

Government of Rajasthan

SECTOR POLICY

for

RURAL DRINKING WATER

&

SANITATION (DRAFT)

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STATE POLICY FOR RURAL DRINKING WATER AND SANITATION

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PREFACE

Water is finite but all life is infinite from mankind's viewpoint. Hence water has to support and sustain all life – human, animal and plant and their support systems ad-infinitum or co-terminous with life on earth. The worldwide awareness and recognition of 'water' as the most precious resource parallel to air and environment have reinforced the need for evolving long term national and regional policies. That "water war" will be in the realm of possibility in the foreseeable future has brought the water, environment and land related issues to the center-stage of discussions at all levels. Almost all stakeholders-Governments, NGOs, Civil Society Organizations, International Organizations including UN Agencies are now wide-awake and fully conscious of the crisis and grim scenario looming large on the horizon with the fast depleting fresh water sources – both underground water as well as surface water. Collaborative efforts have, therefore, been mounted and agreed measures are being worked out at various fora to find solutions to inter-country, national and regional water related problems.

In the context of Rajasthan, it is gratifying that the initiative taken by, UNICEF, Rajasthan as part of their country mandate has fructified in the shape of this "State Rural Drinking Water & Sanitation Policy" which is, in fact, a policy framework comprising a policy outline, an exercise in strategy and an action plan with target time lines and finally, an overview of coordination mechanism and guidelines for future.

We hope this three-in-one policy framework, as stated above, would be placed in public domain for wide-ranging consultations and discussions in workshops, seminars and meetings to be attended by stakeholders with varied interests for evolving a long term policy to govern and sustain efforts in a new public and private – partnership.

It is also hoped that due care and caution will be exercised in forgoing new relationships especially in regard to privatization of underground water exploitation, transportation and distribution to be regulated by the proposed Water Regulatory Authority.

Decentralization of management by PRIs and NGOs should be necessarily focused upon and problems of local management discussed threadbare with an open mind and open arms. Transparency in management and participation by the people, the twin 'mantra' should infuse new ideas and vigour to the discussions and generate solutions - long lasting and acceptable to all stakeholders.

We would like to place on record our sincere appreciation of and acknowledge with gratitude the timely assistance and support extended by Dr. Satish Kumar, State Representative and his colleagues in UNICEF. We are beholden to Shri Bharat Meena, Secretary PHED, for his valuable suggestions on the draft report. Sincere thanks are also

due to Shri K.C. Sancheti, Chief Engineer (Rural) PHED, Shri M.K.M. Joshi Additional Chief Engineer, PHED and concerned officers of Ground Water and Rural Development Departments who provided us background material, relevant documents and necessary assistance from time to time. Shri Bhagirath Sharma, IAS (Retd.) and Shri S.K. Kulsherastha, Retired C.E. PHED, expert members of the team of consultants have put in labour of love to give the long term policy documents its present shape and I would like to record appreciation for their valuable contribution.

We do hope, this report would be considered in depth by the State Government for giving it a concrete shape of a long tem State Policy for Rural Drinking Water & Sanitation.

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THE VISION

*“BY 2015, every person living in Rajasthan is aware of the critical importance of water for survival of all living beings and for overall development of the State and of the need for its conservation and judicious management at the household, farm and higher levels. Everybody’s basic needs for clean water for consumptive and productive purposes, and environmental services are fully met at affordable cost and nobody suffers from water borne diseases. People at local level fully participate in and contribute to judicious management of water resources through appropriate organizational structures. In a nutshell, everybody is water-secured on a sustainable basis”.**

“Community needs to be made aware of the linkages between proper use of safe drinking water and sanitation facilities by encouraging health and hygiene promoting practices in order to break the disease transmission chain towards ensuring good health benefits to all living beings by 2015”.

STATE POLICY FOR RURAL DRINKING WATER AND SANITATION

I

INTRODUCTION

- 1.1 Water is a basic human need and a limited natural resource. It is also a precious national asset. In the recent decades, human demand and misuse of water resources have continued to grow. Therefore, water security for human life has become a matter of principal concern for sustainable development in the 21st century. Some global statistics speak for themselves. It is estimated that 20% of the world population still lack access to safe drinking water and 50% lack adequate sanitation. Water being essential for human life has become one of the greatest challenges of 21st century and therefore, a worldwide concern for sustainable development water security lies in making basic provision of water supply and sanitation to meet this basic need for human life every where.
- 1.2 In Asia, one in three people lacks access to safe drinking water and nearly 5 lac infants die each year from water related diseases and lack of adequate water and sanitation. On the other hand, agriculture accounts for 90% of fresh water withdrawal in South Asia. Therefore, aquifer depletion in South Asia has led to drop in per capita water availability. As it is, India has 2% area of the earth, 2.45% of world's fresh water resources and 16% of global population to support within its limited resources.

II

LONG TERM POLICY: GOALS AND OBJECTIVES

2.1 Rajasthan, the largest state of the country faces a grim scenario in relation to water availability resources. Rajasthan has two third of its area as desert and it faces, due to scanty rainfall, recurring droughts in 3-4 years in a cycle of 5 years. It would be seen from the present status of drinking water detailed at **Annex-1** that the situation has become more critical in recent decades because out of 237 blocks in Rajasthan only 49 are safe in terms of ground water while 101 are critical and semi critical and 86 are over exploited. It is a hard reality that state dependence on ground water is 91% for drinking water and 60% for irrigation. Therefore, planning development and management of all water resources in the state need to be governed by national perspectives in keeping with the National Water Policy.

2.2 There has been continuous drought and low rainfall for the last 5 - 6 years, which has resulted in over- exploitation of 91% of water supply sources viz ground water, reducing water table, and yield of water or no water in tube well or hand pump and increase in concentration of dissolved salts making it unsuitable for drinking, thereby making already covered habitations either not covered or quality problematic. As per the latest survey of Dec'2003, the fully covered habitations have reduced to only 32.6%, partially covered habitations about 14% leaving about 53.4% habitations as not covered or quality problematic (about 21190 having salinity problem, 23297 fluoride problem, 20659 nitrate problem). The number of problematic villages/ habitations is increasing year after year as we go deeper and deeper to mine the ground water resource, which at present, is the main source.

2.3 An expert committee appointed by State Govt. for preparing a report on Integrated Water Resource Management in the state has also underlined and expressed concern over growing uncertainty for availability as well as, inadequate and unequal distribution besides inefficient use of water for various purposes. It is therefore necessary to: -

(i) shift the source of water supply from ground water to surface water¹ available to the state in the various river basin allocations.

(ii) ensure equitable distribution keeping in view the area specific demand by changing the norms

(iii) educate people for efficient use of water for drinking, economic and other purposes.

1

- 2.4 The coverage of rural areas under sanitation and hygiene education is only 14% as per 2001 Censuses. Therefore, massive effort is required to attain full coverage. With this end, view the programme has now been transferred to PHED so as to bring both water supply and sanitation and hygiene education under one authority.
- 2.5 Both activities of water supply and sanitation require people's active involvement for operation and maintenance of infrastructure created for these facilities.
- 2.6 A well-defined State Water & Sanitation Policy, needs to be evolved for utilizing all available water resources, surface and ground, in a judicious equitable and economically viable framework. While the state has more than 10% of the total geographical area of the country, it has to support and sustain its 5% total population with only about 1.16% of the water resources. The need, therefore, for evolving a long-term policy for next 15 years up to the year 2020, for the drinking water and sanitation cannot be over emphasized.

Goals and Objectives

- 2.7 The long term goals and objectives of the State Water and Sanitation policy are outlined below:-
- (i) With a view to make everybody in the State, water-secured on a sustainable basis, provision of safe and potable water to meet their lifeline and other needs. (End of 2015)
 - (ii) Adoption and evolution of the demand responsive and participatory water Management systems. (End of 11th Plan-2012)
 - (iii) Legal ownership of and responsibilities for management of public drinking water and sanitation assets by the Panchayati Raj Institutions in a phased manner to be completed. (End of 11th Plan-2012)
 - (iv) 100% responsibility of operation and maintenance (O&M) by the users and empowerment of panchayats/communities, in this regard in a phased manner to plan implement, operate, manage all water supply and sanitation schemes. (End of 12th Plan-2017)
 - (v) Attainment of full sanitation coverage in rural areas. (End of 2012)
 - (vi) Adoption of hygiene practices at personal, family and community level. (End of 2012)
 - (vii) Movement from a low subsidy regime to no subsidy regime for household toilets. (End of 11th Plan-2017).

Other objectives

- Transfer of legal ownership of water and sanitation assets by entry in revenue record for different levels of schemes in a phased manner.
- Integration of Rural Drinking Water, Sanitation, Health and Hygiene programmes at the state, district, block and GP levels
- Integration of water use and land use policies with the main objective of providing drinking water needs of human beings and animals, which should be the first charge on any available water.
- Delineation of the role of the State Government in respect of multi-village, multi-block, and multi- district schemes, in relation to water quality, source sustainability issues and technical administrative and financial support to the Gram Panchayats/ VWSCs.
- Developing operational procedures for Swajaldhara and total sanitation schemes.
- Defining the role and responsibilities of all stakeholders under Swajaldhara and sanitation campaign.
- Enactment and implementation of law for effective ground water extraction control, regulation and recharge?
- The sustainability of drinking water sources.
- Rationalization of tariff structure.
- Appropriate sanitary options suitable for arid zones.
- Ensuring linkages among Swajaldhara, TSC and SSA.
- Scaling up the school water, sanitation and hygiene education programme.
- Adoption of integrated approach for fluorosis mitigation.

- Water quality surveillance.

III

WATER RESOURCES DEVELOPMENT AND MANAGEMENT

- 3.1. Water resource means ground water in aquifers or surface water within a river basin wherein a well/tube well or a spring or a river or a dam is the source of water. Presently, most discussions of sustainability issues in water supply are centered on sources leaving larger domain of resources mostly un-addressed. Water resources can be broadly categorized into ground water resources and surface water resources.

(A) Water Resources Assessment and Availability

- 3.2. Water supply to about 91% (65 lacs) households is based on ground water sources and the remaining households depend on surface waters of Indira Gandhi Canal or Bisalpur Dam or other surface water sources. As per the state water policy top priority has been given to drinking water demand of human population as well as cattle population. The management and development of water resources shall have the following objectives.

- All development projects of the state shall be prepared, keeping in view the availability of water and priority of utilization so as to maximize production in all user sectors.
- Development of all utilizable water resources to the maximum possible extent including both surface and ground water for optimal economic development and social well-being with judicious and economically sound allocation of water resources to different sector with drinking water supply both for human and cattle as a first priority.

(i) Ground Water Status

- 3.3 The state has been divided in 594 ground water potential zones; out of these 322 zones fall in “white” category, where ground water development is less than 65%, 71 zones fall in “grey” category with 65-85% stage of ground water development. The remaining 201 zones fall in “dark” category where stage of

ground water development is more than 85%. Out of these 173 zones are over exploited having a stage of development more than 100%.

- 3.4** Ground water levels are monitored through evenly distributed network of key wells and peizometers. The study of the trend of water level from 1994 to 2004 revealed that out of 237 blocks only 19 blocks have rising water level trends in the districts of Barmer, Bikaner, Churu, Ganganagar, Hanumangarh and Jaisalmer. This rise is attributable to insignificant irrigation draft due to salinity of ground water. In Ganganagar & Hanumangarh districts this rise is due to seepage of canal water.
- 3.5** On the basis of average rate of depletion of ground water table per year the districts have been classified as most critical, critical and moderate.

Most Critical- where average of depletion is more than 0.4 meter per year. Alwar, Jalore, Jhunjhunu, Jodhpur, Nagaur, Pali, fall in this category (total 6 districts).

Critical- where depletion, varies from 0.20 to 0.40 mtrs per year. Ajmer, Bhilwara, Bundi, Chittorgarh, Dausa, Dungarpur, Jaipur, Karauli, Rajsamand, Sawaimadhopur, Sikar, Sirohi, Tonk, Udaipur, fall in this category (14 districts).

Moderate- where average rate of depletion is, between 0.1 to 0.20 meter per year. Banswara, Baran, Barmer, Bharatpur, Dholpur, Jhalawar, Kota (total 7 districts).

Others – Churu, Bikaner, Jaisalmer, Sriganganer and Humangarh (5 Districts) are such where water table has gone down very little or has risen

- 3.6** The aforesaid declining trends in water level are indicative of over exploitation of ground water which is primarily due to increase in irrigated area, increase a number of dug wells/ tube wells/DCB in the last about 20 years which has been made further acute due to high energisation of tube wells/wells/DCBs facilitating higher quantity of pumping with less effort. The balance resource assessment of ground water estimation for the year 2004 reveals that ground water exploitation has increased from 59% to 105% i.e. by 46%, which has resulted in depletion of water level as well as deterioration in water quality. In other words, we are mining the ground water. Based on ground water estimation the Panchayat Samities have been categorized as safe, semi-critical, critical and over exploited. During last 10 years the number of safe blocks has decreased and the number of over exploited has increased as indicated below:-

S.No.	Particulars	1994	2004
1	Total no. of blocks assessed	237	237
2	Safe	127	49
3	Semi-Critical	35	21
4	Critical	14	80
5	Over-exploited	60	86

3.7 Some key observations on ground water status are as follows:-

- In over 16 districts ground water exploitation has already crossed 100% of available resource. Some of the critical districts are 165% in Jhunjhunu, 153% in Jodhpur, 135% in Dholpur and around 130% in Bhilwara, Jaipur and Jalore. If, the above trend continues it is apprehended that many areas of the state may totally run out of ground water. Therefore, this trend needs to be arrested urgently.
- The number of dark zones in the state is increasing every year and the over exploitation of ground water can be traced to subsidized power tariff for agriculture.
- Little effort has been made towards water conservation, rain water harvesting and ground water recharge in the PHED schemes executed up till now. Hence, rain water harvesting and ground water recharge and water conservation should be made inseparable parts of all new water supply schemes.

(ii) Surface Water Status

3.8 The surface water resources in the state besides being scarce are mainly confined to south and south eastern part of the state. There is no perennial river in the state except Chambal which traverses some South Eastern part . The state has 14 major river basins which could be further sub-divided in 59 sub basins. The 14 major river basins are Chambal, Banas, Parvati, Ban-Ganga, Gambhiri, Roorprail, Sabhi, Mahi, Sabarmati, West-Banas , Luni, Sukli, Sekhawati and other nallas of Jalore district. The total surface water potential within the state is only 15.86 MAF. The state, therefore, has to depend on water from inter-state river basins where total 14.50 MAF water has been allocated to the state from various inter-state river basins agreements. In addition to this, an allocation from inter-state sources viz. Ganga water 37.01 MAF, Mahi(ex kadana) 1.56 MAF is currently under negotiation.

3.9 Management of water resources shall be through sharing of water for different requirements. Drinking water supply for both human and cattle shall be given top most priority. Water allocation shall be done at the level of District Collector, keeping in view the urgent requirements for various needs, but giving over riding priority to drinking water demand.

3.10 Irrigation department shall ensure construction of water harvesting and conservation structures where ever required and feasible.

(B) Source Development And Sustainability

- 3.11** Most of the water supply schemes are based on ground water source. Because of over exploitation of ground water for agricultural and other uses this source has either dried up or deteriorated in quality, making it unsuitable for use as a source of drinking water supply scheme. Hence, utmost care is required to be exercised in selection of a source of water supply scheme and its continued sustainability. Further, it is observed that the habitations which were covered earlier have become "not covered" because of inadequacy and poor quality of the ground water source after some time. Therefore, as a long term measure, a shift from ground water source to surface water source shall be required.
- In areas where exploitation of ground water has already reached upto 85%, schemes shall be framed from surface water of a canal or impounding reservoir available in the nearby area. If required, construction of a new impounding reservoir may be proposed.
 - Efforts shall also be mounted for roof top rain water harvesting and tankas for APL/BPL families alongwith provision for community tankas etc. Necessary subsidies may be provided to the APL/BPL families.
 - Excessive run off water in the rainy season from the villages covered in the schemes shall be impounded jointly/separately at a place nearest to the source of the scheme. Necessary recharge of the ground water may be carried out at these sites through recharge structures which shall be an integral part of new schemes.
 - Construction of sub-surface barriers in nallas/streams/seasonal rivers where ever feasible shall be undertaken. The site of the tube wells required for the scheme shall be located nearest to such structures.
 - Mega projects from surface waters allocated to the state in the various river basins of the country shall be formulated and bulk water provided to already existing schemes so as to reduce their dependence on the ground water. This will help in providing good quality of water and also conservation of the already depleted ground water.

(C) Water Conservation

- 3.12** Water being scarce resource in the state, every drop is required to be conserved. It has been observed that people tend to use less water when its cost is higher. Hence, keeping this in view Water Tariff Policy shall be so regulated that it is cheaper on lower consumption levels or even free for BPL families but higher for higher levels of water consumption. The following measures shall be taken for encouraging water conservation.
- Cattle Water Troughs(CWT) should be provided at each GLR in such a way that the waste water from the tap is collected in the CWT and used by the cattle for drinking. Similar practice should be adopted for public stand posts/HP's where ever feasible.
 - Overflow of water from the CWT should be utilized for watering of the trees/plants wherever possible.
 - Surplus overflow water should also be utilized for recharge of the ground water by constructing small dia dug well/kui near the CWT or GLR wherever possible. This will also help in improvement of the sanitary conditions of the villages.
 - Massive IEC campaign shall be launched in the areas of over exploited ground water persuading the general public for changing over their crop pattern to low water demand crops so that the agricultural irrigation demand of water is reduced. It would however, take time to bring about this crucial change.

- All measures suggested above are to be included in new projects to be taken up in future by PHED / SWSM/ DWSM after obtaining necessary sanctions from capital funds available with the concerned agencies.

(D) Rain Water Harvesting And Artificial Recharge Efforts

3.13 In order to reduce the water demand, rain water harvesting both in individual houses and on community basis shall be required to be taken up. Similarly, massive action for artificial recharge of the ground water aquifer on community basis in a village shall be required. All new schemes shall make provisions for taking up these works. The following guidelines may be followed to achieve these aims.

- Roof top/ground level water harvesting should be taken up in individual households by providing necessary subsidies so as to reduce the drinking water demand in critical period. The beneficiary family shall contribute towards labour component of the work so that it develops a sense of ownership of the assets so created.
- Some community ‘tankas’ may also be constructed wherever possible so that surplus rainwater of a village is collected and utilized during critical period.
- The local village water and sanitation committee shall look after the up-keep of such community assets and impose a ban on taking out or pumping out of water from such tankas and transporting it to their individual household storage tanks.
- Wherever possible individual households shall be encouraged to construct ground water recharge dug well/kui so as to use surplus rain water of their household for recharge purposes.
- Surplus rain water of a village shall be impounded in an already existing Nadi/Johar/Local Talab for storage. The VWSC shall also arrange to clear any encroachment of the catchments area of such structures and shall be responsible for its maintenance.
- A ban on drawing of water by individual persons through pumping or transportation to their storage tanks shall also be imposed on these Nadi/Johar/Talab by the VWSC.
- The PHED in consultation with Irrigation Department and the Ground Water Department shall take up construction of anicut, sub-surface barrier on rivers/

streams/nallas and provide necessary recharge structures. Such works shall be executed by the relevant department.

- Necessary schemes for large scale recharge of the ground water for increasing its availability in the sources of the existing scheme, shall also be prepared and executed by the PHED/Irrigation department/GWD so as to make the sources of the existing scheme self sustainable.

(E) Enactment of Law for Regulation And Control Of Ground Water

3.14

- There is a conscious view among the Government and stakeholders that before enacting the Ground Water Legislation, there is a need to create awareness among the people about the scarcity of water and its management . Awareness in public should be created by providing some incentives and disincentives through executive orders. There is a need for management of cropping pattern i.e. to encourage orders. There is a need for management of cropping pattern i.e. to encourage those crops which require less water for maturity. The use of sprinkler and drip irrigation which have high application efficiency should be encouraged. The NGOs will be involved for creating awareness among with people regarding scarcity of water and create a sense of ownership among the people regarding ground water which should be considered as a common pool source.
- Power subsidy in over exploited block shall be reduced steadily as given below so that people have a gradual acceptance of this subsidy reduction

Over exploited GW blocks Ranging from	Reduction of subsidy in power sector (In Percentage)				
	3/07	3/08	3/09	3/10	3/11
100 to 125%	5	10	15	20	25
125 to 150%	7.5	15	22.5	30	37.5
>150%	10	20	30	40	50

- The community participation should be encouraged through involvement of NGOs, thus creating consensus among the people and then enacting the Ground Water Legislation will help in effective implementation of the Act.
- Draft Rajasthan Ground Water Regulation Bill has been prepared and shall be placed before the state legislature after building-up of consensus.

(F) Quality Control And Monitoring

3.15 Water quality is required to be monitored regularly so as to ensure that the drinking water is fit for human consumption. Presently, PHED has got a vast net work of laboratories in all the districts of the state. Following action shall be taken for quality control.

- Source of water supply shall be selected after analysis of chemical parameters of ground water or surface water source.
- The sources shall be continually examined quarterly by the agency responsible for maintenance of the water supply schemes. The cost of such quality examination shall be shared between Central Govt., and State Govt., in ratio of **75:25**.
- Random checking of the water supply source for bacteriological examination shall be carried by the PHED at its own cost through its network of laboratories.
- In areas of over exploited ground water, the PHED shall prepare half yearly profile of water quality so as to find whether the sources have suitable quality water or have become quality problem area.
- The expenditure on staff for laboratories, provision of vehicles in each laboratory for a period of six months in a year, expenditure on equipment and chemicals shall be borne in equal ratio (50:50) by the GOI and GOR.

(G) Policy For Fluoride/ Salinity/Nitrate Affected Areas.

3.16 Water supply to the quality problem areas shall be provided through regional schemes by transporting water from suitable ground water source or surface water of canal/dam. From the coverage status of water supply, it is observed that nearly 50% of the habitations have become quality problem habitations due to over exploitation of the ground water. The following steps are suggested to tackle the water quality problem;

- Mega projects from surface water sources shall be executed providing for transportation of water through long trunk main pipelines to the problem area. Some such projects are already under execution and some new projects are awaiting approval at the various stages of the government. In these projects potable water shall be delivered to individual VWSCs at the boundary of the village from where it will be carried up to the habitation and store water in a GLR or install PSP. The VWSC shall be required to maintain this portion of the work within their village boundary.

- The PHED shall execute and then operate and maintain the production of water in such regional schemes and deliver the required quantity of water to the villages at their boundary through a water meter. The VWSC shall pay for the water consumed by the village on a tariff to be notified for regional schemes from time to time by the state government. The water charges shall then be collected by the VWSC from the individual households or beneficiary public.
- The quality problem areas suffering from salinity and nitrate shall be provided with drinking water from surface water sources or suitable ground water sources.
- For fluoride affected villages wherever local ground water is available in good quantity, domestic de-fluoridation units or community domestic de-fluoridation units attached with hand pumps shall be provided. The individual domestic de-fluoridation units shall be provided to APL families at a subsidy of 33% of its cost, and will be totally free for the BPL family. The remaining cost shall be met by the GOI and GOR in the ratio of 75:25.
- The community de-fluoridation plants shall be installed on ¼ of the number of hand pumps installed in a particular village and shall be maintained by the VWSC. Necessary arrangements for replacement/recharging of the media shall be made by the PHED at certain centrally located points the cost of which shall be borne in the ratio of 50:50 by the state government and the VWSC. The similar pattern shall also be applicable for the domestic de-fluoridation filters.
- In places of fluoride quality problem, where hand pumps are not feasible big regional schemes shall be executed on the pattern of saline and nitrate affected areas from surface water sources or suitable ground water sources.

(H) Water Supply –Future Road Map

3.17 Keeping in view the large cattle population of the state and requirement of cattle drinking water, inadequate and quality problematic sources of water, the rate of water supply recommended to be adopted for all types of Rural Water Supply Schemes shall be 70 liters per capita per day for the entire state.

- Water supply schemes in the rural areas are planned to be executed through District Water and Sanitation Mission and the Village Water Supply & Sanitation Committee constituted under the Swajaldhara Programme for this purpose. Mainly, there are two types of schemes viz. individual village schemes such as hand pump scheme, TSS, JY, P&T and Piped Schemes. Regional Schemes covering many villages falling in more than one block and more than one district. The following types of works are required to be carried out for attaining full coverage;

- Augmentation and improvement of the existing individual villagewise schemes shall be framed on people's demand through the VWSC and DWSM after takeover of the existing scheme by the VWSC from PHED. The scheme shall be first managed in its existing position by the VWSC initially when the O&M expenditure is borne by the PHED as is being done presently. After satisfactory managing for a prescribed period, the VWSC shall strive to collect water charges from the user families as per the tariff made applicable through Govt., Notification and after prescribed period of revenue collection by the PHED.
- The State Government shall carry out augmentation and improvement of regional schemes and the entire cost shall be borne by GOI and GOR, in the ratio of 75:25. In such schemes water shall be delivered to the individual villages on its revenue boundary. Operation & Maintenance of such schemes up to the boundary of the villages including production and distribution of water, replacements etc., shall be done by the State Govt., through PHED.
- Mega regional schemes conveying surface waters allocated to the state in the inter river basins or existing dams/canals shall be implemented by the State Govt., through PHED. The cost of such big schemes shall be shared between GOI and GOR, in the ratio of 75:25. The O&M of such schemes shall also rest with PHED and villagers shall be responsible for maintenance and distribution within their village boundary only.
- Remaining individual habitation scheme shall be completed by PHED upto 10th Plan wherever possible and the habitations required to be covered by regional schemes shall be completed by 11th Plan.
- All remaining works of water supply in the schools shall be completed by the end of 10th Plan wherever possible, but in case schools are in villages of regional schemes where there are no nearby water supply source available, the same shall be provided with roof top rain water harvesting 'tankas' with a full year's drinking water demand of the school. In such cases these schools shall be provided with tap water on completion of regional schemes for the village.

IV

RURAL SANITATION AND HYGIENE : FUTURE ROAD MAP

4.1 Status of coverage

- The State Government's efforts in rural sanitation can be traced back to 1982, which covered construction of community-latrines in a few selected community development blocks. However, on observation that these units were poorly maintained and managed, in 1984, the Government decided to extend financial assistance to construct individual and institutional units rather than community latrines. In 1987-88 a joint effort was taken up by Government of Rajasthan and UNICEF to initiate rural sanitation programme and social mobilization for sanitation awakening. The implementing agency then was Rural Development and Panchayat Raj Department. At the District and block levels Zilla Parishads and Panchayat Samities were involved.

- In the beginning the programme was initiated in 200 villages in 20 community development blocks (Panchayat Samities) in 4 districts viz. Alwar, Bhilwara, Jaipur and Jhunjhunu. Three years of successful programme implementation led to extending this programme into 3 more districts viz. Ajmer, Sawaimadhopur Tonk and Jhunjhunu district was, however, dropped from the programme. This programme was structured as a people's programme. Local volunteers were appointed to act as village sanitation motivators. It was observed then, that the success of the programme depended upon education, communication and motivation of rural masses, which was addressed by sanitation motivators. UNICEF collaborated with GOR in the area of capacity strengthening for improved planning and implementation of sanitation activities under the project.

- With the support of Government Of India and UNICEF the rural sanitation programme in Rajasthan was further expanded to all the 31 districts during the year 1995-96. Construction of 400,000 APL latrines, 20745 BPL latrines, 17 facility parks, 480 Institutional toilets and urinals, 358 hand pump or water source attached bathing-washing platform was envisaged. However, in spite of good efforts the above- mentioned targets were not achieved.

- The sanitation coverage as per 1991 census in the state was only 6.7% which has increased to about 14% as per 2001 census (a mere increase of 7.3% in 10 years). Thus, it is clear very little work has been done in the field of rural sanitation and hygiene. Nearly, 60 lac households are required to be provided with IHHL and a mass awareness towards hygiene is required to be generated in the rural areas.

4.2 Total Sanitation Campaign

- The implementation of TSC commenced in 1999-2000 in 4 districts viz. Jaipur, Sikar, Alwar and Barmer. Jhalawar in 2000-01 and Kota, Bundi, Ajmer and Rajsamand in 2001-02 and Sawaimadhapur in 2002-03 followed this. Thus TSC is now being implemented in 10 districts of the state. This programme was initially being implemented in the field by the Panchayati Raj Department through Zila Parishad, Panchayat Samities etc., and it has now been transferred to PHED with effect from 01.04.2004 in order to integrate water supply and sanitation activities in the villages under one umbrella so as to ensure better monitoring and technical support. The main activity under the TSC programme is of construction of Individual House Hold Latrines(IHHL) in the rural areas in the first instance. However, environmental sanitation for improving over all cleanliness of the villages can also be taken up under this programme at a subsequent stage.
- The progress of the TSC project has been slow in respect of construction of individual household latrines viz. Jaipur, 14459 (28%), Sikar 763 (11%), Jhalawar 3756 (7%), Kota 779 (2%), Bundi 1572 (4%), Alwar 50281 (54%) Ajmer 4675 (7%) Barmer 15899 (20%), Rajsamand 10581 (18%), Sawaimadhapur 552 (1%) i.e. total 110184 (18%) progress has been achieved upto 31.03.04 against a total target of 613478 IHHL for the entire state. After transfer of TSC project to the PHED a target of 114937 IHHL for the year 2004-05 has been fixed against which 68406 IHHL have already been constructed viz. 59.5% progress has been achieved upto 31.01.05. This slow progress is due to lack of involvement of NGOs initially in community mobilization, IEC activities, gap in understanding the guidelines of the programme etc.
- This TSC programme has now been made applicable to cover all the districts of Rajasthan. The remaining 22 districts have also submitted their project proposals for sanction which is expected in the near future. The operational guidelines for implementation of TSC have been issued to provide key instructions to overcome operational problems in the field in implementation of TSC. Sanction for creation of Communication and Capacity Development Unit (CCDU) have also been received from Government Of India to actively take up the work of IEC activities in all the districts of the state and monitor the progress of implementation of the TSC.

Strategy and Implementation Mechanism:

- Greater involvement, advocacy and efforts are required at the level of SWSM and SWSC to push the TSC agenda so as to obtain 100% coverage in a time bound manner. If required, strengthening the PRIs functionaries to guide the TSC programme on day to day basis shall also be done by GOI/ SWSM / DWSM.
- Mass awareness campaign shall be undertaken to involve the community towards the use and benefits of IHHL for sound health and higher productivity of rural population through the local sanitary animators and NGOs by organizing seminars workshops at village/ grampanchayat/ block/ district level on the pattern as prescribed in the guidelines. To achieve full involvement of animators and NGOs towards achievement of TSC targets in respect of IHHL, their stipend/ remuneration/ allowance should be linked with some physical targets to be achieved either on monthly basis or on each workshop basis.
- This awareness campaign shall be jointly launched with association of all concerned functionaries of PHED, PRIs, Health, Women & Child. Education Departments. etc., in order to make integrated efforts to achieve goals of total sanitation clubbed with health and hygiene.
- Necessary subsidy shall be provided to the BPL families for adopting IHHL as prescribed in the TSC guidelines which should be upgraded every year to provide for inflationary trend of prices at the beginning of the financial year.
- A large number of APL households (roughly about 80% of 60 lac households) are without IHHL. To achieve full coverage of sanitation this huge number of households are to be attracted towards this programme. The importance of IHHL in the context of dignity of women, girl child, and convenience to elders should be emphasized during IEC campaign.
- The present staff with PRIs, PHED is not accustomed to act as a facilitator instead of a provider. To attract active participation of all the uncovered households in adopting IHHL, involvement of all government staff located in villages is required to motivate the villagers towards IHHL. To encourage such involvement of all government staff in this programme an incentive of Rs. 50/- per IHHL be provided to each individual government staff for motivating individual households.

- Presently, no staff either of PHED or PRIs is directly responsible for TSC Programme. The magnitude of work is 80 lac households to be provided with IHHL at an approximate cost of Rs. 375.00 crores. Therefore, the government should provide one JEN per block and one AEN per district alongwith their field functionaries in 237 blocks of 32 districts of the state for effective and time bound implementation of TSC.
- The co-operative institutions operating in the area shall be encouraged to work as a local sanitary mart and provide material for installation of IHHL in the villages. Such co-operatives may be provided financial assistance to the extent of Rs. 30000/- to 75000/- as seed money by the concerned DWSM as an encouragement to set up such sanitary mart. In addition to this, such co-operative institutions may also be provided incentive of Rs. 50/- per IHHL installed in APL household.
- For APL families all scheduled banks/ co-operative banks shall be bound to give loans on soft interest rates (about 2% p.a.) for taking up construction of IHHL upto an amount of Rs. Thousand per IHHL, to be recovered in equal installments @ Rs. 50/- p.m. No separate guarantee other than that of a house where this IHHL is being constructed shall be required by the bank for release of such loan.
- IHHL shall also be provided in all Anganbaris presently being run by the state government through the Women & Child Welfare Department out of the funds available with the department. However, in case of non availability of necessary funds this work may also be taken up through TSC.
- All government & public buildings to be constructed in future shall invariably provide appropriate sanitation facility and drinking water supply arrangements. Necessary provision of funds may be made at the time of sanction of such buildings.
- Technical supervision for installation of IHHL shall be arranged by the DWSM by involving all technical personnel of all engineering departments available in the area by assigning specific duties of checking of material at the sanitary mart/factories working in the area, actual work quality at the place of installation so that the work done is of quality and as per standard specifications. For such supervision the technical personnel shall be provided with some allowances to be decided by the DWSM for a specific time period.
- Necessary incentive to each VWSC shall be provided by GOI/ GOR/SWSM/DWSM for achieving 100% coverage of IHHL in a specified time period so as to generate a spirit of competitiveness amongst the villagers.

Such villages may also be awarded Nirmal Gram Puraskar on the lines of GOI scheme.

- Such villages which take active interest in implementing TSC programme shall be given preference for sanction of rain water harvesting, ground water recharging, solid waste disposal schemes, drainage works including impounding of waste water and recharge of ground water projects from the development funds available under various programmes of GOI/ GOR/ District Level Development Funds. This sanction shall be over and above the normal sanctions available to a particular village.
- NGOs shall continue to be engaged for IEC activities even after construction of IHHL to ensure its continuous use and cleanliness of the facility.
- For strengthening the implementation, monitoring and the administration mechanism a panel of experts may be formed at the district level by the DWSM to guide and monitor the programme.
- Independent evaluation of the performance of the TSC programme on key health & sanitation indicators shall be carried through the CM&HO of the district for perusal of the chairman of the DWSM so as to improve the working of the programme in the field.

4.3 School Sanitation & Hygiene

- Health hazards associated with sanitation are one of the major causes of child related diseases in India . As per WHO, diarrhoea, which spreads easily in poor sanitary conditions is one of the three top fatal diseases claiming about 2.5 lacs children annually. Rajasthan is also grappling with the problem of insanitary conditions in schools, ignorance of correct hygiene related practices such as hand washing, appropriate storage, handling of water and eatables. Poor health of child is also a major impediment in enrolment in schools specially girl child.
- SSHE programme in India aims to promote sanitation and hygiene in and through schools to bring about behavioural change to enable children to live in a safe and healthy environment. SSHE is one of the important components of TSC which require provision of toilet facilities with water supply and hand washing in all government schools. This will ensure that children will learn good hygiene behaviour and through them the message of sanitation and hygiene shall reach the community and the family which will trigger the demand for other components of TSC.
- To achieve this objective a lot of inter sectoral co-ordination in various state government departments such as PHED, Rural Development, PRIs , Education

depts, Health depts, Women & Child depts is required. As part of TSC, comprehensive projects to provide hardware facilities in all schools and to take up the necessary software activities by pooling all resources of the line departments are required to be prepared. In this context, the Education Department of Rajasthan has prepared an action plan for implementation of SSHE.

- Government of India and UNICEF has played a key role in the evaluation of SSHE which became a part of TSC programme in 1999. The reforms in the education sector such as District Primary Education Programme (DPEP) and the Sarv Shiksha Abhiyan have also contributed to the evolution of SSHE programme. TSC programme recognizes the importance of children in communicating the need for sanitation and hygiene practices to the community through the teacher –student –parents route and focuses on provision of water, sanitation and hand washing facilities to all schools.

4.3.1 Status of SSHE

- The state has about 65941 rural schools covering primary ,upper primary and secondary and higher education with a total number of students as 95,85,503. The status of sanitation and hand washing facilities in rural schools of the state is as under-

Level	No. of rural schools	No. of students	Schools with toilets	Schools without toilets	Schools with Hand Washing facilities	Schools without Hand Washing facilities
Primary	49706	5381210	21685	28021	11080	38626
Upper Primary	11563	2554487	8475	3088	4089	7474
High/Secondary	4672	1649806	4149	523	2641	2031
Total	65941	9585503	34309	31632	17810	48131

- From the above table, it is clear that about 50% of these schools are without toilet facilities and 73% are without hand washing facilities. The state has prepared an Action Plan for the implementation of School Sanitation and Hygiene Education (SSHE) which provides for toilet facilities with hand washing facilities alongwith provisions for plantation, rain water harvesting structures, hand pumps etc. Necessary funding for provision of IHHL in the schools along-with hand washing facilities shall be made from the TSC Plan.

- All schools which require IHHL and hand washing facilities shall also be covered mostly upto the end of the 10th Plan but not later on 2010. Such works in the school shall be carried out by the Govt., through a local agency or the school staff. If required, funds from the TSC programme can also be utilized for school sanitation works.
- Hygiene promotion facilities like hand washing are lacking in most of the schools due to poor maintenance of toilets /urinals and arrangement of proper disposal of waste water as well as garbage in the schools. Most of the school development and management committees and parent teachers association are functioning but their involvement in sanitation and hygiene education is lacking. They should be properly oriented for school sanitation and hygiene education activities.
- Proper coordination of ICDS, PHED, PRI, Health deptt., is necessary for effective implementation of the SSHE. The DWSM /DWSC shall supplement the efforts under SSHE for attaining full coverage wherever required both in terms of funds/ targets.

4.4 Hygiene

- Community needs to be made aware about the linkage between proper use of safe drinking water and sanitation facilities i.e. hygiene behaviour and health. According to WHO hygiene behaviour implies safe disposal of human excreta, hand washing and maintaining water free of faecal contamination through proper handling which is very essential to control diarrhoeal diseases. It is equally important that communities use safe water and sanitary facilities to improve their health status and break the chain of disease transmission. Encouraging health and hygiene promoting attitudes and behaviors within the households are very important for good health. Likewise access to latrines does not ensure that people will use and maintain them. Hence, hygiene promotion is one of the important components of Total Sanitation Campaign (TSC) Project.
- To promote hygiene, involvement of NGOs and animators on a regular basis for implementation of TSC project and their use & maintenance regularly by the beneficiary family is very essential. For this training of NGOs, animators, PRIs and other stakeholders such as Panch/ Sarpanch/ Teachers/ Anganbari Workers towards sanitation and hygiene practices shall be regularly organized at various levels.
- Awareness towards hygiene is to be generated through IEC activities and is to be monitored regularly at the level of ANM/AWW and the VWSC. School children may also be educated towards hygiene through their teachers with necessary training. Village contract drives for awareness generation for sanitation and hygiene shall also be taken up.

- Wall paintings, slogan writing, display and distribution of IEC materials shall be undertaken through the IEC activities to be undertaken by the NGOs/animators etc.,
- The ignorance level of hygiene practices is very high in the rural areas and there is a high need to increase the literacy level of the women in the state which may result in better understanding of the hygiene and sanitation practices. Action to organize educational workshops for women in the villages shall be taken up by the DWSM.
- Simultaneous action for providing clean environment and sanitary conditions in the villages shall also be initiated by the VWSC's by preparing proposals for providing drains and solid waste disposal and stopping disposal of waste water on village roads or path ways. Such projects shall be funded by the GOI and GOR, in the ratio of 75:25. This type of project may also be offered to the VWSC's as an incentive towards attracting them to the Swajaldhara concept of water supply.

V

PROJECT PLANNING MECHANISM

- For preparation of new projects, an overall view in reference to surface water availability, ground water exploitation level and its recharge projects, water harvesting and conservation projects, waste water collection and drainage projects and their use for ground water recharge, unaccounted flow of water (UFW) reduction projects etc., is to be taken for schemes beyond the boundaries of one village/ Gram Panchayat/ Block/ District, therefore, specific project planning cell is required at various levels.
- A state level Project Planning Cell shall be created under the control of Chief Engineer, PHED, who will be assisted in formulation of Mega Projects involving regional schemes covering villages in more than one block or districts and projects required for transfer of surface waters from different river basins/reservoirs/canals to quality problem areas or inadequate water availability in existing or new regional schemes. This State Level Project Cell shall also consist of Specialist in Ground Water, Hydrogeologist, Senior Chemist as water quality analyst, experts in the field of social sciences and mass communication etc.
- A District Level Project Planning Cell shall be created under the control of Superintending Engineer PHED in-charge of the district for formulation of projects covering individual villages and regional schemes falling in different blocks but within the same district. This District Project Cell shall also consist of officials of Ground Water Department, Hydrogeologist, Chemist as water analyst, Soil Conservation Department, Irrigation, Power Distribution Companies, Health, Forest, Education, Rural Development Department and experts in the field of mass communication and social sciences. This Cell shall function and inter-act with District Water & Sanitation Mission (DWSM) on regular basis. If required some experts (retired experienced govt. /non govt. officials) may also be taken on contract basis in this cell. All projects shall be sanctioned after scrutiny and recommendations of the District Project Formulation Cell to the DWSM/DWSC.
- A Village Level Scheme Preparation Unit shall be constituted with concerned AEN/JEN of the area under the control of Executive Engineer in-charge of the area to prepare schemes with various alternatives as per the express desire of the village community and to explain to them the various implications of capital cost for different types of schemes and their regular maintenance liability including recurring expenses on power, wages, repairs and renewals etc. This will be done to facilitate the community in taking a judicious decision at the time of selection of a particular type of scheme.
- For preparation and sanction of rural sanitation and hygiene projects the same shall be issued at the level of DWSM after its preparation at the level of AEN/JEN after adoption in the VWSC meeting.
- These special cells shall prepare projects to be taken up from capital funds available with GOI/ GOR over and above the funds available under Swajaldhara/ TSC programme or for bilateral assistance of external agencies.
- All measures suggested at various chapters in this policy document are to be implemented in the field by framing new projects and obtaining fresh sanctions either through PHED or SWSM/DWSM from capital funds of Rural Water Supply Programme.

VI

MAINTENANCE AND MODERNISATION

- Maintenance, implying rectification of small defects/break-downs or preventive measures required for up-keep of the machinery and equipments, shall be carried out by the VWSC in case of HPs, TSS, JY, P&T, Piped schemes after their final take-over from PHED and shall form part of recurring monthly maintenance expenditure to be borne by the beneficiary community.
- Modernization includes, replacement of old worn out equipment and machinery, up-gradation of technology, augmentation/increase in capacity of existing scheme in terms of pumping machinery, electrical equipment, pipe lines etc. and shall be carried out under augmentation proposals from Capital Funds on the guidelines laid down for execution of new schemes for individual villages. The O&M grant being received from GOI shall be made available for such schemes.

- All Mega/Big Regional schemes covering villages falling in one district/ more than one district/more than one block shall be continued to be maintained by the PHED. The production of water and its distribution upto the village boundary shall be done by the PHED as is being done presently.
 - The replacement and modernization of electrical and mechanical equipments of such Mega/Big regional schemes shall be carried out by the PHED and its cost shall be met out of the O&M grant of GOI. Such projects be shared in the ratio of as applicable to new projects between GOI & GOR.
 - Projects shall be prepared to reduce unaccounted flow water (UFW) on all schemes by installing bulk water meters and removing all visible hidden leakages to bring it down within standard limits. Cost of such projects shall be provided out of capital fund and shared by GOI & GOR in the same ratio as applicable to New Projects.
 - To provide minimum necessary quantity of drinking water of standard quality to its citizens is an obligatory function of state government. Therefore, O/M cost shall be subsidized broadly on the patterns suggested in chapter VIII E.
 - A water regulatory authority shall be constituted to administer water allocations for drinking water needs and fix water tariffs to be charged from consumers and subsidy to be provided by GOI/GOR from general budget.
 - Water being scarce, needs to be conserved. People tend to use less water when it is priced. Therefore, water tariff policy shall be so regulated that it is cheaper on lower consumption level or even free for BPL families but costlier on higher levels of water consumption.

 - Projects for drainage and collection of waste water and its storage and subsequent use for ground water recharge on all existing schemes shall be framed and taken up from capital funds and cost shared between GOI and GOR on the pattern of new projects. Similar action for water harvesting and water conservation projects shall also be taken. This environment of a village and this can be funded from TSC funds.

 - The community assets created under this programme shall be maintained by VWSCs. The surface drains or the solid wastes disposed shall be maintained by the VWSCs and the cost so incurred shall have to be recovered from the users.
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VII

BROAD STRATEGY FOR FUTURE DEVELOPMENT

- 7.1 With a view to evolve and implement a participatory demand driven water management system, a broad strategy framework has to be considered in the light of experience gained in the performance of water supply schemes implemented under Sector Reform Programme in the four districts, namely, Alwar, Sikar, Jaipur and Rajsamand as well as the other planned schemes. These broad strategy issues can be spelled out as under:
- Community Awareness and Participation
 - Capacity Building of Institutions and Role Players.
 - HRD and Joint Orientation of PHED officials/VWSC Chairman, Workshops for MLAs/MPs and detailed training programmes for other stakeholders.
 - Institutional Reforms and redefining the Role of PHED officers.
 - Information, Education and Communication (IEC).
- 7.2 While the transfer of legal ownership of assets and responsibility for operation and management of water and sanitation schemes to the community/PRI Institutions at the appropriate level appears to be sound and logical, the road map for implementation has to be drawn, keeping in view the past policies of the government over the decades, present practices and procedures and the nature of the functioning of PRIs in the current scenario.
- 7.3 The basic premise of the strategy framework assumes that people would be willing to pay capital cost partially and also operate and maintain water supply schemes.(a) if they own the assets (b)if they themselves planned and installed the systems and were actively involved throughout in the process.(c)if they have been trained to do simple repairs.(d)if they know the government will not maintain the asset.(e)if they have sufficient funds for maintenance.(f) if they have to pay for operation and maintenance of the system.
- 7.4 The takeover of all responsibilities implies that community/appropriate PRI Institutions has developed and attained a necessary capacity to do so. Therefore, the capacity building exercise for the local community and the appropriate PRI Institutions has to be carefully planned as an integral part of overall strategy framework for the transfer of full responsibility for ownership and management of water supply and sanitation assets.

7.5 The broad strategy framework envisaged is as follows.

(A) Community Awareness Campaign and Consultation Workshops

- A sustained awareness campaign at Panchayat level in different phases each covering a period of six months.
- Organize consultation workshops at State, District and Panchayat Samiti headquarters on (a) Swajaldhara scheme and its components.(b) the demand driven approach to be adopted for future approach.(c) need for participatory management in operation and maintenance of community assets as mandated in the 73rd Constitutional Amendment.
- The role players and stakeholders viz. MLAs, representatives of PRIs, local community, NGOs, Self Help Groups and Members of Active Co-operative Societies will participate in the consultations besides officers and officials of Rural Development, PHED and Health Department. NRIs and NRRs may also be invited, if available.

(B) Consultations for evolving political consensus on:

- According priority for sensitizing people, through party cadres, for envisaged community participation under Swajaldhara and other water/sanitation schemes.
- Joint tours of political leaders with officers for awareness campaign.
- Attending joint training/orientation programme by local political leaders.
- Participation in implementation mechanism at various levels.
- Political consensus on highlights of Water Regulation, Law, Rules and Byelaws Water Zones and adoption of agro- climatic zone wise cropping pattern. This would include orientation and awareness generation at the level of all political party cadres.
- A massive water campaign, is also required to be launched to educate people regarding scarcity and economic use of water before law for regulating ground water is enacted. Water Campaigns would also include Total Sanitation Campaign also and wherever necessary, separate campaigns would also be launched for TSC. Such campaigns would be got inaugurated/associated by Ministers/MLAs/ MPs for ensuring their closer and wholehearted involvement towards building of political consensus.

- State shall make special efforts to secure “Special status” to Rajasthan in funding from GOI keeping in view the difficult terrain, desert conditions and low potentiality of suitable water resources .

(C) Carefully planned and evolved IEC material.

- A background brochure on over view of capacity building and management requirements.
- Training and orientation modules including training content material.
- Leaflet/brochures to be used for training, publicity and awareness campaign

(D) Capacity Building of PRIs and other Institutions.

- (i) Orientation programme for master trainers and animators at District Level.
- (ii) Awareness and training programmes for representatives of PRIs .
- (iii) Orientation and training of Self Help Group Leaders and NGO trainers
- (iv) Different models shall be adopted in different areas, keeping in view the area specific socio-economic conditions and cultural practices.
 - Anna Hazare(Ahmed Nagar) Model for village development.
 - Water shed scheme Model for forming water users’ association and management committee (successful awarded water shed projects in Ajmer Udaipur to be referred to) .
 - Aapni Yojna and Rural Water Supply Project of Churu District.
 - Sukhomjari(Haryana) Model envisaging declaration of the total water resources as common property giving each family, rich or poor, equal right to water without discrimination.

(E) NGOs and other Role Players at the field level

- **NGOs** with a strong presence in clusters of villages and known for service and work to play a lead role in guidance of VWSC as well as in planning, project formulation, implementation and monitoring in specific assigned villages. In addition to this other stakeholders may also be involved in this process as indicated below:
 - Motivated and dedicated **DLOs**, specially PHED officers in some districts to adopt villages to guide and monitor VWSC on similar lines as envisaged for NGOs and District Lead Bank.
 - Members of **Self Help Group** especially its leaders shall be co-opted in VWSC and involved in door to door awareness campaign/Chaupal meetings and monitoring activities.

- For a cluster of villages, a **Stakeholders' Forum** shall be formed for joint fortnightly meetings to review and monitor the progress of awareness campaign and operational strategy for transfer of management of assets to VWSC.
- The Forum will also work towards acceptance of management by VWSCs' by (a) sensitizing members (b) collection of O&M charges by working out total costs in a transparent manner.(c) ensuring entry of assets in revenue record in the name of VWSS and also (d) working out modalities of upkeep of assets.
- Heads of VWSC (Sarpanch) Junior Engineer PHED, representatives of Self Help Groups, NGOs (wherever involved), Mahila Supervisor (ICDS), ANMs, Doctor In-charge of PHC will be members of the Forum.

(F) Documentation

- Documentation of Traditional Water Conservation Structures, beliefs and practices in order to help revive community participation.

(G) Steps for Implementation of IEC

- Management System on the pattern of successful T&V Approach of Agriculture Extension under Green Revolution shall be adopted. For this purpose Leader of Self Help Group to be appointed as Village Water Leader. Alternatively, an active member of VWSC or Up Sarpanch may be designated as Water Leader who will be member of Stakeholders' Forum as aforesaid and will monitor and give feedback on the implementation of Swajaldhara and other schemes.
- During awareness campaign or shortly thereafter (a) A notification by Revenue Department for entry in revenue recoveries of water and sanitation assets in the name of the appropriate level of PRI Institution/local community to be issued.(b) Action will be taken to make entries in revenue records by Patwari and ILRs under the guidance and supervision of Tehsilders in a campaign mode.

(H) Institutional Reforms

- Keeping in view the envisaged changes in the role of PHED Department and its officers at various levels in relation to implementation of Swajaldhara and other water/sanitation schemes and their inter face with PRI Institutions at various levels especially at Panchayat and Panchyat Samity levels, the following institutional reforms and restructuring of management system would be necessary:

- To redefine the role of PHED officers in relation to VWSC and other structures to be positioned in line with new State Policy. Additional functions e.g. participation in awareness campaigns consultation workshops and implementation mechanism at various levels to be included in job charts.
 - Modalities for transfer of Administrative Control to PRIs and VWSC
 - Modalities for devolution and transfer of O&M funds to PRIs and other management units with proper budgetary support.
 - **O&M work Manual** shall be modified to provide for running and maintenance by VWSC. Separate Manual, if necessary to be prepared for VWSC and other management units.
 - **Construction/ Contract Manual prepared** under PWF&AR shall be modified to provide for construction and implementation of the project by local PRI and other units.
 - **Management Information System(MIS)** shall be reformulated to provide for monitoring by various implementation agencies including stakeholders forum.
 - **Sustainability of Source.** Design of the Scheme shall take care of the sustainability of the source on a long term basis.
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VIII

INSTITUTIONAL ARRANGEMENTS

Objectives

- 8.1 The institutional design for any development programme, particularly for providing crucial services like drinking water and bringing about an attitudinal change for total sanitation, should take into account not only the development thrusts built upon the capabilities at the local level, but also the need to ensure local participation in decision making process. The balance between the technological requirements and possibilities for meaningful participation by the people can be established through delineation of functions like higher technical control, guidance and inputs from the State level line departments and devolving all powers and functions, functionaries and funds to the appropriate levels of the local Government Institutions at the district level and down below for planning, designing, implementation, operation, maintenance and management of development programmes at the grass root level. Under the present set up rural drinking water, sanitation etc. are being administered by the Public Health Engineering Department (PHED) in Rajasthan both for drinking water including 'Swa Jaj Dhara' (SJD) and Total Sanitation Campaign (TSC). Now that, under 73rd Constitution Amendment, a uniform pattern of three tier local government structure in the rural areas has emerged by constituting Gram Panchayats (GPs) at the grass root level, Panchayat Samitis (PSs) at the block/ middle level and Zila Parishad (ZP) at the district level, the broad objective is to transfer all these functions along with concerned functionaries and all related funds to the PRIs, so that people participation can be fully ensured.
- 8.2 Presently, the entire cost of infrastructure and day today operation and maintenance of all schemes is being fully met by the Government except in the case of SJD, being implemented in the State, where 10% of the capital cost and full O&M is expected to be met by the users. This scheme, despite launching in 2002-03 could not pick up because, out of 1934 schemes sanctioned, only 191 could be handed over to the community for implementation, through Village Water and Sanitation Committees (VWSCs). Here again O & M cost has been observed to be a major issue, especially with respect to the payment of even electricity bills. In another special scheme known as 'Aapani Yojana' in Churu district, the O &M cost, despite massive IEC efforts and working intensively for last 4-5 years, is being partially met by the users, only to the extent of 28% till now. The long term objective of the State Government is to ensure maximum sharing of O & M cost by the community in a phased manner and ultimately to reach cent- percent recovery in all the schemes handed over to PRIs / VWSCs on SJD pattern, except subsidizing only the electricity charges.

- 8.3 Centrally sponsored Rural Sanitation Programme (CRSP), now known as **Total Sanitation Campaign (TSC)** has now been recently extended to the entire state. This programme, as a matter of fact, envisages improvement in general quality of life of the rural masses, acceleration of sanitary coverage, generation of felt demand for sanitary latrines, coverage of schools / 'Aagan Baris' to promote hygiene education and to eliminate open defecation. **The strategy is to make this programme 'community led', 'peoples centered' and 'demand driven'**. Presently, this programme is being implemented by PHED through NGOs and progress is monitored through State Water and Sanitation Mission (SWSM) and District Water and Sanitation Missions (DWSMs) and the State PMU/CCDU. **The broad objectives are to :**
- (a) Cover all households with IHHL.
 - (b) Involve PRIs as implementing agency at the district level and down below; and
 - (c) Involvement of NGOs to be continued for IEC programme and Capacity Building for TSC as well SJD in an integrated manner.

Strategy and Implementation Mile -Stones

(A) State PMU / CCDU

- 8.4 A Project Management Unit (PMU) with PHED and Community Capacity Development Unit (CCDU) with Indira Gandhi Panchayati Raj Sansthan (IGPRS) **has already been** established at the State level to take care of technical support, capacity building and time bound implementation and monitoring of the entire components of SJD and TSC programmes, including initiating necessary steps for early transferring of '3Fs' to PRIs in the State. The State PMU / CCDU shall come into existence by the end of 2005-06.

(B) Transfer of Functions to PRIs

- 8.5 The long term strategy shall be to transfer all functions related to Rural Drinking Water, Swa Jal Dhara and Total Sanitation and Health and Hygiene education programmes for all inter block, inter panchayat level and stand alone single village schemes to PRIs at appropriate level in a phased manner including all '3Fs' i.e. functions, functionaries and funds.
- 8.6 'Drinking Water' and 'Health and Sanitation' have already been listed at items No. 11 and 23 of Schedule Eleven, laid down under Article 243 (G) of the Constitution, as per 73rd Constitutional Amendment Act 1992. But this is not 'Mandatory'. It has been left for the State Legislature to endow such powers and functions to PRIs. Accordingly, the State Legislature, in case of Rajasthan, have also made provisions in Schedule-I prescribed for Panchayats under Section 50 of the Rajasthan Panchayati Raj Act, 1994, while describing powers and functions for Gram Panchayats, for (i) Operation and maintenance of drinking water wells, water ponds and tanks; (ii) Control and eradication of water pollution; and (iii) O & M of hand

pumps, pumps and drinking water schemes at item No. 10 under the broad head 'Drinking Water'. Similarly, at item no. 20 related to 'Rural Sanitation' the GPs have been empowered to ensure (i) General Sanitation; cleaning of public roads, drains, water tanks, wells and other public places; (ii) Maintenance of cremation grounds; (iii) Construction and maintenance of rural latrines, facility parks and bathing places and soak pits etc.; (iv) Disposal of dead animals; and (v) Control and management of washing and bathing places. As regards, PSs it has been provided under Section 51 of the Act at item no. 10 of Schedule – 2 of the Rajasthan Panchayati Raj Act 1994, for (i) Monitoring, repair and maintenance of hand pumps and drinking water schemes of Panchayats; (ii) Maintenance of Rural Water Supply Schemes; (iii) Control and eradication of water pollution; and (iv) Implementation of Rural Sanitation Schemes. This again has been made subject to the conditions prescribed and orders issued by the State Government from time to time.

8.7 In view of the legal position stated above, the State Legislature have already authorized the PRIs to perform these functions but orders prescribing conditions for transfer of these functions to Panchayats along with funds and functionaries are still required to be issued, for want of which panchayats could not assume these functions at their own despite lapse of even more than one decade, since RPR Act was passed in 1994.

8.8 The State Government would therefore issue necessary orders indicating conditions, if any, for transfer of aforesaid functions relating to rural drinking water, rural sanitation, health and hygiene activities etc. to PRIs along with all assets created under these sectors and all related funds under plan and non-plan and all concerned functionaries in a phased manner.

8.9 It would be first necessary that a massive programme of capacity building of these Institutions along with awareness generation amongst the rural population shall have to be undertaken at a very large scale in all the villages throughout the State, through reputed NGOs and other institutions, in all the districts both for Rural Drinking Water including SJD and Total Sanitation Campaign including health and hygiene of the rural masses. This process and gigantic efforts would take not less than 4-5 years to cover the entire State. **The first phase of this activity would be completed by the end of the current plan (2007).** This process, is presumed to be started at different time spells in different areas. **However, each round of IEC in a particular area shall be completed within 6 months.** Simultaneously, **wherever this process would be completed the transfer of powers and function to the PRIs would be made** as per mile stones indicated below:

1. Hand Pumps

- There are around 23,000 hand pumps in the rural areas in the State. To start with operation and maintenance of rural hand pumps shall be transferred to concerned GPs, soon after completion of first phase of IEC on preference basis in concerned villages **by 2007.**

- The ownership of these assets would be first transferred to GPs and entry to this effect shall be made in the revenue record by the **end of 2006**.
- The paraphernalia of all Hand Pump 'Mistries' and concerned supervisory/administrative/technical officers meant for higher technical input and supervision shall also be transferred to the concerned Panchayat Samitis by the same order transferring these functions to GPs **by 2007**.
- Those Hand Pump Mistries presently headquartered at Block Level shall be redeployed and placed in a central location of a cluster of Panchayats, allotted to them for maintenance and repair of Hand Pumps in their respective areas.
- The work relating to the coordination of TSC activities with drinking water shall also be transferred simultaneously to GPs at the Panchayat level and PSs / ZPs for supervision and monitoring from the block / district level in respect of the Hand Pump village to start with **by the end of 2007** along with respective staff.
- The IEC activities would continue to be retained with the respective NGOs to continue the second phase of IEC Programme in other areas.

2. **Stand alone / Single Village Schemes**

- Ownership of all Stand alone / Single village drinking water schemes, other than Hand Pumps, shall also be transferred to the concerned GPs, soon after completion of the second phase of IEC activities during the next plan period **by the end of 2009 and entries in Revenue record shall be made accordingly**.
- The entire work relating to maintenance and supervisory staff at village, block and ZP level shall also be transferred to the concerned GPs/ Panchayat Samitis /ZPs **by the end of 2011**.
- Rural Sanitation programme of these respective village shall also stand transferred to the concerned PRIs at appropriate level by same time frame up to **end of 2011**.

3. **Multi Panchayats / Multi Block Schemes**

- The process of transferring these schemes to Panchayat Samitis / Zila Prarishad would start in the beginning of the 12th Five year Plan.
- The ownership of Multi Panchayat Scheme shall be transferred to the concerned Panchayat Samitis before close of the **year 2012-13** after making entry in the revenue record.
- Multi Panchayat Schemes shall be transferred to the concerned PSs along with all O &M, implementation supervisory staff **by the end of 2015**.
- The ownership of the entire infrastructure of Multi Block Schemes shall stand transferred to ZPs **by the end of 2015** and an entry to this effect shall be got made in the revenue record.

- The work relating to the implementation operation and maintenance of all Multi Block Schemes and the entire Paraphernalia of PHED Staff relating to rural drinking water and presently functioning at district level shall be transferred to ZP and those functioning at the sub-division/ block level to the respective PSs. The grass root level functionaries shall be placed under the full control of the respective ZPs along with entire plan and non-plan budget.
- Rural Sanitation / TSC concerning to all these areas shall also stand transferred to ZPs/ PSs for implementation, supervision and monitoring along with concerned staff and financial budget under the plan and non plan both.
- The concerned PRIs on completion of aforesaid transfer of functions shall be responsible for planning, design, implementation, monitoring and control all such schemes/programmes sponsored by the State/Central Government.

(B) Role of State Government / PHED

- The State Government / PHED shall continue to play their full role in respect of Multi District Schemes and Mega Projects including ground water recharge structures for the entire State along with quality control, source development, sustainability and project formulation and monitoring of all the schemes transferred to PRIs.
- They shall ensure timely flow of funds, preparation of special projects for drinking water under SJD, projects for TSC and for attracting bilateral assistance under all programmes.
- **A massive project formulation** / implementation campaign throughout the State shall be launched for ground water recharge, surface water harvesting and rural sanitation etc. for which a special cell shall be constituted at the State level apart from similar cells created at the district level with all ZPs.
- Preparation of new water supply schemes under SJD shall be done by VWSCs with help of technical pool of experts available at the district level, under overall guidelines issued by the State level Project Formulation Cell.
- CCDU / State PMU have already been constituted at the State level with IGPRS to meet the new demands under SJD and TSC for community mobilization, IEC etc.
- The total orientation of PHED Officers shall have to be changed in order to make them a ‘facilitators’ rather than ‘providers’. They should play the role of “friend, philosopher and guide” and also provide full technical support to PRIs and VWSCs at all levels in order to ensure better and more efficient management of drinking water and TSC functions.

- That State / district level mission (SWSM/GWSMs) shall continue in their present form and functions apart from induction of concerned Zila Pramukhs as Chairman and CEOs, General Manager Milk Unions, Manager Marketing Society etc. as members of DWSCs on transfer of complete work to PRIs by the **end of 12th Plan (2016)**.
- The state level setup of the Chief Engineer, PHED (Rural) shall be renamed as “Rural Public Health Engineering Department” and shall be placed under the administrative control of Secretary Panchyat Raj for the purposes of monitoring of schemes transferred to PRIs under Swajaldhara and TSC Programmes.

(C) Devolution of Funds

- That State Government shall transfer the entire budget under the non-plan and plan for all the transferred schemes and staff in relation to the establishment and ongoing schemes and also for O &M etc. simultaneously on transfer of functions as indicated above.
- At least 40% of the State Plan allocations relating to Rural Water Supply Scheme and entire allocations for rural sanitation, health and hygiene etc. shall also be transferred to the PRIs totally untied, so that they can design and plan their schemes as per felt need and local requirements.
- All four Funds enlisted in the MOU shall also be set up by the Government at the State level in respect of (i) Operation and Maintenance Fund; (ii) Institutional Restructuring Fund; (iii) Quality Improvement Fund and (iv) System and Source Sustainability Fund; **latest by 2007**.
- Necessary funds shall be contributed to all these Funds from time to time out of GOI grants/ State Resource and public contribution. To start with, the GOI shall provide at least Rs 10 crores each in these respective funds and initial contribution from the State Government shall also be given @ Rs. 2 crore each, constituting 20% contribution from the State Government. Thereafter, all plan resources meant for these programme shall also be credited to the respective Funds and efforts would also be mounted to raise public contributions in the form of capital cost sharing and O & M tariffs for further strengthening of these Funds..

(D) Sharing of Capital Cost

- Capital cost sharing by community is rather difficult and cannot be adopted in toto in Rajasthan due to very high cost of new sources with the water going deeper and deeper because of very low or negligible recharge. However, in order to evolve principles for sharing the capital costs under SJD and to bring

uniformity in all other schemes, the State Government shall issue orders that the community would contribute at least 10% of the capital cost of new hand pumps and stand alone single village schemes in all irrigated areas **by 2007 in order to make it at par to SJD pattern.**

- In the case of desert area, where recurring famine conditions prevail and income level is very low, conditions of capital cost sharing shall have to be waived of in single village / stand alone schemes including schemes under SJD.
- In cases of multi village / multi block / multi district and Mega Projects, the capital cost is too high and it would not be possible for the community to share this cost in such cases. However, efforts shall be mounted to ask the affluent PRIs to share this cost on a token basis by raising contribution from the public or out of their own funds @ 2-5% from 2007 onwards, for works within their revenue boundary, which can be later increased to 10% in a phased manner **by the end of 2012** in order to bring it at par with SJD pattern.
- There seems to be an urgent need to advocate with political leaders to implement the reforms of cost sharing and regulatory aspects. Appropriate dialogues shall have to be established through Water Campaigns and Orientation Training Workshops.

(E) Water Tariffs for O & M Expenses

- **This is a most 'difficult' area because all-powerful State Government cannot collect more than 8% of the total expenditure incurred on maintenance. Hence PRIs cannot be expected to levy tariffs and meet cent percent expenses for entire maintenance of all units handed over to them. Moreover transmission losses have also been reported as high as 40% as per Vyas Committee Report. In view if this, water tariffs, initially, can only be collected from consumers having house connections as per prevalent practice.**
- **Keeping in view the recovery performance of the urban areas (nearly 25% of the O&M expenses) and also in 'Aapani Yojana' where only 28% recovery is achieved. O&M cost shall have to be contributed by the Government at least to meet full electricity charges (presently on an average 52%) and staff (38%) and rest of the 10% can be met by the community in rural areas till goal of recovering 100% O&M cost is achieved firstly, in urban areas and then made applicable in a phased manner in the rural**

areas which may be possible by the end of the 12th Plan (2016).

- No water tariffs would be levied on hand pump schemes because these structures are meant for poor localities. The State Government shall have to provide a cent percent subsidy to be shared under the envisaged MOU by the Central Government in all such cases.
- In **stand alone/ single village schemes**, the water tariffs would be levied in a phased manner i.e. to start with 10% of the total O & M expenses would be levied from 2008 onwards by the Government and thereafter transfer of these schemes to JPs during the next plan period (**2011 onwards**), this would be increased in a phased manner excluding power charges. However, total power charges constituting around 50-52% of the total O&M cost would have to be subsidised by the Government.
- Cost recovery in Desert and Tribal areas is not at all feasible, particularly from the rural water users because of the huge carrying cost and sparse population, mainly in the desert areas. In view of this, efforts would be mounted to recover only 10% water charges in the beginning, which may be gradually raised in phases, at the most up to 50%, by the end of 2017 in all types of schemes.
- In the cases of multi village / multi block / multi district / Mega Projects, keeping in view a very high level of O & M cost, only 5% of the O & M cost or expenses within the village boundary, whichever is less, would be recovered from the community at the first instance from **2011 onwards**. This may be increased to 10% in a phased manner **during the 12th Plan (2012-16)**. Rest 90% would have to be subsidized by the Government.
- **It would be always borne in mind by all concerned that “cost recovery” is also related to “improved service levels”**
- Keeping in view the special conditions prevailing in Rajasthan and very high O & M cost of taking drinking water to far-flung areas from long distance sources, the Government of India should also share O & M subsidy as a special case, to the extent of at least 75% in desert areas and 50% in other areas. The State Government shall provide remaining contribution of subsidizing this cost from their own resources.

- Efforts shall also be mounted to create as many as water harvesting structures as possible to partially solve the problem of drinking water and reduce the impact of water charges, mainly in rural areas. A massive programme of constructing “Tankas” owned by individuals/community, would be launched, mainly in fluoride affected areas to harvest rainwater on a large scale to meet the drinking water requirements. This would not involve any O&M expenses and capital cost would be attracted from the SJD and other sources. If necessary, a bi-lateral funding project may also be launched.

(F) Role of NGOs

- Local NGOs have the direct linkages with the community and they have bridged the gaps between community and Government. The key success of ‘Aapni Yojna’ lies in the dedicated efforts and commitment of NGOs in the area, who have been working as catalytic agents in successful implementation of the Project through community participation. Such programmes cannot take place either by Government machinery or by the PRIs alone. It is evident from different studies, that wherever the good NGOs are involved in management and social mobilization activities for RWSS and sanitation, mitigation of fluoride programme, people have owned the Government scheme with full enthusiasm.
- In view of the aforesaid advantages, the NGOs shall be involved in rural drinking water, total sanitation campaign including rural health and hygiene and cultivating desired habits for these purposes amongst the school children.
- Services of NGOs would be utilized for activities such as social mobilization, Communication and Capacity Development, Participatory Rural Appraisal (PRA)/ Participatory Learning and Action (PLA), Human Resource Development (HRD), Training and implementation of schemes. However, proper and transparent selection criteria should be adopted. NGOs may be properly oriented and trained in the drinking water and sanitation sector reform principles before their services are utilized.
- The same NGO shall take care of both SJD and TAC components of social Organization, Awareness Generation, Capacity Building, Hygiene Education and Demand Generation activities in a particular village.

- The NGOs, Cooperatives and other Institutions shall be involved in the aforesaid activities throughout the State in all villages in a phased manner in order to cover the entire State **by 2011 by launching first phase up to 2007 and second phase from 2008 onwards.**
- Selection of good NGOs for this work shall be decentralized at district level to DWSCs and ZPs, where, the process for empanelment of local NGOs, shall invariably, be completed latest **by the end of 2006.**
- A crash programme for Capacity Building of NGOs shall also be taken up through short training courses organized by IGPRS, HCM RIPA, SIRD and other Institutions/Centers working at the State and Regional levels in order to equip them for better performance under SJD / TSC social mobilization campaigns. The end of 2006 shall complete this training programme.

(G) Involvement of Cooperatives

(a) Dairy Cooperative Societies (DCSs)

- These societies having large membership of Milk Producers and women members can play a very important role in rural drinking water, sanitation, health and hygiene programme, they can generate demand and serve as a nodal point for information dissemination and supply of hardware for implementation of these programmes.
- In view of above, an agreement / MoU shall be signed between the NDDDB, RCDF, Milk Unions and the State Government with the assistance of the UNICEF, **during 2005-06** itself and programmes shall be launched in all districts and villages where DCSs are functional.
- These institution shall thereafter be asked to adopt TSCs guidelines and norms and funds would be provided from TSC and SJD for effective IEC, promotion of different options of toilets, advocacy for hand washing practices and focus on total sanitation and disposal of solid waste and waste water etc.
- These Institutions shall also make full efforts for raising public contribution and shall provide their own contribution also under these programmes for benefiting their member families.
- They can also establish mechanism for self-financing of rural sanitation on long-term basis and make this programme self-sustainable even after subsidy component is withdrawn.
- Involvement of DCSs would on the one hand, ensure clean and safe environment at homes, inculcate sustainable hygiene practices for reduction of diseases, leading to economic and social development of the families of the members of Milk Unions and

on the other hand, improved quality of milk shall be available to the consumers

(b) Agricultural Marketing Cooperative Societies

- These societies working almost in every block for marketing of agriculture produce and supply of inputs and other necessities for the village community. These societies shall be persuaded to establish **Sanitary Marts** and keep spare parts for hand pumps and other minor spares for stand alone / multi village drinking water, machinery and equipments in fluoride effected areas they can supply de-fluoride equipments along with consumable refills for domestic de-fluoride units
- .This would ensure availability of hardware within a close vicinity of the demand generated in respective areas and on the other hand these societies would also get an additional source of marketing activity and income.
- The government shall enter into agreement with these societies **before close of 2006** and Sanitary Marts / Spare parts units shall be established by them by the **end of 2007 positively** so that soon after completion of the first phase of IEC, necessary hardware can be available at least at the block level.
- The RAJFED may draw up a production plan in collaboration with manufacturers and also work out implementation strategy.
- In order to make this network more extensive, on increased demand, agricultural marketing society can further provided sub dealership to Gram Seva Sahakari Samities (GSSs) functioning at all most each Panchayat level. This can be done **latest by 2011**, so that increased demand for hardware under both these programmes can be met right at the doorsteps of the villagers.

(H) Water Regulatory Authority

A statutory body known as “Water Regulatory Authority” at the state level shall be created to:

- (i) ensure effective enforcement of water regulation laws, privatization, wherever possible, for transportation and distribution of water ,
- (ii) carving out adequate share of drinking water from the surface water sources like rivers, canals and all other basin levels and
- (iii) regulation of water tariffs.

This body would also have regular dialogues with water users/consumers and all stakeholders pertaining to agricultural, industrial and domestic use of water.

ACTION CALENDAR FOR INSTITUTIONAL ARRANGEMENTS

Activity	Mile Stones
1. Capacity Building, Awareness Generation and IEC	
(a) Empanelment of NGOs	2005-6
(b) Training of NGOs	2006
(c) IEC in Hand Pump Villages- (Ist Phase)	2006 2007
(d) IEC in Stand Alone Scheme Areas -(IInd Phase)	2009
(e) IEC in All other Scheme Areas-(IIIrd Phase)	
2. Transfer of Hand Pumps to GPs	
(a) Ownership and Entry in Revenue Record	2006
(b) Operation and Maintenance	2007
(c) Transfer of Funds and Functionaries	2007
3. Transfer of Stand Alone / Single Village Schemes to GPs	
(a) Ownership and Entry in Revenue Record	2009
(b) O & M alongwith Staff and Funds	2011
4. Transfer of Multi Village / Multi Block Schemes to PSs/ZPs	
(a) Ownerships and Entry in Revenue Record	2015
(b) Transfer of O & M, Staff and Funds	2016
5. Agreement with RCDF / Milk Unions / DCSs	
(a) Signing of MOU	2005-06
(b) Commencement of IEC	2006
(c) Establishment of Sanitary Mart	2007
6. Agreement with RAJFED / Marketing Societies	
(a) Signing of Mou	2006
(b) Establishing Sanitary Marts by Marketing Societies	2007
(c) Sub Dealership to GSSs	2011
7. Sharing of Capital Cost	
(a) New Hand Pumps Schemes/Stand Alone Schemes up to 5%	2007
(b) Increased to 10%	2009
8. Water Tariffs – Issue of orders by the Government	
(a) Stand Alone Single Village Scheme up to 10%	2008
(b) Increased to 20%	2011
(c) Multi Village / Multi Block Schemes up to 5%	2011
(d) Increased up to 10%	2016
9. Transfer of Plan / Non Plan Budget	

<p>(a) Ongoing Schemes (b) 40% of State Plan allocations to PHED as untied (c) O & M Subsidy</p>	<p>With functions 2011 with concerned Schemes</p>
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IX

COORDINATION AND INTEGRATION

Objectives

9.1 The Drinking Water is linked with multifarious aspects of human life, it is not only a life line for human beings but is directly linked with health, hygiene and economic / social aspects which ultimately requires quality control, education, awareness generation and Capacity Building efforts. This also necessitates intimate involvement of various stakeholders in a coordinated, cohesive and integrated manner to get desired results in a specific time frame. Hence, there is an urgent need for total coordination amongst all the role players under various facets of these programmes including drinking water, sanitation, health and hygiene in an integrated manner, to obtained best results at the field level.

9.2 It is generally observed that each department functions in a watertight compartment, particularly at the lower level. The main objective therefore, is to ensure cross-sectoral convergence at the grass root level.

(A) Strategy and Policy Framework for Integration of SJD, TSC, Health and Hygiene

9.3 The Coordination Mechanism shall have to be therefore established at all levels as indicated below:

- Firstly, all drinking water schemes under the State Plan, ARWSP and SJD shall have to be implemented in an integrated manner. All funds for these purposes shall have to be pooled in the State Level Funds and then allocated on the basis of area specific needs. A specialized project formation cell, created at the State Headquarters, shall prepare new projects/ schemes.
- A panel of Retired Experts shall also be prepared at the district level with all ZPs for Project Formulation work at the local level keeping in view the felt needs and aspiration of the people.
- Integration of water harvesting and artificial recharge structures with all ongoing and new schemes shall also be done in order to ensure sustainability of water sources. Such structures shall be created for all the existing old sources of drinking water through a special project and

attracting Funds from bilateral sources and a special campaign shall be launched till this goal is likely to be achieved **by 2011**.

- It would be made compulsory that all new schemes would have an inbuilt provision for water harvesting and artificial recharge structure under all circumstances to ensure long term sustainability of sources.
- All traditional water harvesting structures including Nadis, Tank and Ponds shall be desalted/renovated, their catchment got cleared from encroachments and efforts shall be made for stone pitching of all these structures to ensure maximum inflow and retention of water in order to supplement and integrate drinking water availability in the respective areas.
- Special water harvesting structures known as '*Tankas*' 'Farm pond' shall be constructed on large scale, preferably in desert/DPAP areas, by way of integrating efforts with Watershed Development, DDP, DPAP, IWDP etc. in order to harvest rainwater to the maximum extent through individual efforts by providing 100% subsidy to small / marginal farmers and 75% subsidy to others.
- Community Farm Ponds shall also be got constructed under all these programmes including SJD and handed over to GPs for maintenance. These integrated efforts shall result in sustainable availability of sweet drinking water, mainly in fluoride effected /desert areas.
- Another area of integration is to implement TSC in close and complete coordination with drinking water schemes at all levels, right from social mobilization and awareness generation efforts to the operations and maintenance of all such schemes. Presently, both these schemes are with PHED at the State Level. However, these functions shall be transferred to PRIs in order to ensure full integration at the district, block and village levels. This is likely to be achieved **by the end of next plan (2011)**.
- Presently, better integration with health, hygiene and education is missing. This would be ensured by transferring rural health and entire Elementary / Secondary Education to PRIs on the lines, it has been mandated in Schedule -11 of the Constitution. This is also likely to be achieved **by the end of 2011**.
- The present arrangement for coordination at State, District and village level shall be further strengthened by inclusion of representatives of PRIs, NGOs, Cooperative Societies and concerned departments and other stake holders in the SWSM, DWSM to start with, **by the end of 2006** and *Zila Pramukhs shall be nominated as chair persons of DWSMs. The District Collectors shall function as Executive Directors on the pattern of DRDAs*. Simultaneously an other forum at the block level known as

BWSC shall also be created under Chairmanship of concerned Pradhans and a Sub-sector Monitoring Mechanism shall also be introduced.

- The Sarpanch of the concerned GPs shall be nominated as Chairman of the VWSC in order to have full integration of Village Panchayat and VWSC at the grass root level. Efforts shall be mounted in the long run to merge the functions of VWSC within the ambit of Standing Committees on Basic Amenities at the grass root level, which can be monitored and supervised by the higher level PRIs through their concerned Standing Committees.
- Stakeholders Forum at sub sector level for cluster of villages shall also be created for close monitoring and guidance at the grass root level.
- Convergence, which is a fundamental premise of the reforms process is difficult to achieve but is possible by activating various institutions like the PRIs and the CCDU etc. Convergence also means sharing of responsibilities among the stakeholders at various levels.

(B) Role and responsibility of the Stakeholders

PHED

- PHED shall continue to play the role of a nodal department at the State level for Rural Drinking Water and TSC including health and hygiene.
- This department shall also discharge the functions of fund management at the State level, Coordination between various stakeholders through SWSC and otherwise, project formulation in all aspects including recharge structures, quality control, ensuring sustainability of sources and implementation of Multi district / Mega projects after transfer of functionaries, funds and functions to PRIs in respects of all other schemes.
- To discharge role of higher technical supervision and input in all schemes transferred to PRIs.

Rural Development Department

- RD Department shall establish integration of all watershed schemes with rural drinking water and TSC.
- The IEC undertaken under IWDP, DDP/DPAP and Watershed scheme shall also include SJD and TSC components so that social mobilization process can be simultaneously undertaken by the same Agency / NGO / Institution, taking care of Watershed activities.
- All Watershed schemes shall also provide for drinking water needs of the concerned village while implementing such projects.

Panchayati Raj Department

- The PR Department shall ensure and take all necessary steps in accordance with the agreed Action Plan to get all functions, funds and functionaries transferred to PRIs, particularly in respect of Rural Drinking Water, Rural Sanitation, Rural Health & Hygiene activities including

Primary and Secondary Education on priority basis as per provisions of the RPR Act, 1994 and 73rd Constitution amendment Act 1992.

- Shall exercise supervision and control over all PRIs for effective implementation and monitoring of all functions transferred as above.
- Take necessary steps to make amendment in the RPR Act for enabling PRIs to act on levying tariffs, costs sharing, constitution of separate Standing Committees for Rural Water and total sanitation activities at ZP/Panchayat Samitis/ GPs levels.

Education Department

- This Department shall dovetail its funds and efforts for undertaking sanitation activities in the schools apart from health and hygiene education, thus cultivating habits for cleanliness amongst the school children.
- Efforts shall be made to ensure completion of the total work for School Sanitation, Health and Hygiene in the entire state by the end of 2006.
- Shall insert drinking water, sanitation health and hygiene contents in this syllabuses of Elementary Education course by 2007 and all out efforts shall be made to give focused attention by all concerned. Teachers shall also be given suitable doses of orientation training capsules besides attendance in monthly review/ monitoring meetings.
- Efforts shall be made to ensure that all schools are provided a roof top water harvesting structure.
- Shall transfer Education to PRIs by 2011 in the light of 73rd Constitution amendment in order to ensure implementation of other interlinked programme in an integrated manner through the same agency of PRIs at the local level.

Medical and Health Department

- Shall transfer rural health and hygiene activating including primary health centers to PRIs at an appropriate level as providing under the RPR Act with all funds and functionaries, so that these activities can also be integrated with SJD and TSC Schemes at the field level through PRIs.
- Shall provide higher technical input and supervisions in all these schemes.
- Integrate SJD / TSC components also in IEC activities undertaken for rural health and hygiene and special programme for eradication of water borne diseases and creating health environment in the rural areas.

Irrigation Department

- Shall provide surface water for Mega Drinking water Projects and other drinking water schemes for the rural areas.
- Shall inculcate water conservation habits amongst the cultivators by raising water tariffs for water intensive crops in the irrigated areas.
- Shall help PRIs in renovation / reconstruction of all traditional water harvesting structures, tanks and water ponds and ensure clearance of

catchments areas from encroachment for effective rain water harvesting and supplementing availability of drinking water in the rural areas.

- Shall pilot enactment of ground water legislation to ensure strict ban on construction of new wells/tube wells for irrigation purposes mainly, in the dark zone areas.
- Shall take steps and ensure improvement of efficiency of water source management.
- Shall take action for convergence of all water related issues to be achieved under the Water Resource Management Department.

Women and Child Development Department

- Shall integrate working of 'Anganwadi' and other ICDS Workers with SJD / TSC activities as they are more effective change agents in the rural areas.
- 'Sathins' shall be involved in IEC related activities, particularly, in respect of hygiene practices amongst the children and lactating mothers.

Agriculture Department

- Shall help conservation of water through efficient irrigation practices and change in the cropping pattern ensuring less requirement of water
- Shall encourage dry farming practices.

Power Department

- Power rates presently charged for drinking water schemes at non domestic tariffs @ of Rs. 4.90 per unit, shall have to be reduced for SJD and drinking water schemes because this tariff is even higher than that for industrial consumers.
- Shall ensure regular and uninterrupted power supply for all drinking water supply schemes.
- Power connection shall be given on top priority basis in all cases of SJD and rural water supply scheme.

NGOs

- They shall continue their role of a facilitator, social mobilization, IEC, Capacity Building etc.

- Competent and willing NGOs, wherever available shall be involved in a large way throughout the State by all GPs.

Indira Gandhi Panchayati Raj Sansthan (IGPRS)

- Shall impart training to all Officials of NGOs, non-Official and Official of PRIs and other stakeholders on a time bound basis.
- Shall help PRIs in identification of good NGOs.
- Shall ensure capacity building of all Community Institutions, PRIs/NGOs and other stake holders through CCDU entrusted to it and otherwise also through normal training programmes, seminars, workshops and other efforts.

Private Sector

- Shall be involved in manufacturing and marketing of equipment spares and hardware for SJD and TAC requirements and shall provide expertise in construction activities, which shall, however, be availed by PRIs / other Stakeholder purely on competitive basis and as per guidelines issued by the State Government
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X

MONITORING ARRANGEMENTS

- PHED shall be the nodal department of all rural water supply Projects and shall continue to monitor progress, implementation of various programmes and the monitoring system of PHED shall continue to function as it is even after transfer of schemes under Swajaldhara and TSC to the PRIs. All MIS being generated shall continue to be prepared and submitted to relevant authorities as in force presently.

(A) Ground Water Availability Surveys-

This work being carried out by the Ground Water Department regularly shall continue to be done on the existing pattern in future even after transfer of schemes to the VWSCs . The MIS so developed shall be made available to the DWSM at the district level and the information so generated transferred to the Chief Engineers of PHED (Rural), GWD and the concerned Secretaries of the department in the state government.

(B) Water Quality-

The Chief Chemist of the department, who will continue to do so on a regular basis, is monitoring the water quality. Necessary facilities for transportation of laboratory staff to the field shall be separately provided for which expenditure shall be shared by the GOI & GOR in the ratio of 50:50. The MIS so generated shall be made available to the DWSM, the Chief Engineer (Rural) PHED and the concerned Secretaries of the department in the State Govt. In case of deterioration in quality the same shall be brought to the knowledge of the concerned VWSC.

(C) For Implementation Of Special Projects-

Special projects relating to mega/big regional schemes involving transfer of surface water from inter basin allocation of the state shall be carried out on turn key basis. Necessary MIS shall be developed to monitor the physical and financial progress of work on these projects.

(S.K. Kulshristha)
C.E. PHED (Retd.)

(Bhagirath Sharma)
IAS (Retd.)

(I.C. Srivastava)
IAS (Retd.)

ANNEXURE-I

Present Status

Annexure '1'

Present Status of Drinking Water Facilities in the State

Rajasthan is the largest state of the country covering about 10% area, with about 5% population but possesses only about 1.16% of country's water resources. Poor rainfall and excessive dependence on ground water, both for agricultural irrigation and drinking water coupled with over exploitation of ground water has made, the task of providing safe and potable water supply, more difficult. A large part of the state consists of the Western Desert. There are no perennial river sources except for Chambal River in the south.

Rajasthan has a rural population of 4.33 crores comprising of 71.56 lakhs of households residing in 39,753 inhabited villages. The economic profile primarily depends upon agriculture and livestock rearing in arid and semi arid regions. In terms of challenges, rural water supply is required to be provided and managed in diverse terrains covering 12 desert districts, low rainfall trends, depleting ground water levels with both ground water quality & quantity problems, skewed population density ranging from 13 persons per sq km at Jaisalmer to 414 persons per sq km in Bharatpur districts.

A Coverage of Drinking Water Supply:

(i) PHED has covered about 37676 villages (Main Habitations) in 9188 Gram Panchayats in 32 districts of the state up to 31 December'2004. The type of scheme wise break-up of coverage of villages is as follows:-

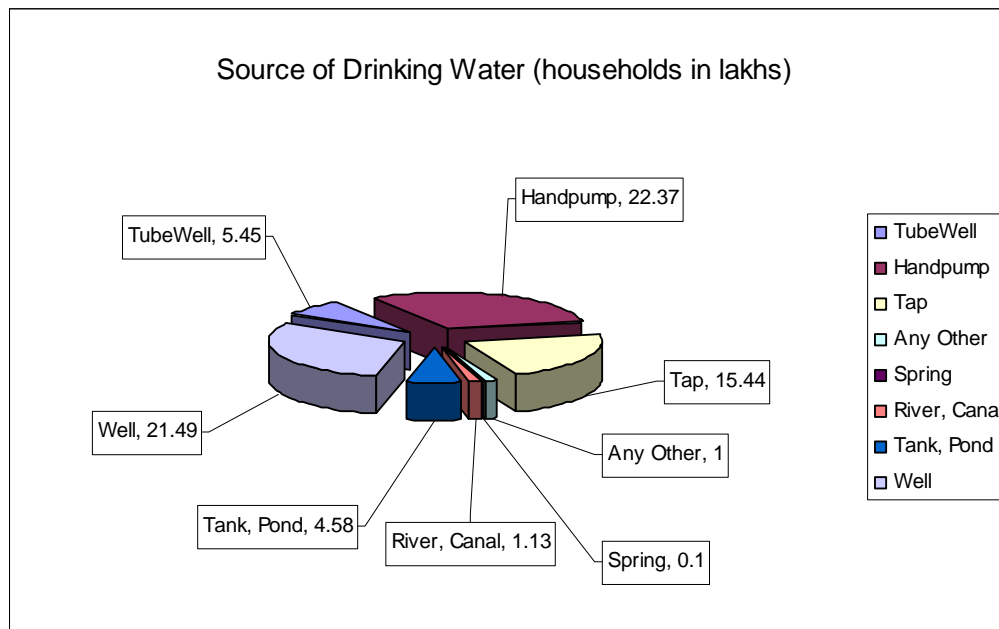
Sl. No.	Type of Scheme	No. of covered Schemes	Brief Description of the type of Scheme
1	Hand Pump Schemes	21640	When the hand pumps are installed in a village, the system is called a Hand Pump System.
2	Traditional Source Scheme(TSS)/Janta Jal Yojna(JJY)	1127	In the Janta Jal Yojana and Traditional Source Schemes, the community maintains the scheme and the expenses incurred regarding Electricity Charges and the repair of Pump & Machinery and also Rs. 500.00 per month for the payment to the worker is reimbursed by the State.
3	Diggi & other Schemes	279	In these schemes water from a surface source is taken in an open tank and after due treatment is provided in a clear water reservoir.
4	Pump & Tank Scheme	2993	When water is locally available and is distributed at one point or multiple points through a Reservoir then it is defined as a Pump & Tank Schemes.
5	Piped Scheme	1811	In case, house connections are released in such P&T Schemes it is called Piped Water Scheme.
6	Regional Water Supply Scheme	9826	When the water is not available locally or is not potable, Regional Water Supply Schemes are framed so that potable water is carried from distant sources covering various villages.
	Total	37675	

Most of the rural population of the state live in Dhanis/Majra/Naglas which have been designated as. Other Habitations (O.H.). As per earlier survey there are about 56057 Other Habitations in the state out of which about 53614 Other Habitations have been covered with Water Supply facilities upto 31.12.2004. The details of coverage are as under:-

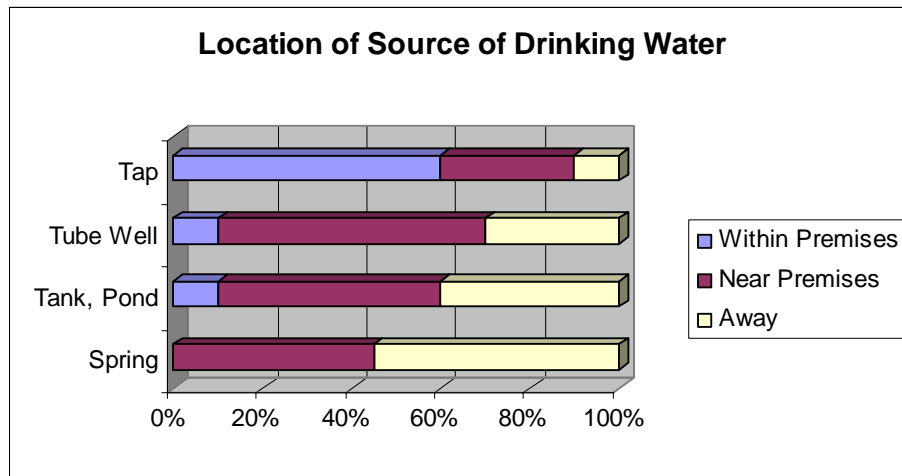
Habitation	Fully covered FC	Partially covered PC	Not Covered NC	Total
Main	37676	-	213	37889
Other	47373	6241	2443	56057
Total	85049	6241	2656	93946

Thus about 90.5% habitations have been covered fully and about 6.6% have been covered partially. But due to low population density of 69 in Barmer, 13 in Jaisalmer and 126 person per SQ KM in Jodhpur District, uncovered habitations remain as 23%, 19% and 17% respectively in the above districts.

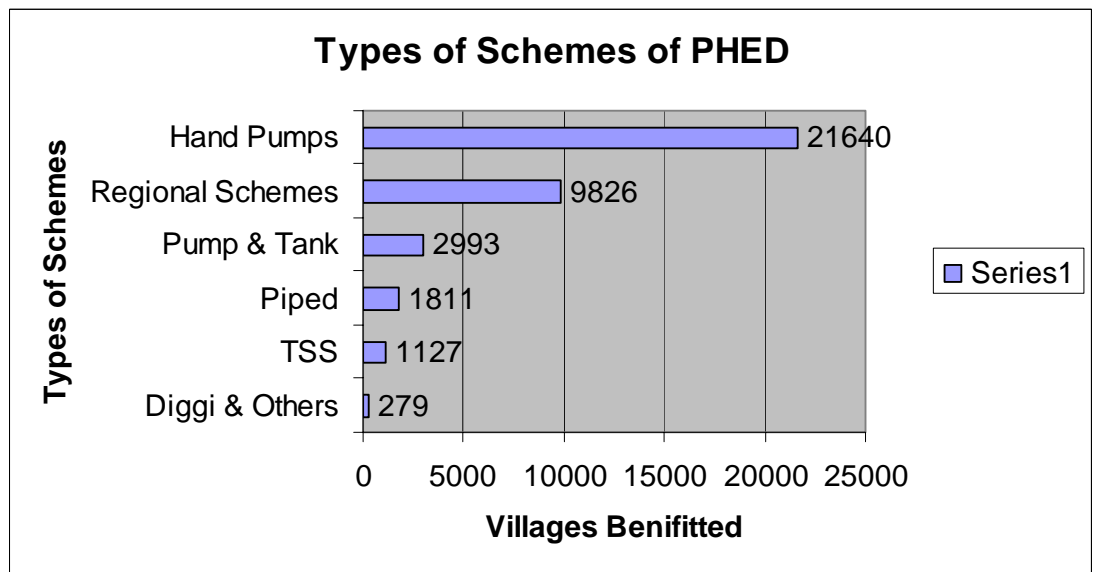
From the census 2001 data it may be observed that out of 71.56 lakhs rural households, about 65 lakhs (91%) households depend upon ground water sources for drinking water. The dependence on Ground water sources has remained the same since census 1991. Supply of drinking water from tap source has increased to 22% from 15% in 1991.



In terms of location, about 71% of rural households have drinking water in the vicinity of 500 mtrs from premises as compared to only 6% of the households in 1991.



The schemes of PHED that have been instrumental in achieving the aforesaid coverage is as under:-



However, after the last survey, there has been continuous drought and low rain fall for about last 5 to 6 years in continuation, which has resulted in over exploitation of Ground water thereby lowering of water table, reduction of yield

of water or no water in tube well or hand pump and increase in concentration of dissolved salts so as to make it chemically unsuitable for drinking. Due to this a fresh survey of status of coverage and quality problem was got done in 2003-2004. The results of this survey as on 31December'2003 are as follows:-

	Unpopulated	Fully Covered(FC)	Partially Covered(PC)	Not Covered(NC)	Total
Main Habitation	1736	14862	9022	15733	41353
Other Habitation	0	25016	8137	49480	82633
Total	1736	39878	17159	65213	123986

However re -verification of the status of the habitation shall be done again before taking up any new scheme for execution

Thus as per latest survey of December'2003 out of total habitations of 1,23,986 populated habitations are 1,22,250 only out of which about 32.6% only are fully covered and about 14% are partially covered leaving about 53.4% as not covered by water supply facilities.

Due to tremendous use of ground water for irrigation and other purposes, it has resulted in sharp decline of ground water levels and brought about adverse changes in the geochemistry of ground water. Natural contaminates such as fluoride, nitrate, and chloride salts are increasing in ground water making it unfit for drinking and posing risk to health. The key concern areas with respect to quality of ground water are as under.

- **Salinity Problem**- 21,190 villages/habitations mostly from the districts of Churu, Bharatpur, Barmer, Jhunjhunu, Nagaur and Ajmer suffer from the problem of excessive salinity.
- **Fluoride Problem**- 23,297 villages/habitations suffer from excess fluoride problem. The problem has serious proportions in the districts of Jaipur, Tonk, Nagaur, Ajmer, Bhilwara, Sirohi and Pali.
- **Nitrate**- 20,659 villages/habitations suffer from excess Nitrate problem. The worst affected districts are Jaipur, Nagaur, Barmer, udaipur, Jodhpur, Churu, Alwar and Tonk.

As per BIS, desirable limits in Fluoride, Nitrate & TDS are 1.0, 45 & 500 mg/l and maximum permissible limits are 1.5, 100 & 200 mg/l respectively. Based on these norms about 56% of the water sources are un-potable. In order to

address this issue Mega Projects viz. Chambal Bharatpur Water Supply project, Fluoride control projects in Ajmer, Bisalpur-Dudu project, Chambal-Sawaimadhopur Project have been taken up under the ARWSP (Quality Control). PHED has also undertaken a fluoride mitigation project that covers 2643 villages/habitations with fluoride problem of more than 5ppm in the first phase. PHED project is comprehensive with respect to community awareness generation and provision of Domestic De-fluoridation Unit (DDU) and hand pump attached de-fluoridation plants. This is modeled on the basis of success in Dungarpur District.

The solution of quality problem villages lies in transporting surface water of Indira Gandhi Canal or Bisalpur Dam or River Chambal through Mega Projects to the problem villages. The State government has taken up such projects the details of which are as under:-

(ii) Projects under ARWSP (Normal)

- Chambal Bharatpur water supply project (Phase-I) Part-I.
The project cost is estimated at Rs. 166.50 crores. This project will benefit 999 villages of Bharatpur & Dholpur districts. Phase-I, part-I will benefit 69 villages of Dholpur and 143 villages of Bharatpur & Dholpur districts respectively. The project has been conceived to solve salinity problems of ground water. The project cost share between ARWSP and MNP is Rs. 75.73 crores and Rs. 90.77 crores respectively. The expenditure incurred upto October 2004 is Rs. 29.40 crores and is scheduled for completion in December'2005.
- Rajiv Gandhi Lift Canal Project(Phase-II)
The original project cost was Rs. 94.47 crores, which has been modified to Rs. 119.13 crores. The project will address water demands in 729 villages of Jodhpur, Barmer & Jaisalmer districts, where salinity in ground water is a major issue. An expenditure of Rs. 83.38 crores has already been made up to Nov'04 and was scheduled for completion in December'2004, which is delayed.
- Fluoride Control Project Kekri-Sarwar
The estimated project cost is Rs. 44.35 crores, 94 villages of Ajmer district will be benefited through this scheme. The state contribution for the project has been Rs. 21.99 crores and ARWSP share is Rs. 22.36 crores. All works are in final stages of completion. The expenditure incurred on the project upto Oct'04 is rs. 39.58 crores.
- Fluoride Control Project Nasirabad
The project cost is estimated at Rs. 61.03 crores. 61 fluoride affected villages in Ajmer will be benefited by this scheme. The state share is Rs. 20.71 crores and ARWSP is contributing Rs. 45.77 crores. 37 villages have been already benefited. The project is scheduled for completion in December 2004 (however might get delayed) and the expenditure incurred upto October 2004 is Rs. 42.38 crores.
- Fluoride Control Project Bhinaya-Masooda.

The estimated project cost is Rs. 43.99 crores. The project envisages water supply to 2 towns and 232 fluoride-affected villages. The state share is Rs. 20.71 crores and ARWSP is contributing Rs. 23.28 crores. The expenditure incurred on the project upto October 2004 is Rs. 29.33 crores and was expected to be completed by December'2004.

- Bagheri Ka Naka Project District Rajsamand
The estimated project cost is Rs. 128.40 crores and covers 206 villages. The project is completely funded through ARWSP. The project has incurred an expenditure of Rs. 29.14 crores upto October 2004 and is scheduled for completion in April 2006.
- Bisalpur-Dudu Water Supply Project
The estimated project cost is Rs. 283.77 crores. The project envisages covering 694 villages in phase-I and 794 villages and seven towns in the second phase. The project is expected to be completed by 2008. Upto October 2004 only Rs. 1.00 crore has been spent on the project.
- Chambal-Sawaimadhopur-Nadoti Water Supply Project
The estimated project cost is Rs. 468.18 crores. The project envisages covering 926 villages and four towns of Sawaimadhopur & Karauli district. The project is still in a conceptual stage.

(iii) **Projects under ARWSP(DDP)**

- Churu-Bisau Project

The estimated project cost is Rs. 119.04 crores. The project covers 169 villages of Churu and Jhunjhunu district including three towns. The cost sharing is based on 75% ARWSP, 25% MNP and Rs. 20.00 crores of urban sector by Planning Commission. The expenditure incurred on the project upto October, 2004, is Rs. 98.21 crores. So far only 2 villages have been commissioned.

The project is scheduled for completion in December 2004 however the execution is behind the schedule.

- Barmer Lift Project

The estimated project cost is Rs.424.91 crores. The project envisages benefiting one urban town, 161 villages of jaisalmer district and 412 villages of barmer district along with 1684 dhanies. The project is funded by ARWSP (Rs. 326.70 crores), Rs. 71.16 crores is from Defence Ministry and Rs. 27.05 crores is from State Plan. Curently field survey works are in progress.

(iv) **Other Projects**

- **Aapni Yojna Phase-I**
The estimated project cost is Rs. 402.57 crores. The project covers 370 villages of Churu & Hanumangarh district including two towns of Churu district. The project was funded jointly by KFW, Germany through government of India and Government Of Rajasthan. Part of the funds towards technical support, CPU and consultancy was in the form of grant from KFW. About 335 villages have already been received water from the project upto October 2004. This project addresses issues with respect to ground water that is brackish and saline. The project has incurred an expenditure of Rs. 391.60 crores upto October 2004 and is behind the schedule.

- **Aapni Yojna Phase-II**
The estimated project cost is Rs. 405.08 crores and will be funded and developed on a similar pattern as phase-I. This project intends to benefit 428 villages and six towns in Churu district.

- **(v) Drinking Water Coverage in Schools.**

The status of coverage of schools with drinking water facilities as on September'2004 is as under:-

Level	No. of rural schools.	No. of Students	Schools with water facility	Schools without water facility
Primary	49706	5381210	30119	19587
Upper Primary	11563	2554487	9857	1706
High/Secondary	4672	1649806	4274	398
Total	65941	9585503	44250	21691

During the year 2004-05, provision for coverage of 10847 Rajiv Gandhi schools with hand pumps and 4892 Rajiv Gandhi schools with pipe line i.e. a total coverage of 15739 Rajiv Gandhi schools (Primary) has been proposed at a total cost of Rs. 7869.50 lacs. Against the above proposed works a total of 6314 schools (5926 with hand pumps and 388 with pipe line) have already been benefited. It is proposed to cover remaining schools within the next financial year.

(vi) Sector Reform Project

Government Of India launched Sector Reform Programme in the year 2000 on pilot basis after identifying four districts, namely, Jaipur, Alwar, Sikar and Rajsamand with a view to involve the community in preparation, planning, execution and operation & maintenance of such schemes by the beneficiary community. These projects tested the feasibility of implementing a demand driven, people's participation approach in developing water supply systems. Till November'2004, 1338 schemes amounting to Rs.

96.74 crores have been sanctioned out of which about 30% (401 schemes) have been completed and handed over to the community for maintenance. The rest of the schemes are in various stages of execution. In Alwar and Rajsamand all schemes have collected 10% of capital cost as community share and deposited for meeting the cost of execution of the scheme, but in Sikar district the collection of community contribution has been as low as 58% of the sanctioned scheme. Execution work on 58 schemes have been taken up without receipt of the community contribution. In Jaipur and Alwar about 45% and 28% respectively schemes have been handed over to the community for maintenance. The performance in Sikar district has been far lower in comparison to other districts. The physical and financial progress of all the sector reform districts are tabulated below:-

Particulars	Jaipur	Sikar	Alwar	Rajsamand
No. of sanctioned schemes	391	150	742	55
Sanctioned cost(Rs. In lacs)	3812.6	1806.4	3636.98	418.23
No. of schemes on which the work has been started	391	143	537	54
No. of schemes on which the work has been completed	233	32	235	25
No. of schemes handed over to VWSC for maintenance.	175	9	205	12
Community contribution (Rs. In lacs)	326.39	109.69	357.07	32.01
No. of schemes on which public contribution is received.	378	87	742	55
Total expenditure made till date in the district (Rs. in lacs)	2680.53	921.23	1982.61	277.95

An evaluation study of water supply schemes implemented under Sector Reforms Programme was conducted according to which following activities are further required to be strengthened so as to achieve the goals of the reform programme.

- (i) Massive IEC activities is required to be carried out in the villages of the schemes through NGO so that the villagers have a better understanding of the issues involved in satisfactory and smooth execution, operation & maintenance of the scheme. Such involvement of NGO was observed only in Alwar district where the performance of the sector reforms is comparatively better.

- (ii) Sufficient information, education regarding various types of the schemes, its capital cost and subsequent O&M cost was not made available to the villagers at the time of selection of a particular type of scheme. This resulted in subsequent unwillingness on the part of the villagers to take over the O&M of the scheme on its completion due to higher monthly expenditure.
- (iii) Sufficient provisions for water conservation, rain water harvesting were not made in the cost estimates of the scheme thereby resulting in non sustainable water source. Thus every scheme should make compulsory provisions for roof top rain water harvesting, community rain water harvesting structures alongwith ground water recharge structures so that the source of the scheme becomes self sustaining.
- (iv) It was observed that there is a general lack of will to bear the O&M charges mainly, because water has been supplied free of cost to them for the last about 34 years. This requires massive programme of IEC through reputed NGO in the field for a sufficient long period.

(vii) Swajaldhara Projects:-

This programme has been launched in the state from 2002-03. The Institutional implementation machnisim under Swajaldhara is similar to the one as followed under Sector Reform Programmes. All the districts including the four sector reform district also are now covered under Swajaldhara projects as per the guidelines issued by Rajiv Gandhi National Drinking Water Mission in June'2003. About 2118 schemes amounting to Rs. 77.63 crores have been sanctioned so far out of which works on 1553 schemes have already been started in the field for villagers and 57 schemes for schools. A total of 509 schemes (462 for villagers, 47 for schools) have been completed out of which 191 schemes have already been handed over to the VWSCs for regular operation and maintenance. A total of Rs. 13.22 crores have been spent on these schemes uptil now.

Lessons learnt :-

From implementation of all the above water supply projects/schemes the following can be easily concluded.

- (i) Proper attention towards sustainability of the source has not been given which has resulted in the covered villages becoming problematic again on account of drying up of source or deterioration of water quality.
- (ii) Water conversation, ground water recharge, rainwater harvesting both through roof top and village level ponds or community tankas should be made an integral part of the water supply projects/schemes.

- (iii) Expenditure on power charges is near about 52% of the total O&M cost of the schemes. The power tariff for water supply schemes should be on the lines of the lowest category of agricultural connections so that the community is in a position to meet the O&M cost of the scheme. Such power tariff should be revised with immediate effect.
