

National Seminar
On
**R & D Perspective for
Rejuvenation of River Ganga**
(December 16-17, 2015)



Organised by



National Institute of Hydrology
Roorkee – 247 667 (Uttarakhand)

INTRODUCTION

Ganga, a cradle of human civilization since time immemorial, is one of the most sacred rivers in the world and is deeply revered by the people of this country.

The Ganges river basin is one of the most fertile and densely populated in the world and covers an area of over 8,61,404 km² in India. The river flows through 29 cities with population over 100,000, 23 cities with population between 50,000 and 100,000, and about 48 towns. Total population which resides in the basin is more than 500 million.

The river is lifeline for millions of people who depend on the various socio-cultural and ecosystem services offered by the river and its vast basin. The River and its basin also play a vital role in the ecological balance of the Himalayas.

Unfortunately, with proliferation and diversification of human and developmental activities in the basin, the resulting environmental degradation (both in terms of quantity and quality) has greatly increased in recent decades.

In 2014, GoI started an integrated Ganga development project titled '*Namami Gange*' for the rejuvenation of Ganga River. The program is focused on maintaining continuous flow as well as pollution abatement interventions namely Interception, diversion & treatment of wastewater flowing through the open drains through bio-remediation / appropriate in-situ treatment / use of innovative technologies / sewage treatment plants (STPs) / effluent treatment plant (ETPs); 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 etc.

The main sources of Ganga river pollution are urban liquid waste (sewage/sullage), industrial liquid waste, runoff from agricultural fields, large scale bathing of cattle, throwing of dead bodies in the river, surface run-off from solid municipal / industrial solid waste landfills or dumpsites. As per CPCB reports, three-fourths of the pollution of the river comes from the discharge of untreated municipal sewage.

Industrial wastewater is also discharged by a number of industries situated in the riparian zone. There are 764 grossly polluting industries discharging wastewater to main stem of River Ganga (either directly or through drains) in Uttarakhand, Uttar Pradesh, Bihar and West Bengal. The

water consumed by grossly polluting industries generates about 45% of total water consumed. In terms of number of industrial units, tannery sector is dominating where as in terms of wastewater generation, pulp & paper sectors dominate, followed by chemical and sugar sector.

OBJECTIVES

This Seminar is being organized to discuss various R&D options which can be implemented to address the objectives of "*Namami Gange*" program of MoWR, RD & GR, GoI for rejuvenation of the Ganga River. The participants are expected to share their experiences and views on the following aspects of Ganga River during the seminar:

- Assessment of basin water resources
- Possible impact of climate change on river basin to evolve adaptation strategies
- Environmental, ecological and pollution issues
- Research needs and methodologies for sustainable development and management
- Identification of policy and governance issues for sustainable development and management
- Experience of the academicians, scientists, engineers, NGOs, policy and decision makers on different aspects of sustainable management of Ganga Basin
- Scope for people's participation and role of NGO's and mass media in Ganga Basin management

THEMES

The seminar will focus on the following major themes:

- Data base management, hydrological analysis and modeling of Ganga river basin
- Sustainable management of surface and ground water resources of the basin
- Governance options & policy implementation
- Flood and drought management
- Snow and Glacier contribution in river flows
- Climate change impact on river health
- River morphological studies
- Sedimentation and erosion: assessment, modeling, control and management
- Environmental impact assessment of developmental projects

- Environmental flows and ecological aspects
- Water quality (both surface and groundwater) monitoring, modelling and management
- In-situ (including bioremediation) and other cost effective waste water treatment technologies
- Effective monitoring and corrective measures of works related to rejuvenation
- Use of Remote Sensing, GIS and GPS in rejuvenation works
- Use of nuclear science in water availability and quality assessment
- Application of advanced instrumentation for rejuvenation works
- Role of community, NGOs, mass media in rejuvenation works

VENUE AND DATE

The National Symposium shall be held in the premises of National Institute of Hydrology, Roorkee - 247 667 during December 16-17, 2015.

CALL FOR PAPERS

Researchers, Academicians, Engineers, Professionals, Policy makers, Planners, Managers and Non-Governmental Organizations (NGOs) are invited to present their original work, case studies, modeling and experimental work as technical papers during the seminar. Authors are requested to submit abstract (upto 1000 words) as per dates given below. The abstracts will be reviewed by the Technical Committee and selected authors shall be requested to make presentation during the seminar. The authors selected to make presentations shall also be requested to submit full length papers (not more than 10 pages) typed in MS Word, in Times Roman (12pt) font, single spaced and 2.5 cm margins on all sides (A4 size). Title of the paper should be in Upper Case, left aligned, followed by name(s) of the author(s), postal address(es) and email id(s). The papers shall be published in a post seminar proceedings volume after review.

IMPORTANT DATES

Submission of abstracts: 25th November, 2015
 Acceptance of abstracts: 30th November, 2015
 Submission of full length papers: 10th December, 2015

PATRON

Sh. Shashi Shekhar, Secretary, MoWR, RD & GR, Gol

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 Sh. N K Sharma, IRI, Bahadrabad

ACCOMODATION

Arrangements would be made to accommodate the delegates in NIH, CBRI and IIT, Roorkee Guest House or other Govt. Guest Houses / Hotels on first come first serve basis. Delegates requiring accommodation should clearly mention their requirement in the registration form. The charges for the accommodation are to be borne by the delegates. All the delegates will have to make their own travel arrangements.

ABOUT ROORKEE

Roorkee is a medium size town located 180 km North of Delhi on Delhi – Haridwar / Dehradun highway and is well connected by rail and road to many important cities of India. Roorkee is the nerve of water resource engineering education and research in India. Apart from NIH, reputed institutes like Indian Institute of Technology Roorkee, the Central Building Research Institute, the Irrigation Research Institute, and the Bengal Engineering Group & Centre are located at Roorkee.

During the month of December, weather in Roorkee is cold. The maximum and minimum temperatures are about 24°C and 7°C, respectively. The participants are advised to bring woolen clothing with them.

ADDRESS FOR CORRESPONDENCE

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