WATER IN CIRCULAR ECONOMY AND RESILIENCE (WICER)

Session 1: Overview of the principles of circular economy and resilience in the water sector

Objective: Establish a common understanding of circular economy principles and resilience in the (urban) water sector. Familiarize the participants with the WICER framework and the WICER quick assessment online tool. Receive feedback on the usability and applicability of the WICER tool and the framework.

Is your water Project WICER? Try the WICER tool using the link **www.wicer-tool.com** or the QR provided below. You can assess a water project you are working on or that you worked in the past. If you cannot think of a water project to assess, you can use the example provided (see Box 1).
(note: the WICER tool works better in a computer)

Discussion Questions:

- Check the results page. Is your project WICER? Discuss with your table your results. Do you think it is a fair WICER result for your project? Why/why not? Was it easy to answer all the questions for your project?
- The purpose of this WICER quick assessment tool is to familiarize the user with the WICER concept, help assess if the project, system or city is WICER and finally present solutions, guidelines and resources to become circular and resilience while achieving economic and financial benefits. Do you think the tool achieves its purpose?
    - APPLICABILITY: Do you think the tool is useful? Can it be applied to all water projects?
    - USABILITY: Is there anything that could be improved to make it easier to use? Do you think you can use the tool in your work?
    - TOPICS: Were you familiar with all the topics introduced in the tool? Is there anything you are missing?
- What other feedback do you have for the World Bank team to improve the tool?

Box 1. Applying circular economy principles in Chennai, India

To protect against the vagaries of nature, build resilience, and increase water availability, the Chennai Metropolitan Water Supply and Sewerage Board (CMWSSB) in Chennai, India, embarked on several projects and investments to diversify water supply and to become more circular and resilient to droughts. Chennai was the first city in India to mandate rainwater harvesting. CMWSSB is also the only utility in India with two large-scale desalination plants and the first to reuse 10 percent of collected wastewater, with plans to achieve a reuse rate of 75 percent. Since 2005, CMWSSB has been implementing several projects to treat and reuse wastewater for several purposes. As part of this effort, CMWSSB sells treated wastewater to industrial users and with the additional revenues, it can cover all operating and maintenance costs (see figure below). The capital investment in the reuse project has been recovered in less than five years. CMWSSB also retrofitted seven of its wastewater treatment plants to recover energy from wastewater and to supply more than 50 percent of the energy needs of all the plants, saving on energy costs and helping sustain operations financially. The energy generation investment had a payback period of 2.8 years. CMWSSB is also investing in indirect potable reuse and is exploring the possibility of selling most of the biosolids generated in the wastewater treatment plants as manure for agricultural use. Read the full case study: https://openknowledge.worldbank.org/handle/10986/35659 (or use the QR below)

Notes: CMWSSB = Chennai Metropolitan Water Supply and Sewerage Board; RO = reverse osmosis.

Other case studies and all the material can be found at:
www.worldbank.org/wicer