

Tec Water Center: 15 years working for water sustainability



During the 15 years following its establishment, [the Water Center for Latin America and the Caribbean](#) has provided spaces for sustainable water management, a center to manage cleaner functional services, wastewater research, and analysis, as well as a water plan for the city of Monterrey.

The [Water Center](#) emerged from a strategic partnership between [Tec de Monterrey](#), [the FEMSA Foundation](#), and the Inter-American Development Bank in 2008.

Juan Pablo Murra, Rector for Higher Education at the Tec said that thanks to fifteen years of work, today *the center is evolving into what we call a **Water Research and Innovation Hub**, a change that represents our ongoing commitment to **research and innovation**.*

*"Research has been conducted on topics such as **water use**, sustainability, climate security, water security, leadership, education for sustainable development, and promotion of a water culture," he said.*

"The Water Center's guidance and leadership is our compass to ensure a sustainable and water-secure future." Inés Sáenz

The **Water Center** focuses on **sustainable water use and management** issues through detailed research and engineering, technology development and innovation projects, personnel development, and solution design.

Contributions made by the Water Center for Latin America and the Caribbean

As part of the [fifteen-year](#) celebration, Aldo Ramírez, Director of the Water Center, shared some of this ecosystem's milestones with **CONECTA** :

- Hydro-sustainable parking: E2 Off-Grid

The **E2 Off-Grid** Parking Lot, which has a **rainwater harvesting** and treatment system for human consumption, was inaugurated in November 2022.

*"The building is proof of what can be done in favor of **sustainable water management** in urban environments.*

*"Harvesting and treatment in a normal rainy season will allow the building to operate for 4 to 5 months when disconnected from the grid. We want it to be a living **laboratory**," said Ramírez.*

- Establishing WaterLabs

With an investment of close to **US\$4 million**, **WaterLabs** are laboratories specializing in **water and energy** that occupy approximately **1,500 square meters** on the Monterrey campus.

The labs are equipped with the latest technology to perform a wide variety of **chemical analyses**, material classification, and chemical reactions, among others.

They have **gas and liquid chromatography**, isotopic analysis, elemental analysis, reactors, and more.

<https://www.facebook.com/CentroAgua/posts/pfbid0oXJKmcVSxGmoSbqMQBUEMU5NaHMq6CTMhMe5>

- Strategic core for carbon neutrality

The Strategic Decisions Nucleus (NED), located in the CEDES building, on the Monterrey campus, is a **methodological and technological** tool used in the collaborative decision-making process related to water management.

"It's a facility that is technologically prepared to analyze scenarios in the face of an uncertain future," said the Water Center director.

With this tool, **Tec's Monterrey campus** aims to reach carbon neutrality by 2040.

- The 2050 Nuevo León Water Plan

The Water Center for Latin America and the Caribbean participated in the development of the [2050 Nuevo León Water Plan](#), whose contributions have facilitated the **implementation** of plans and actions, explained Aldo Ramírez.

The plan, in which the **Autonomous University of Nuevo León** and international research centers such as **Rand Corporation** also collaborated, focuses on **responsible water consumption** and **attention to** hydrometeorological risks.

"We're very proud to recognize this story of transformation and conviction." Lorena Guillé-Laris.

- Wastewater research and analysis

Aldo Ramirez also remarked that the Water Center has conducted research on [Covid identification](#) through the analysis of wastewater and **microplastics** in water, among others.

*"It's a display of projects that have made a big impact. We address issues such as **wastewater treatment** and **emerging contaminants analysis**,"* said the executive.

Ramírez added that the center has also participated in studies on groundwater quality and aquifer water harvesting.

- Innovation in water issues at Expedition

The Water Center, the Center for the Future of Cities, and the Eugenio Garza Lagüera Institute of Entrepreneurship joined forces in a water innovation project to be conducted in the [Expedition building](#), also located on the Monterrey campus.

*"The project is focused on **innovation** in drinking water, wastewater, water treatment, sludge treatment, and solid waste. The goal is to promote innovative ideas.*

"It contains a plan for supporting innovators, and a scientific part about looking for what is required in the sector," Ramirez said.



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- Global smart cities

Another of the Water Center's achievements was forming part of the [Morgenstadt](#) initiative, which aims to contribute to the **innovative urban development** of the project cities: **Kochi** (India), **Saltillo** (Mexico) and **Piaura** (Peru).

According to the official website, this initiative is characterized by the **reduction of emissions** and **environmental awareness**, as well as the achievement of international sustainability goals.

The Morgenstadt Initiative is a network of Fraunhofer institutes, municipalities, and companies. It was launched in 2012 by the Fraunhofer Institute for Industrial Engineering and aims to **develop and test innovations** for the city of tomorrow.

Tec de Monterrey is one of the initiative's **main implementing partners**, among the various Fraunhofer institutes, the UDEP in Peru, and the School of Finance and Management in Frankfurt, Germany.

- Promoting the Santa Catarina River

Finally, the development of high-resolution **mapping** of the Santa Catarina River is also one of the center's contributions, which will serve as a basis for the development of water-climate modeling projects and as a framework for exploring Nature-Driven Solutions.

- 15th Anniversary Commemoration

The Water Center for Latin America and the Caribbean celebrated its 15th anniversary with the title ***The Future of Water***, which included conferences on water resources issues.

Social anthropologist Sebastián Jung, and Denise Soares, researcher at the Mexican Institute of Water Technology, addressed the topics of **water in a changing climate** and **gender and human rights to water and sanitation** in a rural context.

During the conferences, the speakers provided an overview of water resources in Mexico and the world.

The event was attended by executives from Tecnológico de Monterrey, the FEMSA Foundation, and the Inter-American Development Bank (IDB), who talked about the Water Center.

*"The Water Center's guidance and leadership have been instrumental to this Blue Route. They are our compass to ensure a **sustainable and water-secure future**,"* said Inés Sáenz, Tec's vice president of Outreach, Social Impact and Sustainability.



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Lorena Guillé-Laris, Director of the FEMSA Foundation, discussed the history of the Water Center and the impact it has had since it began in **2008**.

*"We're very proud to recognize this story of **transformation and conviction** that began by visualizing a world full of possibilities, with a dream of changing the game together,"* said the director.

On behalf of Sergio Campos, head of the Water and Sanitation Division at the IDB, Anamaria Núñez, communications officer for the Infrastructure and Energy sector in Washington, highlighted the **collaboration** between sectors.

*"It's an **honor** to be part of this essential initiative because these efforts drive innovation,"* said Núñez.

The Water Center is committed to fostering more just, peaceful, and sustainable societies, where education, science, and research, supported by innovation and governance, play a prominent role in water management.

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