

IUWM - Introduction

1. National administration
Regional administration
Urban level administration(s)
Civil society
Vertical and horizontal administrative layers

2. River Basin Agency
Energy generation
Irrigation
Urban area
Fishing
Tourism
Navigation
River basin management and upstream/downstream users

3. Economic development
Housing
Solid waste
Water supply
Sanitation
Drainage
Transport
Health
Floods/drought management
Land use planning
Energy
Wastewater treatment
Water Resources Management
Environment
Urban agriculture
Industry

Water

Selected impacts of urban sectors on water (Green line)
Selected impacts of water on urban sectors (Blue line)

IUWM brings together water supply, sanitation, storm- and waste-water management and integrates water sector planning with other sectors like land-use, housing, energy, industry and transport

IUWM represents a paradigm shift in way urban managers think when it comes to managing urban water resources

IUWM provides framework to complement traditional approaches to navigate challenges in provision of water related services in urban area

IUWM provides framework to include environment, economic, social, technical and political aspects of urban water management

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Virtual Workshop-Achieving Sustainable and Healthy Water through Efficient Systems

Development Alternatives Group organised virtual workshops for cities of Jhansi and Dehradun in November 2020. This is part of a six-city dialogue series, in association with the National Institute of Urban Affairs (NIUA) and supported by Heinrich Böll Stiftung. The workshop was aimed at bringing solution providers and experts in dialogue with the city officials to brainstorm on various challenges the cities are facing in achieving efficient and sustainable water and wastewater systems. An attempt was made to understand the aspirations of these shaping smart cities, solution providers, and how their collaborations can be leveraged to meet the challenges in achieving sustainable and healthy water through efficient water systems.

The discussion helped in understanding various challenges the Urban Local Bodies (ULBs) are facing in the water sector such as high non-revenue water, lack of infrastructure for last-mile connectivity, dilapidated and design period outlived infrastructure, lack of metering, lack of volumetric charges, lack of underground system and resource mapping, lack of third eye enforcement and infrastructural policing, etc., leading to unsustainable water and wastewater systems. During these workshops it was found that Jhansi and Dehradun do not have adequate wastewater treatment capacity, reuse, and resource circularity leading to high stress on freshwater sources and associated energy consumption. The solutions discussed for the cities covered online monitoring and tracking of water systems, wastewater treatment and reuse, capacity building trainings, and stakeholder participation. Key opportunities that the new age solutions for water and wastewater management offer are:

- Small scale, decentralised, and customisable solutions with lower capital and operational costs.
- Agile service providers with faster ROIs and new payment models making solutions and services affordable to the city and citizens.
- Dynamic data provision for tracking, monitoring, and improving the system over time.

The workshop conducted was a knowledge enriching session for all the participants. It elucidated the need to shift to Integrated Urban Water Management (IUWM), an approach that encourages not to look at water supply in isolation but in coordination with related sectors like sanitation, storm water and rainwater conservation, and wastewater reuse integrated with other urban sectors like land use,

housing, industries, transport and nutrients, and energy management. The key principles of IUWM under the water sector are encompassing alternative water sources like storm water, wastewater, matching water quality with water use, integrating municipal water value chain, conserving water at source, and accounting for non-urban users. IUWM promotes simultaneous planning of urban infrastructures with decentralised approach for new interventions in parallel to the existing centralised systems. To help the city to adopt a feasible solution and achieve its goals and aspirations, we are looking forward to having:

- Continued dialogue with city officials to facilitate the integration of efficient solutions to their system
- Workshops and training for municipal capacity development for material flow and life cycle analysis of the resource
- Citizen engagement through social media campaigns and awareness programmes through various platforms
- Continued engagement with solution providers
- Documentation and publication of the learnings, findings, and best practices with relevant communities and stakeholders