

## **1. Water Resources Assessment : Estimation of Water Availability**

**Background:** CWC in collaboration with NRSC is carrying out assessment for 20 basins under CWC own initiative.

### **Proposal in NHP:**

- Revisit the methodology and model (developed by NRSC) and consolidate it, if required.
- Training of the state engineers on the methodology for assessment
- Development of water assessment model at sub-basin level by state engineers (micro-models) in line with the macro-model of the basin.

## **2. River Basin Planning**

**Background:** CWC in collaboration with CSIRO Australia under the Bilateral MOU (between Indian and Australia) is already carrying out River Basin Planning for Brahmani and Baitarni Basin. In addition, similar study for Ganga Basin is also being carried out by MoWR with technical and financial assistance by the World Bank.

### **Proposal in NHP:**

- River Basin planning for remaining 18 basins will be carried out under NHP by CWC.
- Basin level model incorporating both surface water & ground water will be developed by CWC in collaboration with CGWB and state agencies.
- CWC to develop framework/ model for assessing surface hydrology, water allocation and water infrastructures.
- CGWB will develop framework/model for groundwater assessment of the basin.
- CWC & CGWB will jointly develop the SW-GW interaction framework.
- CWC to develop platform for scenario analysis and data visualization (user interface for hydrological model and data management)
- Using the same approach and models, States will develop their own-sub basin (micro) model for all 20 basins.
- Training of state engineers (to be carried in collaboration with NIH)

## **3. Extended Hydrological Prediction (EHP)**

### **Proposal in NHP:**

- CWC will exclusively develop the model for EHP at basin scale.
- Based on assessment, CWC will provide Advisories to the states
- 8 basins to be taken up under NHP

#### **4. Flood forecasting (early warning system for flash flood, flood and inundation)**

##### **Proposal in NHP:**

- CWC will develop early flood warning system for entire flood prone area of India in collaboration with state agencies.

#### **5. Sediment Modeling study**

##### **Proposal in NHP:**

- CWC will carry out the sediment modeling study for Brahmaputra, Kosi, Ramganga Basin, Mahanadi, Tapi Basin and three basins of West flowing rivers viz. Kuttiadipuzha, Peechi & Mangalam.

#### **6. Center of Excellence/Water Park at Hyderabad**

##### **Proposal in NHP:**

CWC will establish the water park cum center of excellence at Hyderabad. The center of Excellence at Hyderabad will have the state of art technology consisting of hardware and software to carry out the basin level modeling studies.

#### **7. National Water Informatics Center (NWIC)**

**Background:** Keeping in view the importance of national hydrology data, it was decided that entire data and decision support system would be managed by NWIC. It would be directly under control of Secretary, MoWR, RD & GR.

#### **8. Proposal in NHP**

CWC and other central agencies have already developed number of software/web portal in their respective domain such as eSWIS, e GEMS, eWQIS and India-WRIS to collect and display data related to water resource of India. Further many applications are proposed to be developed under NHP. Therefore, it has been proposed in NHP that linkage of these software and application models with NWIC will be developed in NHP. Further, it is proposed to develop the additional modules of eSWIS software which will be installed at the Earth Receiving Stations (ERS) of Central Water Commission so that all the data from remote field stations of CWC, states and other agencies can be received at one platform and can be integrated seamlessly in eSWIS.

For more details click: [www.indiawrm.org](http://www.indiawrm.org).