

11 actions to take of care of water and prevent Day Zero in cities



[Tec de Monterrey](#) has held its third **International Water Forum**, at which academics and scientists discussed actions to **take care of water** regionally, nationally, and internationally.

During this forum, **panels of experts** discussed the **causes, responses, and lessons learned** on the use of water, as well as water management strategies in cities.

*“It’s not enough to define the vision. We still need to **take action** and find **spaces** like this, which give us the opportunity to reflect on the **actions** that must be taken,”* said [David Garza](#), Rector and Executive President of the Tec.

[Juan Pablo Murra](#), Rector of Undergraduate and Graduate Studies at Tec de Monterrey, said that long-term solutions must be achieved that bear future generations in mind.

Here’s a list from [CONECTA](#) of the actions shared by experts to prevent **Day Zero**, a term given to the moment when there is no longer enough water in a city.

El Tec de Monterrey realizó su tercer Foro Internacional del Agua 2022 width="900" loading="lazy">

1. Consumption awareness

The panelists pointed out the **importance** of **people** knowing the amount of **water they consume**, with the aim of raising awareness of its use and the need for responsible usage.

*“So that people are aware of **their pattern of use** and their **consumption**,”* said **Carmen Julia Navarro**, Head of the Department of Hydraulic Sectorization in Chihuahua.

2. City water pressure management

Both Carmen Julia Navarro and Dante Ragazzi, Superintendent of [Integrated Planning in São Paulo](#), Brazil, agreed that **regulating night-time consumption** of water in cities can help reduce waste.

*“Managing **pressure** and reducing water at night helps us to have a controlled supply,”* said Navarro.

Las personas deben conocer cuánta agua consumen con la finalidad de concientizarlos
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3. Identifying water risks in each city

Michael John Webster, Executive Director of [Water and Sanitation for Cape Town](#) in South Africa, said that it is necessary to **investigate** and **understand** the **risks** of each city to know their vulnerability due to water deficit.

*“We need to **investigate** all aspects of cities and see how **consumption** is affected and how vulnerable they are to the risks of climate change,”* he said.

4. Reducing water demand

Michael Webster said that **reducing** demand was **vital** for survival in Cape Town, a city that has almost reached **Day Zero** (when there will not be enough water for citizens).

*“We survive by **reducing demand**, in a joint effort between local government and people. (We took) action such as repairing leaks, giving economic incentives, and even making campaigns about Day Zero,”* he said.

Es necesario investigar y entender los riesgos de cada ciudad para saber su vulnerabilidad ante la falta de
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5. Having access to multiple water sources

Planning, mapping, and having access to multiple available water sources is another piece of advice mentioned by panelists, such as **Heriberto Ramírez**, Director of [Water Sanitation and Drainage in Monterrey](#).

Some of the methods indicated by forum participants include **shallow wells**, **cloud seeding**, the construction of **rainwater harvesting systems** such as dams, and even **reusing water**.

Webster proposed the **desalination of seawater** as a possible solution, as long as the aim is to make this process more efficient and accessible to cities.

*“Having those **reserves** prevented us from reaching Day Zero in November 2014 (in Sao Paulo). If we hadn’t had those sources, we would have incurred a deficit, requiring more water than we had,”* added Ragazzi.

6. Using the crisis to build resilience

Some of the panelists agreed to **take advantage of the crisis** that some of the cities have experienced due to the water deficit to create awareness and streamline storage, collection, and distribution processes.

“We use shock to create resilience, to create new water programs and new studies.

*“Taking advantage of the opportunity to **improve services**, create **financial sustainability** in water services, and become a citizen-based organization,”* Webster said.

Es importante que se trabaje en conjunto con diversos actores que utilizan el agua width="900" loading="lazy">

7. Creating incentive programs to reduce consumption

Greg Walch, General Counsel of the [Las Vegas Valley Water District](#), Nevada, pointed out the importance of working **together** with **various stakeholders** that use water. This was the case for Nevada, with approximately 80% participation.

*“One way is to introduce **incentive programs** for stakeholders who reduce consumption, with new rates and bonuses,”* advised Dante Ragazzi.

8. Educating future generations

Ragazzi added that education is fundamental so that **future generations** not only become aware of the **water crisis** but also contribute ideas for the future.

*“In Brazil’s **educational program**, we learned that the children who participated decreased their consumption. On average, 80% of the population joined these efforts for rationing water,”* he said.

La industria agrícola tiene oportunidades para usar menos agua width="900" loading="lazy">

9. Creating new models of water use

Rosario Sánchez, a senior researcher at the [Texas Water Resources Institute](#) at Texas A&M University, highlighted the need for a change in the model of water use.

For example, she believes that because of **food waste** around the world, the **agricultural industry** has the opportunity to use less water, which could be allocated for human consumption.

*“Globally we should be using **less water** for **agriculture** when there is huge food waste.*

“Is it a water crisis? No, it’s a problem with our model. It can’t be the case that we are still using the best quality water for irrigation. That’s something that needs to change,” she said.

10. Maintaining infrastructure

It’s crucial for us to maintain an **infrastructure** that is capable of efficiently providing water to citizens without affecting its quality, says Frank Loge, Director of the [Center for Water-Energy Efficiency](#) at the University of California, Davis, in the United States.

Loge said the water crisis also requires water **providers** to focus on **distribution**.

*“There are **options** that suppliers can take to make their **distribution systems** more **efficient**, such as increasing the diameter of the pipes, adjusting to the topography, and using alternative and more resistant materials,” he said.*

Frank Loge también aconseja la obtención y utilización de datos recopilados sobre el uso y distribución de
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11. Using data to create models and simulations

Loge also suggested **collecting** and **using data** on water use and distribution.

“These data can be used to make water systems more efficient (in cities).

*“With the data, you can create **hydrological models**, carry out scenario **simulations**, see if the systems can withstand leaks, or find out how much energy is needed to cover the demand,” Loge concluded.*

The 2022 International Water Forum

The **International Water Forum** is a **Tecnológico de Monterrey initiative**, whose vision is to position Monterrey as the Latin American space for the discussion of cutting-edge topics to do with

water.

The objectives for the 2022 forum were:

- 1. To analyze and share the experiences** of emblematic cities around the world that had to address Day Zero when they ran out of water.
- 2. To discuss critical challenges in urban water management**, based on selected international and national experiences.
- 3. To present research papers** by Tecnológico de Monterrey students on **water security**.

It was held from **October 6 to 7** in the **Main Hall of the Rector's Building** on Monterrey campus.

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