

### PLAN OF ACTION AND PHASING-WATER

S. No. 1	Policies/Proposals 2	10 <sup>th</sup> Plan (2002-2007) 3	11 <sup>th</sup> Plan (2007-2012) 4	12 <sup>th</sup> Plan (2012-2017) 5	13 <sup>th</sup> Plan (2017-2021) 6
1.	<u>Blueprint for Water Resources in the Region:</u> Blueprint for water resources in the region including augmentation of drinking water should be prepared for NCR identifying all the potential surface water sources and ground water aquifers in the region and inter-basin transfer of water. This should include water mapping, desilting, augmentation of existing lakes/depressions for storage of rain/flood water, rain water harvesting, reuse and recycling of waste water, measures for conservation of water, inter basin transfer of water and include integrated land & water management for the region.	A detailed study will be needed to be taken up through an independent agency which will take about 2-3 years. This will lead to formulation of an Integrated Regional Scheme for augmentation of drinking water supply in the region.	Implementation and monitoring of the scheme to be done by the States.	Implementation and monitoring of the scheme to be done by the States.	Monitoring to be done to be done by the States.
2.	<u>Integrated Regional Schemes for Augmentation of Drinking Water Supply (surface and ground):</u> considering NCR as a single entity should be prepared. All the future planning for multi-purpose dams should be done considering the future demands of the NCR and not for NCT-Delhi only. Long term solutions should include construction of upstream reservoirs to store excess water during monsoon for use in lean period and inter-basin transfer of water such as Sarda-Yamuna link canal etc.	Scheme will be formulated on the basis of study at S. No. 1	Implementation and monitoring of the scheme to be done by the States.	Implementation and monitoring of the scheme to be done by the States.	Monitoring to be done by the States.
3.	<u>Norms and Standards:</u> § Rate of Water supply: <i>Urban</i> NCT-Delhi : 225 lpcd Population one lakh and above : 200 lpcd Population below one lakh : 135 lpcd <i>Rural</i> Spot Source : 70 lpcd Pipe supply : 100 lpcd § Unaccounted for water (UFW)-should be reduced to 15%	Should be implemented strictly by the participating States in their respective Sub-regions immediately and to be done in phases. In Phase I, all the towns getting water supply less than 100 lpcd should be taken up to enhance rate of water supply to 100 lpcd. Capacity of supply main and distribution system to be enhanced as per norms laid down in plan.	Augmentation of the capacities to be done based on increased demand. In Phase II, all the towns with population more than one lakh to be brought to 150 lpcd level and towns with population below one lakh to be brought 135 lpcd. Capacity of supply main and distribution system to be enhanced as per norms laid down in plan.	Augmentation of the capacities to be done based on increased demand. In Phase III, all the towns with a population one lakh and above should be brought to 200 lpcd supply level from 150 lpcd level. Capacity of supply main and distribution system to be enhanced as per norms laid down in plan.	Augmentation of the capacities to be done based on increase in demand due to increase in population.

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1	2	3	4	5	6
4.	<u>Protection of Land for Ground Water Recharging:</u> Recent studies of Central Ground Water Board have revealed that additional exploitation to the extent of 1,816 mld (1.82 MCM/day), 454 mld (0.45 MCM/day) and 908 mld (0.91 mcm/day) could be made available by harvesting the ground water potential of aquifer system of river Yamuna, upper Ganga canal system and Ganga flood plains respectively falling within NCR. In the Sub-regional Plans and Master/Development Plans, all the flood plains and other ground water recharging areas such as ponds, lakes, other water bodies etc. should be identified and protected from the invasion by other land uses and encroachments. At least, 2-5% area should be earmarked under water bodies (natural as well as constructive) in the distribution of landuses.	The areas to be protected for ground water recharging have already been identified in the Plan on the basis of the study done by IIRS, Dehradun on "Geology, Geomorphology and Ground Water prospects for NCR". These areas should be protected in the sub-regional plans and master plans by the respective State governments and should be implemented on priority basis immediately.	State Governments to ensure protection of ground water recharging areas while undertaking the development works in their respective Sub-regions.	State Governments to ensure protection of ground water recharging areas while undertaking the development works in their respective Sub-regions.	State Governments to ensure protection of ground water recharging areas while undertaking the development works in their respective Sub-regions.
5.	Intensive urban development/induced developments/water consuming industries, should not to be recommended/proposed in grey/dark blocks of ground water potential.	State Governments to ensure its implementation in their respective Sub-regions and monitor the same on regular basis.	State Governments to ensure its implementation in their respective Sub-regions and monitor the same on regular basis.	State Governments to ensure its implementation in their respective Sub-regions and monitor the same on regular basis.	State Governments to ensure its implementation in their respective Sub-regions and monitor the same on regular basis.
6.	<u>Recycling of waste water for non drinking water use:</u> Recycling of waste water for non drinking water use should be promoted. All the town level urban irrigation for landscaping, hotels, industrial units, air-conditioning of large centrally air-conditioned buildings/institutions, large installations and other non-potable demands should be met through treated recycled waste water as per norms. At least 50% of the treated waste water should be recycled for these purposes and emphasis should be laid towards waste minimization, which will also help in improving the environment as a whole. Government may also provide liberal tax rebates for Institutions/ industries adopting recycling of waste water to compensate for the cost involved in treating waste water for recycling. No fresh water should be used for irrigation purpose if treated waste water is available.	To be implemented and monitored on regular basis by the respective State Governments. Initially it is to be implemented in institutions/hotels and new colonies under development/proposed to be developed. If required, enabling provisions in the respective acts of the local bodies may be made by the respective State Governments.	To be implemented and monitored on regular basis by the respective State Governments.	To be implemented and monitored on regular basis by the respective State Governments.	To be implemented and monitored on regular basis by the respective State Governments.

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7.	Mass Awareness should be created among public through mass media with regard to saving water and waste minimization.	To be implemented and monitored by the respective State Governments.	To be implemented and monitored by the respective State Governments.	To be implemented and monitored by the respective State Governments.	To be implemented and monitored by the respective State Governments.
8.	Commercial Approach is required to be adopted by the local bodies for revenue generation. Water charges should cover at least O&M cost. The structure of the water tariff should be demand based and increase telescopically depending upon the monthly consumption and should be reviewed periodically as a built in mechanism to make the service self sustaining and a deterrent to wastage. Tariff for the recycled treated waste water should be fixed accordingly to encourage its non-potable uses such as gardening, horticulture and other uses referred above. "Public-Private Partnership" needs to be introduced for operation and maintenance of the water supply schemes.	States should improve water tariff by the end of 11 <sup>th</sup> Plan.  Water tariff to be reviewed every five years by the State Governments.			
9.	<u>Institutional Capacity Building:</u> Water demand management and institutional capacity building measures, e.g. zoning, setting up a contingent valuation fund, transparent operation-maintenance, regulatory guidelines etc. for efficient operation of the system contribute towards improvement in the finances.	Capacity building is a continuous process and required to be taken up immediately by the respective State Governments. The Board should help the State Governments in conducting the courses for capacity building.			
10.	Emphasis should also be given to the quality of water as per BIS standards and CPHEEO Manual.	Constituent States to ensure the quality of water as per standards and ensure implementation from first year of the plan and future also.	Constituent States to ensure and monitor.	Constituent States to ensure and monitor.	Constituent States to ensure and monitor.
11.	<u>Allocation of Land for Water Treatment Plants and Water Distribution System:</u> Planning of the city must incorporate advance land allocations at appropriate places for different components of water treatment & distribution systems.	To be ensured by the constituent States/development authorities in the first year of the implementation of Plan and subsequently to follow the same.	To be ensured by the constituent States/development authorities.	To be ensured by the constituent States/development authorities.	To be ensured by the constituent States/development authorities.

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12.	Provision for Special Component Plan for NCR should be made by the Planning Commission in the five-year plans and Sub-component Plans should be prepared by the respective State Governments. Centrally Sponsored Schemes for Infrastructure Development (drinking water supply, sewerage, sewage treatment plant, drainage, roads, power etc.) in NCR should be formulated with state share of 25%, central grant of 25% and remaining 50% could be interest bearing loan from NCRPB.	Respective State Governments, Central Ministries and Planning Commission to ensure the provision. Ministry of Urban Development and Poverty Alleviation to form a centrally sponsored scheme for the purpose.	Respective State Governments, Central Ministries and Planning Commission to ensure the provision. Centrally sponsored scheme to continue.	Respective State Governments, Central Ministries and Planning Commission to ensure the provision. Centrally sponsored scheme to continue.	Respective State Governments, Central Ministries and Planning Commission to ensure the provision. Centrally sponsored scheme to continue.
13.	<u>Investment Plan</u> : Total water requirement in the region would be 11,984 mld by the year 2021. Accordingly, there will be need to produce additional water and to strengthen/expand the water supply distribution system in the region. Total investment required for the production/augmentation of water would be about Rs. 5,992.15 crores by the year 2021 and for strengthening/expansion of distribution system/network, it would be about Rs.7,190.57 crores.	Fund requirement for drinking water supply is estimated to be Rs.2,637 crores.	Fund requirement for drinking water supply is estimated to be Rs.3,955 crores.	Fund requirement for drinking water supply is estimated to be Rs.3,955 crores.	Fund requirement for drinking water supply is estimated to be Rs.2,637 crores.