



NATIONAL DRINKING WATER SCHEMES -A STUDY

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Introduction

Water is prime natural resource, a basic human need and a precious national asset. Optimum development and efficient utilization of water resources, therefore, assumes great significance. Clean drinking water is a basic necessity of life. Supply of clean drinking water in the rural areas has always been one of the highest priorities of the government. The Ministry of Water Resources lays down policies and programmes for development and regulation of the country's water resources. It covers sectoral planning, coordination, policy guidelines, technical examination and techno-economic appraisal of projects, providing general assistance to specific projects, facilitation of external assistance and assistance in the resolution of inter-state water disputes, policy formulation, planning and guidance in respect of minor irrigation, command area development and development of ground water resources, etc

Role of the Ministry of Water oures

The primary responsibility of providing drinking water facilities in the country rests with the State Governments. The Government of India supplements the efforts of State Governments by providing financial assistance under the centrally sponsored Accelerated Rural Water Supply Programme (ARWSP),

now renamed as National Rural Drinking Water Programme (NRDWP). This Programme has been under implementation since 1972-73. In 1986, the National Drinking Water Mission (later named as the Rajiv Gandhi National Drinking Water Mission in 1991) was launched and, further in 1999, the Department of Drinking Water Supply was created, to provide a renewed focus with a mission approach to implement programmes for rural drinking water supply. About Rs.70,000 crore have been invested in the Rural Water Supply Sector since independence by the Central and State Governments.

National Water Policy

The National Water Policy lays emphasis on integrated water resources development and management for optimal and sustainable utilization of the available surface and groundwater. Creation of well-developed information system, water conservation and demand management have been recognized in the Policy.

Drinking water has been accorded the first priority in allocation of water for diverse uses. It integrates quantity and quality aspects as well as environmental considerations for water through adequate institutional arrangements.

The involvement of beneficiaries and stakeholders in the project planning and participatory approach in water resources management have been focused in the Policy. The Policy also envisages Private Sector Participation for providing facilities in water resources sector. Resttlement and rehabilitation aspects of project affected persons have been emphasized in the Policy. The policy also recognizes adequate training and research in water resources sector.

Accelerated rural water supply

In June 2002, Government approved relaxation of 'coverage' norms under ARWSP to provide for 55 lpcd with a source within 0.5 km in the plains and 50 metre elevation in the hills after coverage of all NC/PC rural habitations in that State is achieved as per the then existing norms of 40 lpcd with a source within 1.6 km. This relaxation was subject to the condition that beneficiaries of the relaxed norms were willing to share a part of the capital cost (which should not be less than 10%) and shoulder full responsibility for subsequent operation and maintenance. Further, in case of quality affected villages or in multi-village schemes where the capital cost was very high, the schemes could be executed and implemented by Government departments and water was to be supplied to individual villages at the periphery of each village. For drinking water distribution within the village, the beneficiaries would share a part of the capital cost (which should not be less than 10%) and shoulder full responsibility for subsequent operation and maintenance of the village water distribution network, while Government Department/Board would maintain the main water supply system upto the village. Government/Board could also collect water rates from the Panchayats/Village communities for bulk supply of water for drinking purposes. Such water charges and the village O&M cost would be fully met by the users/beneficiaries

Sustainability of Sources

Almost 85% of the drinking water needs are met from ground water. Only about 5% of the total groundwater extracted is used for domestic drinking water supply. Irrigation accounts for 85% of all groundwater extraction. The remaining 10% of the ground water extracted is utilised by other sectors including, industries. The rapid development of groundwater based irrigation in many States has caused ground water depletion. Attempts were also made to tackle the problem of sustainability through the Sub-Mission on Sustainability by taking up projects for conservation of water and rainwater harvesting.

A Technology Mission on drinking water name 'National Drinking Water Drinking water supply is one of the six components of Bharat Nirman, which has been envisaged to build strong rural infrastructure in four years (2005-06 to 2008-09). The task ahead is to cover all the remaining uncovered habitations and also to cover the slipped back as well as the water quality affected ones. Action Plans from State /UT Governments for achieving the goals of Bharat Nirman in a time bound manner have been obtained.

Bharat Nirman

Under Bharat Nirman, the quality affected habitations were sought to be addressed with approval of projects. These projects were approved by the respective States within the funds allocated to them each year. The achievements reported under Bharat Nirman are for approval of projects to tackle quality problems, which was taken to mean "addressal". However, actual number of projects completed is different from "addressal". This is because the projects approved and undertaken to tackle water quality have a longer implementation period of 2-3 years, as developing a safe alternate source and treatment plants and pipelines etc take longer. States prefer to go in for coverage of

quality affected habitations through alternate sources, which increases costs. The States go in for predominantly engineering solutions instead of exploring low cost options. Traditional systems are not utilized fully. Disposal of sludge in treatment plants set up for tackling harmful chemical contaminants such as arsenic and fluoride remains a problem.

To ensure proper reporting and transparency in working, all information is now proposed to be obtained on-line on the web-based Integrated Information Management System of the Department. Work has already been initiated and States have been asked to update their records. The first step was to link the present habitations to census villages with assigned codes. Thereafter, the existing habitation data was to be verified and disaggregated upto the household level, along with information of status of water supply. This work has already been completed for majority of the habitations. This basic data now forms the foundation for marking of the target habitations where drinking water projects would be taken up in the current year and also for perspective planning. The IMIS has been designed to actually list out habitations, schemes taken up, and physical and financial progress to be linked and information presented in the public domain..

Hydrology Project

The Hydrology Project Phase-I was implemented with International Development Association (World Bank) assistance of SDR 75.1 million under a credit agreement with the Government of India. The credit effectiveness of the project began on 20 December 1995 and the extended closing date was 31 December 2003. The Government of Netherlands provided a grant-in-aid of Euro 14.64 million in the form of technical assistance under a bilateral Indo-Dutch agreement.

The Project was implemented by nine states viz. Andhra Pradesh, Chhattisgarh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa and Tamil Nadu and six

Central agencies. The project enabled establishment of functional Hydrological Information System (HIS) and an improved institutional capacity of implementing agencies to build, operate and utilize the HIS to the benefit of different user groups. The development of databases would support major aspects of National Water Policy, particularly with regard to water allocation and planning and management of water resources development at a national, state, basin and project level. To realize the objective, the hydrology project supports: upgrading and expanding physical infrastructure for all aspects of data viz., collection, collation, processing, storage and dissemination; provision of equipment and material; institutional strengthening, including technical assistance and training and new buildings, laboratories, computer hardware and incremental operating and maintenance costs.

The total expenditure was Rs. 605.28 crore at the closing of the project on 31 December 2003.

Hydrology Project Phase-II has become effective since 5 April 2006. The project objective is to extend and promote the sustained and effective use of Hydrological Information System (HIS) by all potential users concerned with water resource planning and management, public and private, thereby contributing to improved productivity and cost-effectiveness of water related investments in 13 States, viz. Andhra Pradesh, Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Kerala, Maharashtra, Orissa, Tamil Nadu, Goa, Punjab, Pondicherry and Himachal Pradesh and 8 central agencies, such as Central water Commission, Central Ground Water Board, Indian Meteorological Department, National Institute of Hydrology, Central Water and Power Research Station, Ministry of Water Resources, Central Pollution Control Board and Bhakhra-Beas Management Board. The

total expenditure to be incurred on the project is Rs. 631.84 crore.

The project envisages to develop a Decision Support System for water Management and Planning.

Water quality assessment authority

In view of the multiplicity of agencies involved in water management in the country, with no virtual co-ordination among them, the problem of pollution of national water resources has become a matter of serious concern.

The Ministry of Water Resources is assisting the WQAA in carrying out and coordinating its functions. The Water Quality Review Committees have been constituted in states with an objective to improve coordination amongst the Central and State agencies. Review/ assess schemes launched/ to be launched to improve quality of water resources. Review Water Quality Data Analysis and Interpretation in order to identify problem areas and developing Action Plans for improving quality on a sustainable basis, identify hot spots for surveillances monitoring and to look into other specific miscellaneous issues related to Water Quality arising from time to time.

Based on the recommendations of Expert Committee and Task Force a Gazette Notification on the Uniform Monitoring Protocol for adoption by all the water quality monitoring agencies has been made in June 2005. A Working Group has also been constituted by WQAA to take up studies towards deciding minimum flows in rivers. The recommendation of this report is under process of consideration.

The Water Quality Monitoring Committee (WQMC) constituted as per decision of WQAA is taking measures towards action to be taken. For this purpose WQMC constituted 3 Standing Groups to initiate action considering present status and requirement/modality about to be taken on related functions of WQAA as per the Gazette Notification.

In order to make State Water Quality Review Committees more effective and to establish co-ordination among various agencies in the field of Water Quality monitoring, one workshop at national level and three workshops at regional level were organized

COMMAND AREA DEVELOPMENT AND WATER MANAGEMENT PROGRAMME

The Centrally-sponsored Command Area Development (CAD) Programme was launched in 1974-75, with the main objectives of improving the utilisation of created irrigation potential and optimizing agriculture production and productivity from irrigated agriculture through a multi-disciplinary team under an Area Development Authority.

The CAD programme was initiated with 60 major and medium irrigation projects. So far 310 irrigation projects with a Culturable Command Area (CCA) of about 28.45 mha have been included under the implementation.

Based on suggestions received from beneficiaries and implementing agencies and recommendations of the Working Groups of the Planning Commission on 'Command Area Development Programme' and 'Private/Beneficiary participation in the irrigation management' for tenth plan, the CAD Programme has been restructured and renamed as "Command Area Development and Water Management(CADWM) Programme from 1 April 2004.

The Programme involves execution of On-Farm Development (OFD) works like construction of field channels and field drains, reclamation of water logged area, renovation and rehabilitation of MI tanks, correction of system deficiency above outlets up to distributaries of 4.25 cumec (150 cusec) capacity. The Programme also involves software activities like adaptive trials, demonstrations, training of farmers, evaluation studies, etc. Central assistance of 50 per cent

(limited to the prescribed cost norms) is provided to the State governments for construction activities and of 75 per cent for the software activities. Warabandi or a rotation system of distribution of irrigation water in order to ensure equitable and timely supply of water to all the farm holdings of the command is also a component of the programme.

Conclusion

The schemes should not depend on single source and to be shifted to multiple source of and through conjunctive use of surface water, groundwater and rainwater harvesting. Focus should be given for ensuring the sustainability in drinking water schemes and should encourage water conservation methods including revival of traditional water For tackling salinity problem, solar desalination and dilution through rainwater harvesting to be adopted

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