



IPN Researchers Install Monitoring Stations to Track Sargassum in Quintana Roo

- **A fourth sensor station has been deployed to establish an early warning system measuring ammonia and hydrogen sulfide levels, aimed at protecting public health**
- **Health effects from gases released by decomposing algae have been documented through surveys of coastal residents and workers**

Researchers from the Instituto Politécnico Nacional (IPN) are advancing the deployment of sargassum monitoring stations across the Mexican Caribbean to measure gases released during the algae's decomposition and mitigate their impact on public health, reported Norma Patricia Muñoz Sevilla, a specialist at the Centro Interdisciplinario de Investigaciones y Estudios sobre Medio Ambiente y Desarrollo (CIIEMAD).

She confirmed the recent installation of a fourth sensor station in Playa del Carmen, strengthening a monitoring network in key sargassum landing zones that also includes Cancún (Punta Nizuc), Akumal, and Mahahual—marking a significant strategic step forward.

These efforts align with the environmental and prevention policies promoted by President Claudia Sheinbaum Pardo and the Secretary of Public Education, Mario Delgado.

One of the primary objectives of the monitoring network, Muñoz Sevilla explained, is to establish an early warning system capable of informing authorities and the public promptly about risk levels on beaches.

This system would support decisions such as restricting access to areas with high concentrations of hazardous gases to safeguard public health. She noted that a similar monitoring model is already operating successfully on the island of Martinique, France, through the Madinair Laboratory, where it functions as a comprehensive surveillance and early warning system providing daily updates on beach conditions. This experience demonstrates that timely information significantly reduces health risks and improves both individual and governmental decision-making.



The researcher added that the effects of these gases have been documented through surveys conducted among coastal residents and workers, who reported symptoms such as headaches, dizziness, and fainting caused by inhalation.

“Prolonged exposure may pose greater risks, particularly for children, older adults, and individuals with pre-existing respiratory conditions, underscoring the urgency of implementing monitoring and prevention mechanisms,” she emphasized.

Muñoz Sevilla explained that sargassum typically reaches the Mexican Caribbean in March; however, its arrival as early as January in 2026 suggests that this year’s influx could exceed the 37 million tons recorded in 2025.

She highlighted that this earlier arrival—linked to climate change, increased ocean nutrient levels, and the consolidation of the Atlantic sargassum belt—has created a complex scenario in Quintana Roo, prompting the installation of monitoring stations at strategic locations.

Measuring ammonia and hydrogen sulfide levels generated by decomposing sargassum is critical for protecting populations at higher risk of exposure, including sargassum collectors, older adults, and residents living near heavily affected coastal areas.

Muñoz Sevilla noted that the project is built on a strong foundation: in 2022, the need for scientific data was clearly identified, and in 2023, an internationally supported preliminary study conducted across 12 sites in Quintana Roo helped determine the optimal placement of the current stations.

She also warned about the risks associated with using sargassum when it contains elevated levels of arsenic. If concentrations exceed safe thresholds (around 40 parts per million), its use in products or fertilizers may pose risks to both humans and animals. Therefore, she stressed that its management should prioritize safe alternatives, such as biogas production.

For more information, visit www.ipn.mx

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