

## Report – Webinar series CitiesWithWater, WWC x ICLEI

Webinar #3 « Too dirty water », 16/09/2025

### Context.

Water pollution is the contamination of water bodies, which leads to unsafe freshwater. Contaminants that pollute water come from four main sources: sewage discharges, industrial activities, agricultural activities and urban runoff such as stormwater. A common misconception about polluted water is that it only affects surface water. In reality, groundwater can also be polluted by industrial activities, sewage discharges and other contaminants such as pesticides. The main concern regarding polluted water, beyond its impacts on biodiversity, is that it spreads water-borne diseases when used for drinking or irrigation. It is therefore essential to treat this “dirty” water to make it clean enough so that, even if it is not drinkable, it does not spread disease. Case studies from Istanbul, eThekweni, Stockholm and Andong highlighted the solutions available to municipalities for dealing with polluted water.

### Facilitator introduction.

Dr. Kobie Brand, Deputy Secretary General of ICLEI presented the organizers of the Webinar, namely ICLEI and the World Water Council, the agenda, and the winners of the water photo competition. The discussion opened with a survey poll. The results showed that the audience thought untreated sewage and wastewater, industrial discharge (factories, mining, chemicals), and solid waste are the top three greatest risks to urban communities today.

### Key takeaways of the webinar.

- Many countries have to deal with informal settlements, which provide inadequate living conditions for people who lack sanitation infrastructure and are exposed to waterborne diseases. This situation also worsens water pollution around the settlements, as residents do not have access to sewage systems or sanitation networks. Consequently, to prevent water pollution, it is crucial to relocate these communities to safer areas. However, this takes time. In the short term, it is important to educate people about the risks of living near rivers and without proper sanitation infrastructure. **Thus, the issue is not only about producing clean water but also about making it accessible to everyone, especially vulnerable communities.**
- In the context of climate change, an integrated approach is needed to address water-related issues, bringing tangible benefits to communities. This means that a multilevel approach is essential to strengthen cooperation between local and national governments. Collective action must be supported by political will and sustainable funding in order to build more resilient water systems.
- **Technical solutions are the primary response to situations where water is excessively polluted.** In essence, dirty water must be cleaned, it's as simple as that. Therefore, developing and applying technical solutions is essential to ensure water safety. This includes treating wastewater in specialized plants, cleaning rivers manually, or using innovative methods such as eco-friendly robots.
- **But the key is also to communicate with citizens.** As highlighted by the Stockholm case study, people need to understand how their actions contribute to water pollution. By raising

awareness and educating citizens, pollution can be prevented through information, education, and sensitization.

### Key points of each speaker and their city case studies.

#### **Ahmet Saatçi, Senior Professional Officer of the Water and Sanitation Directorate Istanbul, Türkiye**

- By highlighting the case of the Melen Project, he insisted on the importance of transporting wastewater from its source to a treatment plant. This project is an Interbasin Water Transfer, carried out through the construction of massive tunnels. These tunnels measure 4 meters in diameter, extend 5.5 km in length, and are located 135 meters below sea level. They are designed to transfer water from the Asian side of Istanbul to its European side. This wastewater treatment plant addresses the challenge created by deep-sea discharge.
- This was also an opportunity to underline two major challenges linked to informal settlements: not only do they contribute to water pollution due to the absence of sanitation infrastructure, but they are also more vulnerable to water-related diseases. Polluted water can be extremely dangerous for human health, especially in contexts of poverty. In this regard, the speaker stressed that the solution cannot be purely technical: a political response is needed to support the relocation of these communities to safer areas while also protecting the environment.

#### **Russell Stow, Manager of the Transformative Riverine Management Programme (TRMP) eThekweni Municipality (Durban), South Africa**

- By providing a brief context of the eThekweni Municipality, where annual temperature increases, extreme weather events, and seasonal rainfall variability are common, he explained how climate change impacts Durban's rivers. As a result, these rivers contribute to sea pollution, while certain factors also worsen flooding.
- Similar to the Turkish case, Durban faces an important number of informal settlements (587), including 160 located in high-risk zones. These settlements generate considerable river pollution, harming both the environment and human health. Moreover, climate change has increased the frequency and intensity of flooding, posing serious sanitary risks to residents of these informal settlements.
- To address this challenge, the eThekweni Municipality launched the Sihlanzimvelo River Cleaning Project, which was later transformed into the TRMP. This initiative focuses on cleaning rivers through community cooperatives of eight to ten members. In addition to reporting sewer leaks, blocked manholes, illegal dumping, and pollution, these groups help prevent river degradation. The project not only reduced pollution but also created 1,557 jobs through 234 cooperatives.

**Katarina Forsl w, Project Leader in the Land and Water Administration  
Stockholm, Sweden**

- The speaker highlighted three key challenges the capital must address: eutrophication, pollutants, and altered habitats. Stockholm is particularly vulnerable to salt contamination of its freshwater system, as the city is located between Lake M laren and the Baltic Sea. In addition to this risk, the city also faces wastewater overflows and large volumes of stormwater.
- In line with the European Framework Directive, municipalities like Stockholm have developed plans involving several measures: sediment treatment, stormwater treatment, sewage treatment, contaminated soil remediation, infrastructure maintenance, and the creation of new habitats for fish. These initiatives were made possible through budget planning, cost-benefit analyses, and, most importantly, multilevel governance.
- Beyond these technical measures, the city of Stockholm prioritized dialogue with citizens to raise awareness about how water can be polluted and the risks associated with using polluted water. By encouraging civil society engagement and promoting messages such as *“Your lake starts here,”* the city sought to sensitize residents to the challenges of managing excessively polluted water.

**Gi-chang Kwon, Mayor  
Andong, Korea**

- The mayor emphasized that *“clean water saves lives.”* More importantly, he stressed that *“dirty water is not water at all,”* highlighting the need for an integrated approach to address the issue. For example, technology such as robots can play a valuable role in cleaning water—by removing suspended solids or through specialized algal removal vessels. This has been made possible thanks to the National Algal Bloom Control Center, which carries out real-time monitoring and algae removal.
- Another technical solution is the establishment of dams and water resource networks. By moving beyond the local scale and integrating water supply systems across regions, it becomes possible to enhance cooperation and ensure that more citizens have access to clean water.
- Ultimately, delivering clean water is not only about purification. It also stimulates research and innovation, generates economic value (often referred to as *“blue gold”*), attracts businesses, creates green jobs, and provides even more clean water. It is a virtuous circle that benefits society as a whole.