

| FEATURES

# A Rising Tide for Environmental Justice

## How a Young Scientist Is Teaching Citizens to Care About the Deep Sea

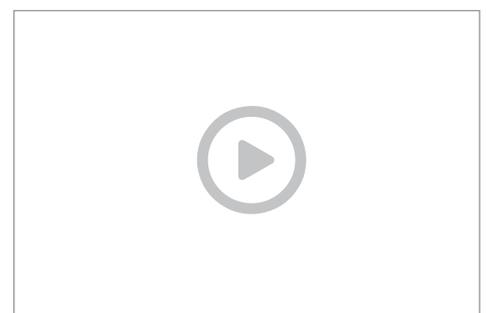
Share:     



By the time children in densely populated cities look up from their homework and glowing screens, the ocean—only a few meters away in reality, but worlds apart in imagination—has often already disappeared from their view. How, then, do you persuade them to care about coral reefs bleaching silently beneath the surface?

That nagging question has accompanied Mariana Gabrielle Cangco Reyes-- a doctoral student in climate change and sustainability-- for years. Born and raised in the Philippines, she finally came to the realization that environmental advocacy succeeds not by shouting louder, but by listening more intently.

In 2025, Reyes was awarded the Student Social Contribution Special Award, in recognition of her work as the founder of Daluyong 2.0, a coral transplantation and coastal cleanup initiative that also achieved second place at the United Nations Youth Assembly in New York. The honor, she insists, is of secondary importance. What truly matters is whether ordinary citizens—students, fishermen, families—begin to see themselves as stewards rather than bystanders.



| Intro-video of Mariana Gabrielle Cangco Reyes.

“You can’t just talk about coral reefs in abstract,” Reyes said. “You have to engage people where they are.”

With fishermen, she speaks of livelihoods and marine economies. With students, she touches on grades, futures, and choices. With the public, she talks about food security and life experience. And with government officials, she frames conservation in terms of tourism, governance, and long-term resilience.

Environmental protection, she argues, is never separate from society. Once people realize how deeply they are implicated in the problems, action follows.

## A Movement Built on Partnerships

That philosophy lies at the heart of Daluyong 2.0—daluyong meaning “surging wave” in Filipino. The project’s significance lies not only in its ecological goals, but in the breadth and reach of its alliances. Local residents in Mabini, Batangas Province. Students from Mabini National High School. University students . The Philippine Finswimming Federation. The maritime police, the Coast Guard Auxiliary, and municipal governments—all have become participants in what Reyes calls a shared undertaking.

In practice, the project embodies two of the United Nations’ Sustainable Development Goals: protecting life below water, and building partnerships across sectors. It is conservation expressed through civic choreography.

## “The Ocean is Part of Who I Am”

Reyes’ connection to the sea is intimate and personal. She grew up in Mabini, one of the world’s premier diving destinations. Her parents were diving instructors; she first entered the water at eight. Over the years, she watched reefs near her home whiten and fade—casualties of warming seas and shifting climates.

“Nature feels like an extension of myself,” she said. “I can’t ignore its decline.”

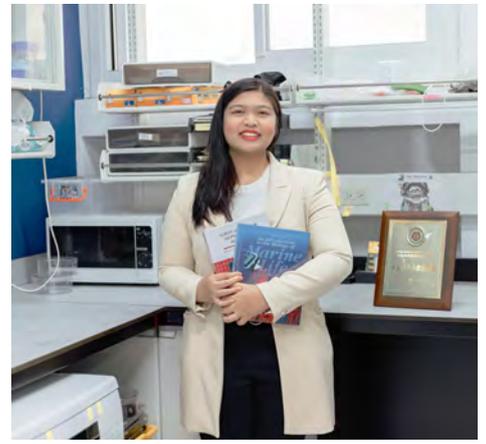
With her parents, the local diving community, and fellow residents, she began organizing reef restoration and ocean cleanup efforts—small steps at first, then steadily expanding. Certified as a CMAS scuba instructor, Reyes did not merely coordinate logistics; she descended into the sea alongside volunteers, guiding coral transplantation herself.

## From Local Action to Global Recognition

As her academic work deepened, Reyes began weaving her research into practice. Drawing on techniques she learned at NTU, including ecological monitoring , she helped identify the keystone coral species and benthic communities. The result: she devised a low-cost, environmentally sensitive restoration method grounded in natural processes rather than expensive technology.

Participation was intentionally inclusive. Experienced divers focused on reef restoration; students joined shoreline cleanups. The barrier to entry was minimal—commitment and resolve mattered more than paper credentials.

“If you’re willing to help,” Reyes said, “there’s a place for you.”



Mariana Gabrielle Cangco Reyes, recipient of the 2025 Student Social Contribution Special Award.



Reyes presenting her latest research progress to faculty members and peers from the International Program in Climate Change and Sustainable Development (IPCS).



NTU President Chen presenting the Student Social Contribution Special Award to Reyes during the university's anniversary ceremony.

## Environmental Literacy as Civic Education

Reyes's advocacy does not stop at the shoreline. She lectures high school students on the UN Sustainable Development Goals, participates in global youth leadership programs in Okinawa, and has led student teams to international social impact initiatives, including one at the University of Pennsylvania.

Her educational philosophy is simple yet radical: environmental literacy should be taught alongside civics and ethics.

“We teach children to say ‘please’ and ‘thank you,’” she said. “We should also teach them how to care for the environment .”

She shows students images of what lies beneath the surface—bleached corals, discarded electronics, wedding dresses, abandoned underwater. The goal is not shame or guilt, but realization and clarity.

In her graduate program, she found a community that practiced what it preached: paperless classrooms, reusable utensils, conversations shaped as much by birdwatching and hiking as by abstract theory. A shared refrain echoed through the discussions: How much time do we really have before 2030 arrives?

Echoing across borders and disciplines, that question has engendered wide solidarity.

## The Quiet Power of Persistence

Reyes recalls the day she was recognized in New York, without drama.

“I never imagined I’d end up there,” she said. “All I did was reach out.”

The moment that stays with her is not the award ceremony, but a plain meal shared after a coral restoration dive—hands reaching over banana leaves, food shared without ceremony.

Later, a biology student from South Africa told her: Your story will encourage other female scientists.

The comment startled her. It reminded her that any action, however modest it may feel, can send ripples outward.

Reyes now speaks of environmental work with what she calls a “critical but hopeful” attitude—clear-eyed about degradation, unwilling to settle for “good enough,” and committed to making steady, patient efforts.

Like the coral fragments replanted off the coast of Mabini, change does not call attention to itself. It accumulates through baby steps—growing quietly, persistently—until one day, it becomes a wave.

<https://ntubeats.ntu.edu.tw/enews/014>