

# **STRATEGIC ROAD MAP OF WATER RESOURCES DIVISION COUNCIL**

## **1. Executive Summary**

Water Resources Department deals in standardization in the field of water resources development and management; to include activities covering utilization of water resources for all for all uses. In regard to drinking and industrial water supply, the work shall be confined to making the raw water available for treatment and distribution. However, special publication for water management shall include all facets of technology and engineering covering entire hydrologic cycle. In regard to water for hydroelectric uses, the work shall include planning and design of hydroelectric development and powerhouse structures but may not include generation, transmission and distribution equipment.

The standards developed under WRD are widely used by construction companies and implementing authorities for planning, design, construction, operation and maintenance of river valley projects, construction of canal, dams, reservoirs, barrages etc. Technical committees are working in close liaison with International Organization for Standardization. Water Resources Department is holding the ISO Secretariat for ISO TC 113 which is the Committee for Hydrometry and also 2 of its Sub Committees TC 113/SC 1 and TC 113/SC 6. Many Standards are also aligned with International standards which will ensure adoption of latest technology and will help in harmonization of global standards.

The major beneficiary and ultimate stakeholder of the committee is the common public as water is one of the main source of their sustenance. Historically it can be seen that all the major habitation and cities have been developed alongside rivers, lakes and water bodies as water has been their main reason for settling in those areas. The interest of the common public in the various WRD committees has been catered through various central and state government organizations and regulatory institutes. Primary users of the standards developed by Water Resources Department are various entities like CWC, CGWB, CWPRS, NHPC, NEEPCO, SJVN, UJVN, THDC, DVC, Brahmaputra Board, Bhakhra Beas Management Board, State Irrigation and Water Resources Department etc.

Main objectives and priorities of Water Resources Division Council (WRDC):

- a) To develop standards within the scope of committee and review them from time to time.
- b) To constantly improve the standard to align with the change in technological advancement and know-how by amendment or revision.
- c) To constantly study and identify emerging areas and new subjects on the related field for standardization.
- d) To continue working in close liaison with ISO/TC 113 Hydrometry and the other liaison committees to avoid repetition and conflict.

## **2. Introduction**

The Strategic Road Map of the Council has been developed as a document which would reflect its vision of national standardization in the field of water resources and provide a broad standardization roadmap with a five-year perspective. The aim is to align the standardization work with expressed business environment needs and trends and to allow sectional committees to prioritize among different projects, to identify the benefits expected from the availability of Indian Standards, and to ensure adequate resources for their development. It covers an up-to-date overview of the Division Council's work that would form the basis for the Sectional Committees working under the Division Council to in turn develop their respective standardization plan and can be shared with all interested stakeholders. The list of Sectional Committees under the Division Council is given at **Annex 1**.

## **3. Business Environment of the Division Council**

As can be seen from the list of committees given at Annex-I above the broad scope of WRD covers ground water and geological surface investigation and exploration, all aspects relating to dams, spillways, barrages, hydro-electric power houses and hydraulic structures, their design and maintenance of their water holding structures like reservoirs and lakes, various aspects of canals and cross drainage works, flood management, erosion management and river training activities.

Ministry of Jal Shakti, Department of Water Resources, River Development and Ganga Rejuvenation in its vision has mentioned the requirement of sustainable development, maintenance of quality and efficient use of water resources to match with the growing demands on this precious natural resource of the country. India as a country is endowed with a rich and vast diversity of natural resources, water being one of them. Its development and management plays a vital role in agriculture production. Integrated water management is vital for poverty reduction, environmental sustenance and sustainable economic development. National Water Policy envisages that the water resources of the country should be developed and managed in an integrated manner.

The strategic road map for Water Resources Division Council should keep in view the govt. directions, policy directives and existing legislations/Regulations prevalent in the country. The Standards under WRD are mostly guidelines to help in bringing out uniform practice in proper management of various aspects of Water Resources Department and River Training Works. Emphasize should be given to the following aspects pertaining to the government plan of action while development of standards:-

- a) Irrigation, flood control and multi-purpose projects (major/medium).
- b) Development of Ground Water Resources, establishment of utilizable resources
- c) Water balance of different basins/sub-basins for consideration of possibilities of inter-basin transfers.
- d) Central network for flood forecasting and warning on inter-state rivers,
- e) Effective abatement of pollution and rejuvenation of the various rivers

#### **4. Benefits Expected from the Work of the Division Council**

The Division Council would work on the priorities area of:

- a) Ground water sector (**Note in Annex 2**)
- b) Hydro-mechanical Equipment (**Note in Annex 3**)
- c) Flood Forecasting and Flood Management (**Note in Annex 4**)
- d) Restructuring of Sectional Committees under the Council, dealing with need of irrigation water quality, improvement in IT systems
- e) Standardization on Dams Safety Management, Planning and Rehabilitation guidelines on Dams where CWC has already framed out 17 guidelines.

- f) Life Cycle assessment of Dams with sedimentation control and removal
- g) Guidelines on Performance of old or existing Hydraulic Structures.
- h) Standards on Geological investigations in Himalayan Region.
- i) Smart use of Water to encourage deployment of smart water solutions for judicious use of water. India needs to derive key insights from successful global smart water management use standards and implement best practices in Indian scenario
- j) Environmental and Social Impact on various River Training Works
- k) Interlinking of rivers. The overall implementation of Interlinking of Rivers programme under National Perspective Plan would give benefits of 35 million hectares of irrigation, raising the ultimate irrigation potential from 140 million hectare to 175 million hectare and generation of 34000 MW of hydropower, apart from the incidental benefits of flood control, navigation, water supply, fisheries, salinity and pollution control etc.
- l) Prioritizing the revision of Old Standards and alignment with international standards

## **5. Stakeholder Representation**

The Water Resources Division Council (WRDC) and all its Sectional Committees are adequately represented by all important stakeholders in a balanced way. They include mainly academic and research institutions, technical organizations, Government and Regulatory bodies and also users. In some cases, eminent scientific persons with established credentials have also been given representation in personal capacities. The composition of each sectional committee is reviewed periodically as and when required by Sectional Committees and also Division Council. The recommendations of the sectional committees on co-options and withdrawals are also considered and approved by the Division Council.

Each sectional committee works in close liaison with its liaison committees and in line with the relevant ISO technical committees.

In order to encourage participation in the committee meetings, it is ensured that meetings are organized at a place that would ensure maximum participation. The meetings are also organized through video conferencing to avoid travel by the members.

## **6. Objectives of the Strategies**

A well placed legal and regulatory frameworks supported by a host of national standards are needed to better regulate and conserve water resources. Information systems are needed for resource monitoring, decision making under uncertainty, systems analyses, and hydro-meteorological forecast and warning. Investments in innovative technologies for enhancing productivity, conserving and protecting resources, recycling storm water and wastewater, and developing non-conventional water sources should be explored in addition to seeking opportunities for enhanced water storage, including aquifer recharge and recovery. This can be achieved through a well defined set of national standards. WRDC will employ the following strategies to satisfy the preceding objectives.

- a) Aligning of standardization with National Water Policy, GOI directives and regional/international guidelines or standards.
- b) Prioritizing the projects taking into consideration the socio economic impact, environmental impact, and benefits from standardization work and Establish the priority of work items within Sectional Committees and Panels
- c) Address the technological changes and major innovation in respective sector Covering the activities of all the Sectional Committees
- d) Identifying and framing of standards on products being used in Water Resources projects.
- e) Keeping in view the identified project work under SNAP and current programme of work
- f) Continually monitor the structure of the Division Council to accurately reflect the changing work programme and the needs of the industries as well as the consumers and the concerned parties.
- g) Give priority to the timely circulation of documents and adherence to target dates.
- h) Limit meetings to when necessary and encourage further use of virtual meetings and the electronic distribution of documents.

- i) Requesting AICTE for institutional labs requirements to be made as per Indian Standards.
- j) Continue close liaison with ISO/TC 113 Hydrometry and other liaison committees.

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