

Organizations Working towards Sustainable Water Management in India

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Abstract

India faces significant challenges in the management of its water resources. With a complex water governance structure and water management issues complicated by political and social factors, sustainable water management practices are crucial. This article highlights 12 organizations working towards the promotion of sustainable water management in India. These organizations conduct research, advocacy, and implementation activities related to hydrology, groundwater, water quality, and water resources management. They also provide training and capacity building programs for water resources professionals and community members. The article aims to raise awareness about the critical role these organizations play in India's water management landscape and highlight their efforts to achieve a sustainable and equitable water future.

Introduction

India is the seventh-largest country in the world by area, with a population of over 1.3 billion people. Water is a critical resource in India, and the country faces significant challenges related to hydrology, groundwater, water quality, and water resources. Due to rapid urbanization, population growth, and climate change, water scarcity and contamination have become a significant concern in India. Several organizations are working to address these issues, and this article will provide an overview of some of the organizations dealing with hydrology, groundwater, water quality, and water resources in India.

1. Central Water Commission (CWC)

The Central Water Commission (CWC) is a governmental organization under the Ministry of Jal Shakti, Government of India. CWC is responsible for the development and management of surface water resources in India. The organization conducts hydrological studies, water resources assessment, and monitoring of water quality and quantity. CWC is also responsible for the planning and implementation of major water projects such as dams, barrages, and canals.

CWC has a network of hydrological observation stations across the country to track changes in river flows, water levels, and sediment transport. The organization also provides technical support to the state governments and other stakeholders in the management of surface water resources. CWC is also responsible for flood forecasting and warning, which is critical for reducing the impact of floods in India.

2. Central Ground Water Board (CGWB)

The Central Ground Water Board (CGWB) is a governmental organization established in 1970 under the Ministry of Jal Shakti, Government of India. CGWB is responsible for

developing and managing groundwater resources in India. The organization conducts hydrogeological studies, groundwater exploration, and monitoring of groundwater quality and quantity. CGWB has a network of observation wells and groundwater monitoring stations across the country to track changes in groundwater levels and quality.

CGWB also conducts research and development activities related to groundwater management. The organization provides technical support to the state governments and other stakeholders in the management of groundwater resources. CGWB is also responsible for implementing the National Aquifer Mapping and Management Program (NAQUIM), which aims to map the aquifers of India and develop a management plan for sustainable groundwater use.

3. Central Ground Water Authority

The Central Ground Water Authority (CGWA) is a statutory authority established in 1997 under the Ministry of Jal Shakti, Government of India. CGWA is responsible for regulating and controlling groundwater development in India. The organization issues permits for groundwater extraction, and it also monitors and enforces regulations related to groundwater management. CGWA provides technical support to the state governments and other stakeholders in the management of groundwater resources.

4. National Institute of Hydrology (NIH)

The National Institute of Hydrology (NIH) is a premier research organization established in 1978 under the Ministry of Jal Shakti, Government of India. NIH conducts research and development activities related to hydrology, groundwater, and water resources management. The organization also provides training and capacity building programs for water resources professionals in India.

NIH has several research divisions, including surface water hydrology, groundwater hydrology, and water quality. The organization conducts research on topics such as hydrological modelling, water resources assessment, and climate change impact on water resources.

5. Central Pollution Control Board (CPCB)

The Central Pollution Control Board (CPCB) is a governmental organization established in 1974 under the Ministry of Environment, Forest and Climate Change, Government of India. CPCB is responsible for monitoring and controlling pollution in India. The organization conducts water quality monitoring and assessment, and it also develops and enforces regulations related to water pollution.

CPCB has a network of water quality monitoring stations across the country to track changes in water quality parameters such as pH, dissolved oxygen, and total dissolved solids. The organization also provides technical support to the state governments and other stakeholders in the management of water pollution. CPCB is also responsible for implementing the National River Conservation Plan (NRCP), which aims to clean up the major rivers of India.

6. National Mission for Clean Ganga (NMCG)

The National Mission for Clean Ganga (NMCG) is a governmental organization established in 2011 under the Ministry of Jal Shakti, Government of India. NMCG is responsible for the rejuvenation and conservation of the River Ganga and its tributaries. The organization conducts river basin studies, water quality monitoring, and it also develops and implements projects related to river conservation.

NMCG has several divisions, including river basin management, water quality management, and industrial pollution control. The organization works with state governments, NGOs, and other stakeholders to implement various projects related to river conservation, such as the construction of sewage treatment plants and the promotion of eco-tourism.

7. National Institute of Oceanography (NIO)

The National Institute of Oceanography (NIO) is a premier research organization established in 1966 under the Council of Scientific and Industrial Research, Government of India. NIO conducts research and development activities related to oceanography, coastal zone management, and marine biology. The organization also provides training and capacity building programs for marine scientists and professionals.

NIO has several research divisions, including coastal processes, marine ecology, and marine geology. The organization conducts research on topics such as ocean circulation, coastal erosion, and marine biodiversity. NIO is also responsible for implementing various projects related to coastal zone management, such as the development of coastal protection structures and the promotion of sustainable coastal tourism.

8. Indian Council of Agricultural Research (ICAR)

The Indian Council of Agricultural Research (ICAR) is a governmental organization established in 1929 under the Department of Agricultural Research and Education, Government of India. ICAR is responsible for conducting research and development activities related to agriculture, including water use efficiency and crop water management.

ICAR has several research institutions and centers across the country, including the Central Soil and Water Conservation Research and Training Institute (CSWCRTI) and the Indian Institute of Water Management (IIWM). These institutions conduct research on topics such as irrigation management, soil conservation, and watershed management. ICAR also provides training and capacity building programs for farmers and water resources professionals.

9. Centre for Science and Environment (CSE)

The Centre for Science and Environment (CSE) is a non-governmental organization established in 1980. CSE is a research and advocacy organization that works on issues related to environment and sustainable development, including water resources management. The organization conducts research and policy analysis, and it also engages in public awareness and advocacy activities.

CSE has several research divisions, including water management, climate change, and sustainable cities. The organization conducts research on topics such as water governance,

water pricing, and water conservation. CSE also provides training and capacity building programs for water resources professionals and NGOs.

10. WaterAid India

WaterAid India is a non-governmental organization established in 1986. WaterAid India works on issues related to water, sanitation, and hygiene (WASH) in India. The organization conducts advocacy and awareness activities, and it also implements projects related to WASH in various parts of the country.

WaterAid India has several programs, including community-based water management, school WASH, and disaster response. The organization works with communities, governments, and other stakeholders to promote access to safe water, sanitation, and hygiene. WaterAid India also conducts research and policy analysis on issues related to WASH.

11. The Energy and Resources Institute (TERI)

The Energy and Resources Institute (TERI) is a research and policy organization established in 1974. TERI conducts research and development activities related to energy, environment, and sustainable development, including water resources management. The organization also provides training and capacity building programs for professionals and policymakers.

TERI has several research divisions, including water resources management, sustainable agriculture, and climate change. The organization conducts research on topics such as water governance, water pricing, and water conservation. TERI also implements various projects related to water resources management, such as the promotion of rainwater harvesting and the development of sustainable irrigation practices.

12. Global Water Partnership - India (GWP-India)

The Global Water Partnership - India (GWP-India) is a non-governmental organization established in 2002. GWP-India works on issues related to water resources management, including water governance and water conservation. The organization conducts advocacy and awareness activities, and it also implements projects related to water resources management.

GWP-India has several programs, including water governance, water security, and climate change adaptation. The organization works with communities, governments, and other stakeholders to promote sustainable water management practices. GWP-India also provides training and capacity building programs for water resources professionals and policymakers.

Conclusion

India faces significant challenges in the management of its water resources. The country has a complex water governance structure, and water management issues are often complicated by political and social factors. However, there are several organizations in India that are working towards sustainable water management practices. These organizations conduct research, advocacy, and implementation activities related to water resources management. They also provide training and capacity building programs for water resources professionals and community members. With the help of these organizations, India can work towards a sustainable and equitable water future.