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Point for discussion this month **Road map for elimination of pollution from Mother Ganga**

Eternal Words

The best time to plant a tree is 20 years ago. The second best time is now.

- Dambisa Moyo, Zambian economist

From dawn to dusk, winter to spring, summer & autumn; the contrasts of nature refresh the mind & renew our sense of balance.

~ Phil Harding (2011)

Rivers are roads which move, and which carry us whither we desire to go.

~Blaise Pascal (1623-1662), "Thoughts on Mind and Style," Pensées, 1660

Dear Readers,

Greetings!

Once again it's very proud moment for every Indian as the most prestigious Stockholm Water Prize has been awarded to Dr. Rajendra Singh aka Waterman of India. This is the 25th year of the prize and the fourth time an Indian has won it.

SERI team is delighted as we have been working closely with Rajendrabhaisab since many years. Heartiest congratulations to him, Tarun Bharat Sangh, Jalbiradari and to every Indian pursuing the dream of clean and adequate water to everyone.

5th June is observed as World Environment Day! Billions of wishes are shared on this day for healthy and sustainable environment. I'm looking for the day when there will not be any need for any such day.

"Sustainable Environment" is today's biz word. When we are discussing the 'polluter should pay policy', in reality, common man is paying exorbitant amount to secure good, healthy environment for his family. Taking care of environment is always somebody else's job. A school teacher from Ranmala village near Pune has set very good example for those who really want to preserve and conserve the priceless natural resources for the future generations. Connecting a tree with every major moment of our life is a right step forward to conserve and increase the green cover.

Pollution of surface fresh water bodies is a primal area of concern as human settlement requires fresh water for sustenance. Whether for domestic or industrial use water is the fundamental need for development. A large part of the economy is dependent on availability of good quality fresh water resources. With this view in mind incumbent government of India has focused on elimination and control of pollution of rivers and other fresh water bodies. Ministry of Water Resources is constituted to recover from the present alarming situation of river pollution. This Ministry has special charge of river development and Ganga Rejuvenation.

The ministry has taken up a big challenge of making Mother Ganga free of pollution. Inputs to prepare road map for the same have been gathered from experts, local activists, scientific community, etc.

Here in this issue, we have listed initiatives by the Ministry to scale the goal. Some programmes and actions taken by the ministry are genuinely innovative and steps forward towards achieving the goal.

We wish great success, from the bottom of our hearts, for this novel task of bringing back the glory of our beloved Mother Ganga.

Thanking you

Chief Editor

News Review

A Tree for Life, Marriage and Death

Deforestation is a contributor to global warming, and is often quoted as one of the major causes of the enhanced greenhouse effect. In absence of plants, the accumulated carbon dioxide forms a layer in the atmosphere which traps the radiation from the sun. These trapped radiations are converted into heat causing global warming. Deforestation also results in changed water cycle, soil erosion. It is cause of flooding and landslides.

Many countries are having rules and laws for afforestation and having national programmes to promote afforestation. Not only at national but at individual level also one should take efforts for conservation and protection of environment and this has been very much highlighted through the action of Mr. P.T. Shinde, a 71 years old retired government school teacher.

Ranmala Village is located in Khed Taluka, about 50 km away from Pune city, this village has initiated plantation programme by encouraging villagers to plant samplings in the name of newborns, newly married couples or in the memory of their departed loved ones. This afforestation programme was initiated on 5th June 2003 by Mr. Shinde.

The villagers were facing loads of problems due to accumulation of wastewater at one end of the village; Mr. Shinde suggested the women folk of plantation of few samplings in this area so as to address the problem. This initiative was well appreciated by the villagers and they waved a green signal to the idea by Mr. Shinde of planting a sapling to celebrate child birth in the family and take care for the plant just like they would take care of the new-born baby. Then the same was extended by adding other occasions like marriages, memories of the deceased etc. The main reason behind the success of this initiative is the deep emotional connection developed between the villagers and the trees they have planted. Over the last decade, more that 22,000 trees have been planted as part of the 'Smritivan' (memorial forest) project.

Such novel work will help to increase the percentage of green cover on the Earth. Healthy trees not only purify the air but also supply oxygen for living beings. Also it will help to reduce green house effects, balance the temperature, harmonize all ecological elements and develop sustainable economics and so forth.

This programme is making an important gesture to the world to demonstrate how one small step at local level towards environmental protection and conservation brings significant effective alteration at the global level.

News Review

Initiatives of Ministry for Ganga River Restoration

Mother Ganga has exceptional place in the heart of every Indian. The incumbent government in India has promised the nation of clearing the pollution from Ganga and giving her back her original pristine form, which has been worshiped over centuries and has nurtured humanity in the people of this country.

After coming to power, keeping his promise the Hon. Prime Minister of India, Mr. Narendra Modi has announced "Mission Ganga". A new ministry, Ministry of Water Resources" (MoWR) headed by Sushri Uma Bharati ji, has been constituted to focus on the rivers of the country.

The Ganges was ranked as the fifth most polluted river of the world in 2007. The pollution has affected the ecology and economy of entire Ganga Basin. It had an adverse effect not only on the livelihood of 400 million people directly dependent on the river but also more than 140 fish species, 90 amphibian species and the endangered Ganges river dolphin.

Ganga River is flanked by 29 class I cities, 23 class II cities and 48 towns, plus thousands of villages. Nearly all the sewage, industrial effluent, runoff from chemical fertilizers and pesticides used in agriculture filed within the basin, and large quantities of solid waste, including thousands of animals' carcasses and hundreds of human corpses are dumped in the river.

The Ganga Action Plan I (GAP I) was launched in January 1986 with main objectives to improve the water quality by interception, diversion and treatment of domestic sewage and toxic industrial chemical wastes entering in to the river.

Despite of many efforts, GAP I was the biggest failure due to inappropriate environmental planning, no political dedication and vision, least input from multidisciplinary environmental experts in policy planning, lack of local technical expert committees for monitoring work and shortage of authentic information on-quality & quantity of waste generation, mode of disposal, possibilities for recycling, development of community treatment plants and cost effective treatment technologies, etc.

The governing party had vowed to bring back the lost glory of Ganga during it's pre-election campaign, and now they are planning a policy initiative to check pollution in the river and rejuvenation of river Ganga. The basic framework to achieve this national priority consists of evolving suitable strategies and action points in several thrust areas.

The work of Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India is based on three-pronged objectives like ensuring effective use of Water Resources, inclusiveness and sustainability.

Ministry held maintaining ecological flow in the river; abatement and mitigation of various types of pollution in it, restoring ecological sanctity, creating awareness about the conservation of river and ensuring people's participation in this process are some of the thrust areas.

Water Resources Minister Sushri Uma Bharati quoted, there are 144 drains discharging sewage in the Ganga; West Bengal and Uttar Pradesh are home to most of them. To ensure effective implementation of the first phase of Ganga rehabilitation programme, she has decided to spend 3-4 days a week on the banks of the river to keep a tab on the drains flowing into it. She had asked Uttarakhand Chief Minister Harish Rawat to prepare a roadmap on tapping of drains flowing into Badrinath and Gangotri. An eco-taskforce consisting of about 2000 personnel and a Ganga Volunteer Corps will be constituted and deployed along the banks of the river to ensure that it is not being dirtied, Bharti said. Under the plan to revive River Ganga, National Ganga River Basin Authority has resolved that by the year 2020 no untreated municipal sewage or industrial effluent will be discharged into river Ganga.

As part of its efforts to make the Ganga rejuvenation programme a mass movement, the Ministry of Water Resource launched a web portal to connect with the public on the ambitious project of the NDA Government.

The bilingual website has a provision to receive feedback from the public, where suggestions can be given about the Ganga Rejuvenation Plan. Public can also upload files up to the size of 4 MB along with their suggestions. The home page of the web portal nmcg.nic.in which opens with the message of Mahatma Gandhi on the holy Ganga is an encyclopedia of the largest river basin in India. Launching the website, Sushri Uma Bharti said, the launch of the website was an important tool to connect the public with the gigantic task of Ganga rejuvenation.

The government has sanctioned a project for the setting up of a network of 113 real-time water quality monitoring stations at critical locations along the Ganga River. The minister said that the locations of the monitoring stations would include upstream and downstream areas of major urban settlements, major tributaries upstream of the confluence of sewerage treatment plants in major drains, downstream of industrial areas at intakes of drinking water treatment plants and important bathing ghats.

Union Minister for Water Resources Sushri Uma Bharti asked the Forest Research Institute (FRI) and the Indian Council of Forestry Research and Education to pool in their vast resources and expertise for the restoration of Himalayan ecology and

rejuvenation of the Ganga. The Union Minister suggested that the twin goals of restoring the Himalayan eco-system and cleaning the Ganga will become more achievable if the FRI also devises a method to involve locals in the mission. She also stressed the need for community-oriented development by involving locals in growing medicinal and aromatic plants.

Further, Bharati said that steps are being taken to ensure that river Ganga flows uninterrupted and clean in three years. Bharati said that multiple measures to clean the river would be implemented on a short, medium and long-term basis. "The short-term measures would take off within six months. The medium-term measures will be implemented between six months and one-and-a-half years while long-term measures would be carried out between 22 months and three years," she said.

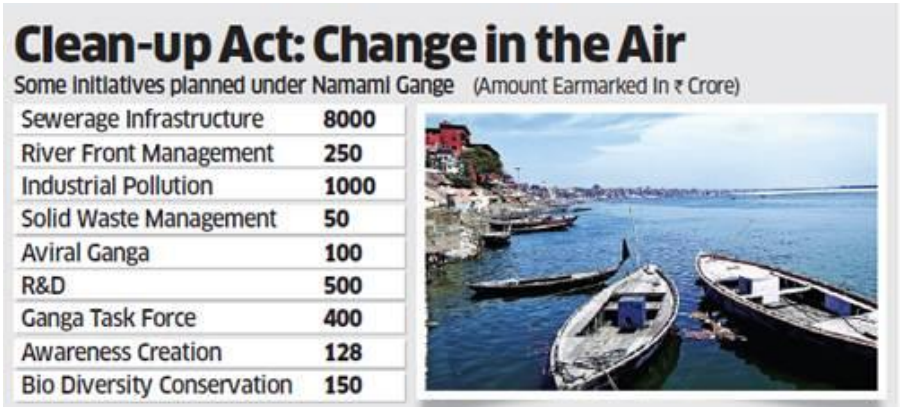
Ministry has identified that 764 industries, 118 municipal bodies and 1619 villages are discharging their wastes into river Ganga and dealing with such a huge number is not an easy task," she said, assuring that once the comprehensive plan is in place there would be no delay in stopping them from discharging waste and carrying out the processes for cleaning up the river.

The Union government may turn to technology for its ambitious project to clean and protect the Ganga by using sensors that can monitor the level of chemical components in the river and send SMS alerts in real time when quantities are excessive. The Minister is quite "enthused" about the idea of using technology and has asked industry to come up with proposals, according to a top executive of a state-owned company. The government is likely to rope in state-run Telecom Consultants of India, which has submitted a proposal to the ministry for the use of transducers to monitor effluent levels in the Ganga in real time. These devices convert chemical parameters into electrical information, process and transmit the data and are capable of sending automated SMSes through mobile networks to alert the authorities. "The status of Ganga water can be updated online to a centralised server and the regulator will immediately get an alert through SMS." An automated SMS would be generated to warn the company if any violation occurs. The government may revoke a factory's licence if there are repeated breaches. About 100,000 units would be needed for the Ganga project and each imported transducer costs close to $30,000.

The Union Minister allocated Rs 80 crore for expansion of the Jagjeetpur-based sewage treatment plant in Haridwar and has sought proposals from the respective departments for Kassaban-Jwalapur and Lakshar sewer nullahs in Haridwar district.

The Government has launched an 'Integrated Ganga Conservation Mission' – 'Namami Gange' in June, 2014, which approaches Ganga Rejuvenation based on learning lessons from the past, and by consolidating the existing ongoing efforts.

The Government has started the 'National Ganga River Basin Authority' (NGRBA) for funding pollution abatement projects on 70:30 cost sharing basis between Centre and States. This includes a World Bank assisted National Ganga River Basin Project (NGRBP) for Rs. 7000 crore, a Japan International Cooperation Agency (JICA) assisted Project at Varanasi for Rs. 496.90 crores and projects with Government's own resources.



Intensive river surface cleaning is set to begin at ten identified cities along the banks of Ganga backed with a Bhuvan Ganga mobile application, ten chosen cities — Haridwar, Varanasi, Allahabad, Kanpur, Mathura & Vrindavan, Patna, Kolkata, Garhmukteshwar, Sahibgunj and Nabadwip. River surface cleaning boats, trash skimmer machines and trash booms will be pushed into service at all these ten cities to arrest floating material and tackle river surface pollution.

This ISRO-backed India specific GIS tool will ensure real-time and public monitoring of river surface pollution on ground situations.

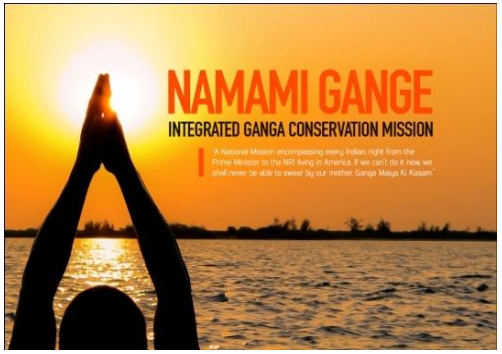
The government is set to launch a Bhuvan Ganga app whereby real-time images of the Ganga can be captured by the public through smartphones and uploaded right away to check for any river surface pollution. Once the image is uploaded and received by the central database, the contractors in charge of the surface cleaning at that particular location will be held accountable in case of laxity.

The Rs 20,000-crore Namami Gange project that was approved by the Union Cabinet in June 2014 specially focussed on 'strengthening public participation' and improved inter-ministerial and centre-state coordination for the cleaning of the Ganga

Namami Gange will focus on pollution abatement interventions, namely interception and diversion and treatment of waste water flowing through open drains via bio- remediation/ appropriate in-situ treatment/ use of innovative technologies/ sewage treatment plants (STPs)/ effluent treatment plant (ETPs). It also aims at rehabilitation and augmentation of existing STPs and immediate short-term measures for arresting pollution at exit points on river front to prevent inflow of sewage, the statement added.

Namami Gange

Union Budget 2014-15 has taken cognizance of the substantial amount of money spent in the conservation and improvement of the Ganga, which has a very special place in a collective consciousness of this country. However, the efforts have not yielded desired results because of the lack of concert by all the stakeholders.



Accordingly, an Integrated Ganga Conservation Mission called "Namami Gange" has been proposed to be set up and a sum of Rs. 2,037 crores has been set aside for this purpose. In addition a sum of Rs. 100 crores has been allocated for developments of Ghats and beautification of River Fronts at Kedarnath, Haridwar, Kanpur, Varanasi, Allahabad, Patna and Delhi in the current financial year.

Accordingly, Namami Gange approaches Ganga Rejuvenation by consolidating the existing ongoing efforts and planning for a concrete action plan for future. The interventions at Ghats and River fronts will facilitate better citizen connect and set the tone for river centric urban planning process.

Recognizing the multi-sectoral, multi-dimensional and multi-stakeholder nature of the Ganga Rejuvenation challenge, the key Ministries comprising of (a) WR, RD&GR, (b) Environment, Forests & Climate Change, (c) Shipping, (d) Tourism, (e) Urban Development, (f) Drinking Water and Sanitation and Rural Development have been working together since June, 2014 to arrive at an action plan. The concerned ministers have nominated a Group of Secretaries (GoS) to develop a draft action plan and have held periodical meetings to review the progress and provide guidance. The GoS submitted its initial report on 21st July, 2014 and after taking into account the feedback received from the Hon'ble Ministers, the final report has been submitted on 28th August, 2014.

While the report is being examined in the Ministry, NMCG has been working in parallel on a draft strategy taking into account all these developments.

As already identified in the report of the GoS, the long-term vision will emanate from the Ganga River Basin Management Plan being prepared by the Consortium of 7 IITs, first version of which is likely to be available by the end of this year.

On a medium term basis, certain interventions both infrastructure and non-infrastructure need to be introduced to set the tone for implementation of long term vision as also take up so called "no regret" activities in the interim.

Following are proposed to be taken up under Namami Gange:

a) **Nirmal Dhara- ensuring sustainable municipal sewage management**
   - Project prioritization in coordination with Ministry of Urban Development.
   - Incentive for states to take up projects on Ganga Main-stem by providing an additional share of central grants for sewerage infrastructure.
   - Uniform standards for both MoUD scheme and Namami Gange programme, 10 years mandatory O&M by the same service provider at par with NGRBA programme and PPP, Mandatory reuse of treated water
   - Expanding coverage of sewerage infrastructure in 118 urban habitations on banks of Ganga- estimated cost by MoUD is Rs 51000 Crores

b) Nirmal Dhara- managing sewage from Rural Areas
   - Mo DWS scheme for all Ganga bank Gram Panchayts (1632) free from open defecation by 2022, at a cost of Rs 1700 Crores as central share

c) Nirmal Dhara- managing Industrial discharge
   - Making ZLD mandatory
   - Rationalized water tariff to encourage reuse
   - Real time water quality monitoring

d) Aviral Dhara
   - Enforcing River Regulatory Zones on Ganga Banks
   - Rational agricultural practices, efficient irrigation methods
   - Restoration and conservation of wetlands

e) Ensuring ecological rejuvenation by conservation of aquatic life and biodiversity

f) Promotion of Tourism and Shipping in a rational and sustainable manner

g) Knowledge Management on Ganga through Ganga Knowledge Centre

However, to control the spread of pollution and to contain it in manageable limits certain interventions would be necessary in short term. Group of Secretaries under guidance of Hon'ble ministers has identified following activities:

1. Scheme for rehabilitation and up-gradation of existing STPs along Ganga
2. Ensuring 100% sewerage infrastructure in identified town alongside Ganga
3. In situ sewage treatment in open drains
4. Support for preparation of DPRs
5. River Front Management for Ghat's developments in selected cities and towns
6. Industrial pollution abatement at Kanpur on priority
7. Action Plan for Char Dham Yatra –Public amenities, waste disposal and sanitation
8. Capacity building of urban local bodies
9. Afforestation – Conservation of Flora
10. Conservation of Aquatic life – special attention on Dolphin, Turtles and Ghariyals etc.
11. Disposal of flowers and other puja material
12. Ganga Vahini
13. GIS data and Spatial Analysis for Ganga basin
14. Study of communities depending on Ganga for their traditional livelihood
15. National Ganga Monitoring Centre
16. Special guidelines for sand mining in Ganga
17. Assessment of Special Properties of Ganga Water
18. Communication and Public Outreach Activities

National Mission for Clean Ganga (NMCG), an autonomous body under the Water Ministry has launched 'Nirmal Ganga Sahbhagita' for initiating a sustainable partnership with 118 urban local bodies located along the river for a clean Ganga. In a notice to 78 urban local bodies of Uttrakhand, UP, Bihar and Jharkhand last week, the ministry had directed to furnish action plans to set up sewage treatment plants to it within 15 days, as 75 per cent of the pollution in the river is caused by untreated sewerage waste.

National Mission for Clean Ganga (NMCG) is the implementation wing of National Ganga River Basin Authority (NGRBA). It is a registered society originally formed by Ministry of Environment, Forests and Climate Change(MoEFCC) on 12th August 2011 under the Societies Registration Act, 1860. As per the 306th amendment in the Government of India **(Allocation of Business)** Rules, 1961, both NGRBA and NMCG are allocated to the Ministry of Water Resources, River Development and Ganga Rejuvenation(MoWR,RD &GR). Accordingly the General Body of NMCG is being re constituted. The Secretary to the Government of India, MoWR, RD & GR is the current chairman of the Governing Council of NMCG. As per the approval of the Cabinet Committee on Economic Affairs (CCEA), the mandate of NGRBA is being implemented by, the National Mission for Clean Ganga (NMCG).

Rejuvenation of River Ganga

The work of Ganga Rejuvenation has been transferred to this Ministry via Gazette notification dated 1.8.2014. Ganga and its tributaries have been brought under one umbrella. Rejuvenation of Ganga has been prioritised as "restoration of its wholesomeness by ensuring '*aviral dhara*' and '*nirmal dhara*' as also its ecological and geological integrity. Following major initiatives have been taken to rejuvenate Ganga:

- National Ganga River Basin Authority (NGRBA) has been expanded by including Minister (WR, RD and GR) as vice-chairman and also other ministers concerned with wholesome development of Ganga.
- Improved coordination among various ministries through Group of Secretaries (GoS) setup on 6.6.2014; The GoS has held 10 meetings and submitted its report on 28.08.2014.
- The First National Dialogue i.e 'Ganga Manthan' was held on 7th of July 2014; more than 500 spiritual leaders of all beliefs, academicians & technocrats, NGOs & Environmentalists, and Policy makers & implementers actively participated in the deliberations. To facilitate inflow of ideas, suggestions and involvement of people, a website of NMCG has been launched on 12th of September 2014.
- A committee of Additional Secretaries of Mo(WR, RD&GR) and MoEF&CC constituted to recommend on provisional environmental flow;
- A Committee constituted to revise existing guidelines on sand mining by MoEF&CC;
- Forest Research Institute (FRI), Dehradun has been requested to prepare a plan for afforestation and Conservation of Flora
- In collaboration with National Medicinal Plants Board a strategy is being finalized for conservation of medicinal plants in the upper reaches of Ganga.
- A project has been undertaken for identification of special properties of Ganga Jal, water quality monitoring and sediment analysis through National Environmental Engineering Research Institute.

- A three member technical committee comprising Director, NEERI, Secretary CPCB and Prof. Vinod Tare, IIT, Kanpur constituted to study and recommend suitable technologies for pollution abatement in river Ganga.

Technology Upgradation

- The management of river water system is being modernised with the use of latest technology. Hydrology Project-III is being launched with World Bank assistance for developing Decision Support System for modernisation of Ganga and Brahmaputra Basins, as well as other uncovered parts of the country, at a cost of Rs. 3,000 crore.
- An ambitious National Aquifer Mapping and Management Programme (NAQUIM) has been launched entailing mapping of aquifers in an area of 8.89 lakh sq. km of the country on a scale of 1:50,000 and in 3-D. Six pilot projects of aquifer mapping have been carried out in five States viz. Rajasthan, Bihar, Maharashtra, Tamil Nadu and Karnataka using advanced techniques including *Heli-borne Transient Electromagnetic surveys* for faster and accurate mapping of aquifers. This will help in managing Aquifer recharge, river bank filtration and identification of critically stressed blocks as well as identification of contaminated blocks.
- A World Bank aided project viz. Dam Rehabilitation and Improvement Project (DRIP) is in operation. Under the project, advanced materials and simulation techniques and guidelines are being brought/evolved in the country to ensure dam safety.
- To empower communities through well informed water related database for better research, planning, development, management in the area of water resources, under Development of Water Resources Information System (DWRIS)-a Web enabled Water Resources Information System' named as IndiaWRIS, has been undertaken. It will add 800 new hydrological observation sites and expand monitoring of major reservoirs to 120 reservoirs.

International Cooperation

- An agreement has been signed between India and Nepal during the recent visit of Indian Prime Minister to Nepal paving the way for constitution of Pancheshwar Development Authority. The Pancheshwar Mutipurpose Project will have an installed capacity of 5600 MW and will create an irrigation potential of 0.37 MHa (0.24 in Indian side MHa and 0.13 MHa in Nepal) at a cost of Rs. 29,704 crore (2011 prices). It will also mitigate floods in the States of Uttarakhand and Uttar Pradesh.
- Implementation Plan with China was revised on June 30, 2014 to receive extended hydrological information of Yaluzangbu /Brahmaputra rivers from 15th May to 15th October every year.
- MoU with Australia for cooperation in the field of water resources has also been signed recently.

India Water Week 2015

- The Third edition of India Water Week has been scheduled for policy dialogue, stakeholder's consultation and will showcase innovation through exhibition on "Water Management for Sustainable Development" during 13-17 January, 2015 at New Delhi.
- All aspects relating to water management for sustainable – agriculture, drinking water supply, urbanisation, industrial and energy development to be discussed. A large participation of international experts is expected.
- Australia and Israel have agreed to be the main partner countries. Besides States of Maharashtra, Gujarat, Andhra Pradesh, Karnataka, Sikkim etc. would be partners for organising the event. People's participation through concurrent mass awareness programme on water conservation with focus on '*Hamara Jila - Hamara Jal*' at all district Head quarters will be undertaken.

Future Directions

- *Nirmal* and *Aviral* Ganga
- Providing irrigation water to each field through creation of enhanced irrigation projects
- Conservation of water bodies and ground water
- Bridging the gap between irrigation potential created and utilized
- Incentivizing the States to undertake water sector reforms.
- National Aquifer Management Programme through community participation
- Use of latest technology for modernization of water resources and flood management
- Active participation of water users associations (WUAs).
- Water Sector Schemes to be rationalized for easier implementation; effective use of water, inclusiveness and sustainability.
- Comprehensive planning for Dam Safety.

Major activities

Conservation of the River Ganga, Yamuna & other tributaries

- Pollution abatement- Treatment plans for both domestic & industrial wastewater.
- In-situ treatment of drains
- Rural sanitation in the urban & rural areas in the Ganga river basin.
- Afforestation in the river basin.
- Aquatic life conservation.
- Environmental Flow ¾ River Water quality
- Communication & public participation. ¾ Ganga Knowledge Centre.

Major Achievements

- 76 Projects approved at the cost of Rs. 4974.79 for creating treatment capacity of 678.23 MLD & sewer network of 2546 Kms.
- Already treatment capacity of 123 MLD & 572 Kms of sewer net work has been created at the expenditure of Rs.1000.07 Cr.
- Integrated Ganga Conservation Mission – Namami Gange program with a budget support of Rs. 2037 Cr & Rs.100 Cr for Ghat development in 2014-15.
- Identification of 764 grossly polluting industries through Pollution Assessment and Inventorization Scheme(PAIS).
- Time bound action plan for online continuous monitoring system by 31st March 2015.
- Strategies to adopt Zero Liquid Discharge for selected industries.
- Ganga Knowledge Centre has been set up at NMCG.
- Indian Institutes of Public Administration has been engaged for collecting the legacy data on river Ganga.
- Collaborations with national international institutions for knowledge sharing and technical cooperation.
- Consortium of 7 IITs engaged in the preparation of Ganga river Basin Management Plan. 36 Thematic reports have been submitted. Final report is expected soon.
- National level stakeholder dialogue- Ganga Manthan held in July 2014.
- National levels meeting with industrial associations & representatives.
- Strategic communication plans developed in association with John Hopkins University.
- Clean Ganga Fund has been set up to encourage public participation & contribution.

Way forward:

- GIS mapping of the basin.
- Survey & threat assessment of Gangetic dolphin.
- Restoration of key stone biotic species. 9 Creation of STPs in 118 towns through MoUD.
- 14 towns in the river basin to have full treatment capacity.
- Real time effluent monitoring for grossly polluting industries.
- Real time water quality monitoring.
- Revival of bio sanctuaries.
- Afforestation of native & medicinal plants.
- Ganga Task force & Ganga Vahini.
- Common Effluent treatment plant at Kanpur.
- Ground water recharges & water conservation efforts.
- Achieving Zero Liquid Discharge (ZLD) in selected industries.
- Conservation of wet lands & flood plains.
- Research on special properties of Ganga water.
- 26 River Front Development (RFD) projects covering 223 small ghats.
- PPP model for projects. 9 Assessment & control of non point source of pollution.
- Pilgrim spots development.

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