

DELHI DECLARATION on Incessant Ganga 2017

Outcome of Conference on

“SEDIMENTATION, A COLOSSAL IMPEDIMENT TO INCESSANT FLOW OF RIVER GANGA – PROBLEMS AND SOLUTIONS”

Held on 18th-19th May 2017 at India International Centre, New Delhi

A Conference on “Sedimentation, a Colossal Impediment to Incessant Flow of River Ganga – Problems and Solutions” was organized by the Government of Bihar, Water Resources Department at India International Center on 18th – 19th May 2017 at New Delhi, to discuss various aspects of the problems caused by Sedimentation

- to the flow of the river,
- to the purity and natural health of the water in the river and
- to the life of the people in the river basin, upstream as well as downstream.

There was a consensus that the problem caused by Sedimentation is gigantic in nature as well as multi-dimensional and that - to find a comprehensive understanding and to design a set of solutions, in long-term strategy as well as in step by step implementation - is the need of the hour.

India's socio-cultural ethos is such that it is impossible to perceive the nation without the river Ganga. The basin of river Ganga consists of 26% of India's land mass and supports 43% of the country's population. The river carries 28% of the nation's surface water resources. The Ganga river basin covers 11 states viz. Uttarakhand, Uttar Pradesh, Madhya Pradesh, Rajasthan, Haryana, Himachal Pradesh, Chattisgarh, Jharkhand, Bihar, West Bengal and Delhi. With concern for this Ganga River System and population of the river basin at heart, scientists, researchers, policy makers, academicians, social activists, legal experts, NGOs and people's representatives gathered on a common platform to ponder over the issues and to find a common approach and road map to comprehensively understand and then to effectively address, on the field, the problems created by the out-of-control siltation. This Conference is the 2nd Conference in an ongoing series on 'Aviral Ganga', the first conference "Incessant Ganga" having been held on 25th-26th February 2017, at Patna, Bihar. It was recognized in that conference that creating an integrated framework of partnership for the River Ganga Rejuvenation Mission is a priority and that within this Mission the understanding of silt and sediment flows in the entire Ganga River and her tributaries is, now and henceforth, permanently highlighted and emphasized for inclusion and study in all current and future planning and implementation. The second conference was held to further this study, to follow up on the deliberate emphasis on siltation issues, and the findings and outcome thereof are this DELHI DECLARATION on Incessant Ganga 2017.

soil types, vegetation , precipitation & temperature based on available scientific data and fresh reviews.

- Vulnerability and risk appraisal of the embanked sections of the Ganga river system and network
- Socio-Economic Mapping of the vulnerability of natural resources and human resources
- Sediment Management prospects using Catchment Area Treatment plans, including prevention of erosion and de-forestation as well as acceleration of existing efforts in greening through afforestation – for the Ganga and all her tributaries
- Reduction of sediment input to the river system in concurrence with its local SEE approach
- Control of the sediment inflows using innovative techniques in high-risk sediment induced flood-prone areas
- Analysis for the prospect of remodeling Farakka barrage system to upgrade its hydraulic performance as well as sustainability by using state-of-the-art design techniques. Special study of alternate and latest technologies and innovations including 'piano-key' modification of barrages.
- Inter River basin impact and treatment management plan, specially other rivers joining.
- Sediment inflows due to sewage and municipal solid waste entry which make sediment unhealthy need to be trapped and managed.
- Innovative ideas such as Piano-key-weir system & other techniques and technologies available may be looked at as remedial measures.

Experts - from various institutions of repute like Indian Institute of Technology, National Institute of Technology, NEERI, NIH etc., social and religious institutional forums and individual researchers and personalities of eminence from religious, social, legal, judicial, administrative, river engineering, earth science, climate change and allied fields - participated wholeheartedly in the sessions and expressed their valuable suggestions. The Conference Management Team is thankful for their rich contributions.

The primary concerns and conclusions presented and shared were:

- (1) Life sustaining ecological purity of the river water is not possible without bringing back the incessant flow in the entire reach of the Ganga river and all her tributaries. A minimum situational flow-velocity is required to keep the silt flowing.
- (2) Need of accepting the inter-national and inter-state presence of the Ganga River Basin System thereby creating and sustaining a collectively agreed mutually enriching relationship of heart and mind, without which a comprehensive inclusive approach to rejuvenate and restore the Ganga will be impossible

- (4) That a time-bound comprehensive study be undertaken concerning siltation and its ill-effects due to the Farakka Barrage:
- i. All the gates and sluices should be made functional round the year
 - ii. To ensure representation of Bihar Government officers in operation, maintenance & monitoring of Farakka Barrage
 - iii. To analyze the remodeling prospects of Farakka barrage system to upgrade its hydraulic performance as well as sustainability using state-of-the-art design techniques in the existing installation and, if possible, an alternative solution may be explored
- (5) That a compilation of all initiatives of professionals, scientists, environmentalists, ecologists, NGOs be done, keeping in view the health of the Ganga River System
- (6) That a modular approach with a mapping of every aspect of the Ganga River Basin from source of the river and all her tributaries to the confluence with the Bay of Bengal, be created as shared-reference maps and documents at basin, sub-basin, macro-basin, micro-basin and watershed levels – to enable the setting of grades and Mission Implementation Priorities with respect to studying everything which positively or adversely affects the goal of ensuring an incessant flow. The maps will be based on remote sensing, geological, geo-morphological and geophysical data. The Data gathering and integration will be guided by a Real Time, Inclusive and Integrative 'Data Driver Decisions' (DDD) Model.
- (7) That release of requisite e-flows should be done by all dams and barrages upstream of Bihar as decided by scientific and systemic assessment
- (8) Dredging of National Waterways-1 is increasing erosion in Bihar. The project should be put on hold until a scientific study of impact of dredging on erosion is done
- (9) To ensure fair share of the water of the Ganga basin, originating from Gomukh and Badrinath, for Bihar and Bengal. It should be a joint responsibility of the Ganga Basin States to provide water to the Ganga to meet India's obligation to Bangladesh
- (10) To ensure discharge at different sub-basin terminal points in the upper riparian States of River Ganga giving due consideration to the needs of population, agriculture, industry and other sectors. A thorough research and review of constitutional provisions with respect to water must be sought and renewed in the drafting of appropriate legislations and amendments as may be needed in the pursuit of Aviral and Nirmal Ganga. We must therefore guide our planning and implementation with supreme respect to guidelines in our Constitution such as:
- i. As envisaged in the Directive Principle of the State Policy, under Article 48 A. Protection of and improvement of Environment and safeguarding of forests and wildlife.
 - ii. To discharge Fundamental duty as envisaged under Article 51 A (g) to protect and improve the natural environment including forests, lakes. Rivers and wildlife and to have compassion for living creatures.