



### Mapping Water Flows in Indian Cities

**D**evelopment Alternatives (DA) through its current initiative supported by Heinrich Böll Foundation (HBF) titled, '*Mapping Water Flows in Indian Cities,*' aims to study the flow of water resources within the identified cities including Dehradun, Udaipur, Ujjain and Bhubaneswar. The initiative is anticipated to contribute towards developing an understanding about the circularity of water resource use within a city. The initiative will support city authorities in making informed decisions on efficient water management and will provide solutions to address water sufficiency and efficiency based concerns. It will contribute towards improving accessibility; ensuring equitable distribution of water; and reducing wastage among the different users of the water resource.

### Situation in Ujjain

Ujjain city is one of the seven big cities in Madhya Pradesh. It is known for its religious significance, with millions of people visiting the city on the occasion of Kumbh mela which takes place every 12 years. The floating population for the city varies from 10000 to 10 lakh per day depending on the festival season.

In usual days, on an average, Ujjain generates about 100 MLD (Million liters per day) of wastewater, from which about 52 MLD is treated. The treated and remaining untreated wastewater is disposed in the Kshipra river, hampering the quality of the resource, and unutilising the resource which can potentially reduce the dependency on fresh water. Like many other cities, Ujjain city is facing the problem of high non-revenue water with a large amount of physical losses. Despite having sufficient water from both surface and ground sources, nearly 62% of the water goes unaccounted. This indicates operation and management issues in the distribution system, with leakages from old pipes and unmetered or illegal connections being a leading cause of water loss. The high stress from the floating population for the Kumbh mela puts Ujjain in a challenging position, where the need for efficient management of the water distribution system is apparent for the benefit of the city.

In reference to this, a stakeholder workshop was conducted in Ujjain on 13<sup>th</sup> December 2018 to address the above stated issues. The workshop in Ujjain brought together policy makers and practitioners to identify issues and concerns regarding the water supply and management in the city and initiate an effective deliberation. It identified the shortcomings, constraints and challenges in terms of policy, institutional and technical needs and opportunities to ensure circularity in the utilisation of water and wastewater as a resource and to minimize wastage at all points of intersection and transmission. DA had carried out a study on understanding the status of water flows in these cities while focusing on the aspect of resource sufficiency, resource efficiency, operational performance and resource equity. The analysis from the study was presented during the workshop which kick started an effective discussion. The workshop involved participation from the concerned departments from both Ujjain and Indore, including Public Health Engineering Department, DRA Consultants, Ujjain Smart City Ltd., Ujjain Municipal Corporation, Pollution Control Board, Urban Administration and Development Department.

The analysis of the study conducted on the status of water flows in Ujjain was also presented in the workshop. The workshop brought together policy makers and practitioners to highlight the importance of efficient water management and its associated benefits. It proposed to evolve a framework for the integrated role of policy, business and civil society that can potentially contribute in meeting India's targets under the Sustainable Development Goals.