

GIS Technology on Ganga Cleaning Projects

National Mission for Clean Ganga (NMCG) is using Geographic Information System (GIS) technology for improving planning, execution and monitoring of projects as well as providing platform for central repository of all data related to Ganga river basin including Sewage Treatment Plant (STP) / Common Effluent Treatment Plant (CETP), water quality monitoring location, afforestation, ghats and crematorium, river front development. This assists NMCG in improving its effectiveness in pollution abatement and river rejuvenation work.

Government of India is supplementing the efforts of the state governments in addressing the pollution of river Ganga by providing financial assistance to the states. Government of India has approved Namami Gange Programme in May 2015 for conservation of river Ganga with total outlay of Rs.20,000 Crores. Namami Gange Programme is an umbrella programme which integrates previous and currently ongoing initiatives by enhancing efficiency, extracting synergies and supplementing them with more comprehensive & better coordinated interventions.

The following corrective measures have been taken up under Namami Gange Programme for Ganga Clean up in Uttar Pradesh and other states in the last 3 years include:

- i. Condition assessment study taken up to know the sewage generation and sewage treatment gap in towns along main stem of river Ganga for sanctioning of sewerage infrastructure projects in holistic and scientific manner.
- ii. Rehabilitation of existing STPs and their Operation & Maintenance (O&M).
- iii. The Namami Gange Programme have been made 100% central sector scheme to ensure sufficient availability of funds to the state government, reduction in time loss for collection of state share thereby faster approval of contracts and effective implementation of the projects;
- iv. The Operation and Maintenance period have been increased from 5 to 15 years to ensure performance of STPs for a longer period.
- v. Formation of NMCG as an authority and enhanced financial power for faster sanctioning of projects and award of contracts; formation of state and district Ganga Committee for effective monitoring of works at the grass root levels.
- vi. Implementation of projects under Hybrid Annuity Mode (HAM) to address issues such as sub-optimal design, lesser O&M support and lack of ownership. HAM will also ensure ownership and distinct accountability for continuous acceptable performance in the long term of the STPs.
- vii. One City one Operator: Existing STPs in 13 towns namely Kanpur, Allahabad, Mathura, Patna, Kolkata, Howrah-Bally-Kamarhati-Baranagar and Bhagalpur are being integrated with new sanctioned STPs and tendered under HAM based PPP mode for selection of one specific operator for better accountability and monitoring.
- viii. Recycling and reuse of treated waste water is being promoted; Memorandum of Understanding (MoU) signed with Indian Oil Corporation Limited (IOCL) for using of treated waste water for their Mathura Refinery.
- ix. Drain treatment by use of innovative technology and modular STPs;
- x. Creation of Rural Sanitation facilities in identified villages along river Ganga in support from Ministry of Drinking Water and Sanitation. 4465 of villages along Ganga are declared Open Defecation Free (ODF).
- xi. River Surface Cleaning activities taken up to clean river surface and banks from solid waste on a regular basis.

The amount spent by NMCG since its inception i.e. from Financial Year 2011-12 to 2018-19 till 30th June, 2018 is Rs.4,322.37 crore. Under Namami Gange Programme, a total of 221 projects have been sanctioned at a cost of Rs.22,238.49 crore. Out of these 221 projects, 58 projects have been completed and 95 projects are under implementation. Details are given below:

- 105 projects are sanctioned for development of sewerage infrastructure to provide total treatment capacity of 3,293.68 MLD (including rehabilitation of 887.00 MLD) and laying of sewerage network of 4,842.30 km. at an estimated cost of Rs.17,485.11 crore. Out of these, 26 projects are completed which has created new STP capacity of 328.13 MLD and rehabilitated 92 MLD of STP capacity. In addition, 44 projects are at advanced stages of completion to create new STP capacity of 769 MLD and rehabilitation of 86 MLD capacity.
- 1 project covering 20 drains have been sanctioned for decentralized treatment of drains through modular STPs.
- Ghat, Crematoria and River Front Development (RFD): A total of 63 projects are approved for development of Ghat & Crematoria and river Front Development. Out of these 24 projects are completed. Rest of the projects is ongoing. Among the ongoing projects, 54 ghats and 10 crematoria have been completed.
- Projects sanctioned for Ghat cleaning in Varanasi;Bithoor, Kanpur, Allahabad, Mathura-Vrindavan and Haridwar.
- A project sanctioned for river surface cleaning at 11 places namely Delhi, Haridwar, Mathura-Vrindavan, Garhmukteshwar, Kanpur, Allahabad, Varanasi, Patna, Sahibganj, Howrah and Nabadwip.
- 14 projects sanctioned for institutional development projects including water quality monitoring;1 project is completed and 7 is ongoing.
- 4 projects sanctioned on implementation support/research development; 1 project completed and 1 is ongoing.
- 19 projects sanctioned for conservation of biodiversity and afforestation. Out of these, 6 projects completed and 8 projects ongoing.
- The project sanctioned for composite ecological task force is ongoing.
- 8 projects sanctioned for bioremediation of drains.
- A project for development of toilets across gram panchayats along Ganga River.

This information was given by Union Minister of State for Water Resources, River Development and Ganga Rejuvenation Dr. Satya Pal Singh in a written reply in Rajya Sabha today.

NP/SKP/IA

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