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Editorial: A Brief Panorama of Water Smart Cities

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In the world it is very important to have the vital resource called water. Water is very important for all aspects of human life, ranging from the water needed for food to the water needed to improve our body's immune system.

Water smart cities are those that use advanced technologies and innovative solutions to improve water management and ensure the long-term sustainability of the water supply. This includes optimising water use, reducing water losses, treating and reusing wastewater and conserving water resources. Some of the common characteristics of water smart cities include:

- Water supply monitoring and control: use of monitoring and control technologies to optimise water use and reduce water losses.
- Wastewater treatment and reuse: use of advanced water treatment technologies to transform wastewater into drinking water or water that can be used for other purposes, such as irrigating gardens or cleaning buildings.
- Public awareness and participation: promoting public participation in water-related decision-making and education on sustainable water use.
- Integrated water cycle management: integrating water management in the context of other urban resources and services, such as energy and transport.

There is an index to determine whether it is a water city. Water Sensitive Cities (WSC) Index is a benchmarking tool created by Cooperative Research Centre for Water Sensitive Cities (Rogers et al., 2020), for evaluating the city sensibility of water viewed in different levels of urbanization. Its 34 indicators are organised into seven goals:

1. Ensure good water sensitive governance,
2. Increase community capital,
3. Achieve equity of essential services,
4. Improve productivity and resource efficiency,
5. Improve ecological health,
6. Ensure quality urban spaces,
7. Promote adaptive infrastructure.

There are many cities around the world that are implementing smart solutions to improve water management and promote sustainability of water supply. Examples include Singapore, Rotterdam (Netherlands) and Curitiba (Brazil).

References

1. Rogers, B. C., Dunn, G., Hammer, K., Novalia, W., de Haan, F. J., Brown, L., Lloyd, S., Ulrich, C., Wong, T.H.F., & Chesterfield, C. (2020). Water Sensitive Cities Index: A diagnostic tool to assess water sensitivity and guide management actions. *Water Research*, 186, 116411.