and water as a human right relating to human development, the elimination of poverty, environmental sustainability and the integrated management of water resource.
- Projects should be systematically monitored and evaluated in order to feed the evolution process.

4. The Systems and their functions

a) **Donors** should provide financial, technical and social resources to the national and state governments in order to strengthen their capacity to undertake development interventions through the local self-government. The donor organization should confine their role as support organizations to the National and Regional Governments particularly in the area of decentralized planning, human resource development, social mobilization, develop models for horizontal linkage with other water, rural development and health related programmes and development of area specific appropriate technology. Donors should also encourage government to develop pilot projects based on sound fiscal policies and sectoral priorities and also making the local bodies a functional necessity for activating the process of 'democratic decentralization' that have least administrative and political interference. Donors should guard against introducing potentially conflicting and alternate institutional framework, which is against the functioning of the Panchayati Raj Institutions.

b) **The National and State Governments** Government should create an enabling macro-economic policy environment that is conducive for poverty eradication and sustainable development in rural areas by according high priority to incorporate broad integrated rural development strategies designed to reduce rural poverty and improved health into the national and state planning and policy framework. The Government agencies should develop broad sector policy framework which is flexible and provide opportunity for innovative approaches. The State Government's Line Departments (at present responsible for planning and implementation of RWSS projects) should confine their role to provide technical support to all the three tiers of PRIs, coordinate their programmes avoiding overlap of activities and optimum use of resources. Governments should establish the institutional mechanisms to make this happen. This includes national

and state specific legislation requiring land and water planning and management with participation of women and other stakeholders representing the economic, environmental and social interests of the community and full sharing of information.

c) **Panchayati Raj Institutions** are responsible of preparation of plans and in consultation with the community for water and sanitation projects and other related projects under the broad framework of Rural Development and implementation of the same for economic development and social justice as entrusted to them including those relating to the matters listed in the XIth Schedule.

d) **Communities** should participate actively in planning, constructing, managing and initiating the water and sanitation systems. They should bear part of the capital cost for economically backward people and 100% O&M cost of the scheme/system. They must facilitate representative participatory processes so that water and sanitation facilities can be managed locally to meet the aspirations of all the stakeholders.

5. Some key stakeholders and their perceived roles

a) **Donor experts** should concentrate on Training National and State Staff and Local Institution capacity building activities to ensure proper decentralized planning and implementation of the WSS projects.

b) **Governments** to supplement extension workers as intermediary in their communications with communities should involve NGOs as systems boundary spanning mechanisms. It should emphasize on extensive human resource development activities.

c) **The domestic private sector**, which is a largely untapped resource, should play an increasing role in accelerating the development and operations of water and sanitation systems at local level.

d) **Women**, because of their role as the carriers of water and guardians of family health, should be a major focus of mobilization and education campaigns.

e) **Politicians and Government Officials** should dispel the idea that water is primarily the government's business. Political will must be marshalled to include all the stakeholders, especially women and socially backward community, in decision making.

6. The Supra Systems Dynamic

As sector development progresses from small-scale pilot activities to large-scale programmes in an adaptive learning process, the function of the systems and role of the actors will change over time. For example, the **Donor's role** may change from providing intensive technical assistance in training and institution building to simply providing funding. The **Government's role** should change from implementers and providers to that

of a support organization to PRIs. It is envisaged that all Rural Development Fund for individual project should be transferred to local self-government (PRIs) to enable the community and the local self-government to take up specific need based projects – designed to meet the specific socio-economic conditions and requirements of a given locality. The activities to be taken up may be those specified in the XI schedule of the Panchayati Act 1992. There should be enough flexibility for the community and the local-self-government to take up projects based on mutually agreed guidelines within the specified broad National and State guidelines. Capital cost sharing by the community and PRIs for specific project and guidelines for implementation of the same needs to be formulated by the National and State Governments. The administrative and financial set-up of the three tiers of **Panchayats** has to be strengthened to enable these bodies to perform the functions assigned to them effectively and the **Community role** may change from being observers of pilot projects to project planners and implementers. This dynamic process also relates to the integration of water and sanitation projects into other sectors. The initial pilot projects may be free standing, whereas during the expansion phase water and sanitation may be fully integrated into health or watershed management and agricultural programmes.

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