

### 1. Genesis

The National Ganga River Basin Authority (NGRBA) was constituted by the Government of India as an apex authority for planning, financing, monitoring and coordinating the collective efforts of Central and State Governments for effective abatement of pollution and conservation of River Ganga in accordance with the Environment (Protection) Act, 1986. An important function of NGRBA is to prepare and implement a Ganga River Basin Management Plan (GRBMP), for which it needed expert help. IITs ("Indian Institute of Technology"s) had such expertise, but it was distributed among various IITs.

In March 2010, the possibility of several IITs jointly preparing a Ganga River Basin Management Plan had been mooted in a conference held at IIT Bombay. Accordingly, two joint meetings of IITs were held in April 2010 to identify the potential project tasks, form key thematic workgroups to focus on these tasks, and work out the modalities of collaboration between the groups. A meeting was then held between a Consortium of 7 IITs (namely, IIT Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) and the then Minister of State, Ministry of Environment and Forests, Government of India in May 2010, following which the project proposal was submitted to the government. Thereafter, in July 2010, the Ministry of Environment and Forests, GoI signed an agreement with the Consortium of 7 IITs and awarded the project for preparation of Ganga River Basin Management Plan to the Consortium led by IIT Kanpur.

The IIT Consortium formed a Core Group of Faculty Experts to identify specific tasks and address the modalities of working. The project work involved both primary and secondary data collection through field work and information gathering from government and non-government sources. A large number of consultation meetings and workshops were also held with stakeholders and experts from a wide cross-section of society to distil critical issues and obtain valuable inputs from their perceptions and knowledge base. These multi-pronged efforts led to the preparation and submission of several Thematic Reports of GRBMP at frequent intervals. After adequate information had been obtained to arrive at some reliable conclusions, an Interim GRBMP was submitted to the government in September 2013.

Feedback was received from experts and stakeholders on the Interim GRBMP after it had been submitted. After assessing the substance of such reviews and feedbacks, and on



completion of the ongoing thematic analyses, the final GRBMP was submitted to the government in January 2015. This final Plan was presented as a three-tiered structure comprising of: (1) the Main Plan Document, (2) Mission Reports on each of the 8 GRBMP Missions detailing the key action areas of GRBMP, and (3) the Thematic Reports providing background information and analyses on specific themes of the Plan.

Subsequent to the submission of the final GRBMP, the concerned issues were frequently discussed with government representatives as and when any clarifications were sought on the GRBMP. The IIT Consortium has been extending its services by also participating actively in allied issues as and when the Consortium's input was sought by the government. Some further work pertaining to the Plan was also carried out for additional field assessments and creating demonstration templates for implementing the Plan.

It is now felt necessary to induct advice and continual scientific inputs from other premier and national science and technology institutions for implementation and dynamic evolution of GRBMP. It is also realized that IITC (IIT Consortium) also needs to expand by increasing the number of partner institutions to leverage the vast knowledge base and experience of such institutions in the fields of environment, water resources, ecology & bio-diversity, investment and financing, legal framework, system integration, etc. Since IIT Kanpur has successfully led the efforts of preparing GRBMP 2015 involving many institutions, officials of both Ministry of Human Resource Development (MHRD) and Ministry of Water Resources, River Development and Ganga Rejuvenation (MoWR, RD & GR) have agreed that it may continue to lead the efforts.

IIT Kanpur is thus assigned the responsibility of identifying relevant persons from premier and national scientific and technology institutes, creating a Consortium of such institutes, and providing continual scientific input for implementation and dynamic evolution of GRBMP through the Consortium. In select cases, international experts and organisations may also be invited on a case to case basis to contribute to the enhancement of the plan and its implementation strategy.

## **2. Salient Features**

The Ministry of Water Resources, River Development and Ganga Rejuvenation has signed a Memorandum of Agreement with Indian Institute of Technology, Kanpur (IITK) for provision of continual scientific support in the implementation and dynamic evolution of the Ganga River Basin Management Plan. The salient features of the agreement are as follows.



- The MoA is for a duration of 10 years.
- IITK is to develop a consortium made up of relevant national and international institutes/organizations and provide expertise to the Government of India on Ganga River Basin Management.
- The programme has been aptly named “Centre for Ganga River Basin Management and Studies”.
- The Centre will act both as a think-tank to the Government as well as a knowledge hub to coordinate all activities within the Ganga River Basin.
- The activity set will include science, technology, research, innovation, social, economics, finance and investment related aspects.
- IITK will make the programme self-sustaining within 10 years.
- In due course the Centre will take a physical manifestation.
- The Centre will collaborate with many national and international bodies.

### 3. Scope of Work

The GRBMP 2015 by IITC has provided strategic action plans, some policy interventions and management actions along with financial implications. These plans need to be further detailed with financial, social, economical and environmental implications including measurable and verifiable indicators for ascertaining beneficial and positive impact on Ganga River System. The activities are thus divided into three categories.

#### 3.1 Core Activities:

1. Review, incorporate and respond to comments and suggestions made by various stakeholders, ministries (central government and various state governments), etc. on GRBMP-2015 prepared by IIT Consortium.
2. Plan interventions for implementation in phased manner.
3. Preparation of detailed mission plans for identified missions.
4. Dynamically evolve GRBMP based on (i) feedback from implementation of GRBMP recommendations, (ii) availability of additional information/data, and (iii) advances in the state-of-the-art.
5. Interface with finance, economics and legal industry to develop robust techno-commercial models.
6. Establish a dedicated facility to (i) develop improved monitoring protocols, (ii) explore new techniques for knowledge and data/information acquisition, security, transfer and dissemination, (iii) ensure community involvement, etc.
7. Create specialist expertise in area of River Health that can develop as an export industry.
8. Establish an advocacy forum for GRBMP.
9. Any other activity relating to water and river systems that is of national importance.



### 3.2 Non-Core Activities

1. Coordinate preparation of Urban River Management Plans (URMPs) which are essential pre-requisites for identifying and executing actionable items for Mission Nirmal and Mission Aviral Ganga in stretches of rivers flowing through Class I and Class II towns.
2. Develop specific work plans for identified activities for effective implementation of the projects on ground.
3. Provide expert input and coordinate scientific aspects of various surveys, monitoring, etc. to be carried out by various agencies.
4. Provide recommendations on specific technical issues and take up pilots, as and when required.
5. Adopt select villages in Ganga River Basin and demonstrate management of water supply, sanitation, drainage, landscape, water bodies, livelihood, etc. in a holistic way.
6. Coordinate implementation and monitoring of Action Plans and status of river in select stretches (e.g. Bithoor to Jajmau in and around Kanpur, Varuna to Assi in and around Varanasi, river Hoogly in and around Kolkata).
7. Any other assignment deemed necessary by the Ministry/NMCG.

### 4. Financing, Monitoring and Coordination

MoWR, RD & GR shall provide the requisite funds to the programme for a period of 10 years. After that the Centre is expected to become self-sufficient in its resource management.

MoWR, RD & GR will constitute Joint Review Committee (JRC) and nominate officers to participate in meetings, workshops and execution of various tasks/events. It will provide administrative support for obtaining information/secondary data for the purpose of development of databases, maps, atlases, etc.

The National Mission for Clean Ganga (NMCG) will execute the responsibilities listed here on behalf of the Ministry including financial aspects.

### 5. Institutional Framework

#### **Constitution**

#### **Joint Review Committee (JRC)**

**Chair:** Secretary, MoWR, RD&GR

**Co-Chair:** Director, IIT Kanpur

**Member Secretary:** Coordinator of the Consortium

**Members:** Joint Secretary from at least two other Central Government Ministries

#### **Functions**

Review Core and Other Activities of the Consortium and CGRBMS from Time to Time



## **Project Management Board (PMB)**

### ***Constitution***

**Chair:** Director, IIT Kanpur

**Member Secretary:** Coordinator of the Consortium

#### **Other Members:**

1. Mission Director NMCG or its Nominee
2. At least three eminent persons/experts
3. Directors/Heads of at least Five Institutes of the Consortium
4. Invitees: Thematic Group Leaders

### ***Functions***

Oversee the Functioning of the Consortium and CGRBMS

## **Project Implementation and Coordination Committee (PICC)**

### ***Constitution***

**Chair:** Coordinator of the Consortium

#### **Members:**

1. Thematic Group Leaders
2. Representatives of at least five Institutes of the Consortium

### ***Functions***

Coordinate various activities of the CGRBMS and Ensure Deliverables

## **6. Advocacy**

The objective is to capture views of various stakeholders and communicate the vision, concepts, policies and framework of GRBMP.

### **6.1 Plan**

- To organize India Water Impact Summit. This is a major forum that is expected to bring national and international experts together to discuss issues and put forward solutions that affect Ganga River Basin as well as other River Basins.
- To establish a multi-stakeholder forum with experts who meet on a regular basis to provide inputs and recommend best practices.
- To regularly publish best practices and innovative solutions.

### **6.2 Towards Self-Reliance**

- To devise a membership framework and model that generates revenues to sustain the advocacy platform.
- The CGRBMS will generate its own funds through partnership with national and international organizations, and sponsorship for various specific events.





