

PHOTO ESSAY

THE MAYA WOMEN RESTORING A SANCTUARY

In Mexico's Yucatán, 14 women are running a mangrove reforestation project recognized internationally as a model for the region.

PHOTOGRAPHS BY BÉNÉDICTE DESRUS
with reporting by Mark Viales

Claudia Maribel Vera Pech, left, 38, and Regina Laudalina Valle Chim, 47, of the award-winning *Chelemeras* group trek through a wetland toward the beginnings of a new forest, planted by hand.





The mangrove forests of Mexico's Yucatán Peninsula bridge sea with land, stabilizing shorelines, storing carbon and sheltering an abundance of life. In the waters they calm, endangered species like the hawksbill turtle lay eggs, and the crabs and fish that support local livelihoods reproduce. Monkeys, tapirs and jaguars cross the tangles of their exposed roots and the sediment they trap and turn into land. Flamingos, ibises and rare songbirds nest among their branches. Corals grow and crocodiles lurk in their shadows.

But in many places, urban sprawl is destroying them. This leaves communities more vulnerable to the storm surges that mangroves blunt. Mangroves also sequester four times more carbon dioxide per square meter than tropical rainforests. Near the town of Chelem, 32 miles north of Mérida, a group of Maya women called the *Chelemeras* are protecting their communities and preserving biodiversity by restoring mangroves. They began in 2010, when a government-funded project searched for volunteers. After two years, the funding was cut, but the women persisted. They have since restored over 50 hectares — roughly the equivalent of 71 soccer fields — and won international acclaim from UNESCO, the Blue Marine Foundation and beyond as a model for the region.

Above: Illegal construction and the remains of a mangrove stand in the Ría Lagartos Biosphere Reserve, in San Felipe, Yucatán, in August.

Right: Biologist Claudia Teutli Hernández, left, from the University of Barcelona, discusses a restoration site with *Chelemeras* Keila Vásquez Lira, center, 42, and Angie Alejandra Martínez Castillo, 49, in October.





Vázquez Lira is the president of the *Chelemeras*, whose ages span from 33 to 82. Through years of work, they have mastered the biological and hydrological subtleties that can make or break mangrove growth.



Dr. Jorge Herrera Silveira, left, a researcher, and Eunice Pech, a laboratory assistant, prepare a mangrove chemical monitoring report at the Center for Research and Advanced Studies at the National Polytechnic Institute in Mérida in November. Herrera advises the *Chelemeras'* restoration project, which he helped to found.



The work in waist-deep water is hard. Here, the *Chelemeras* pile mud high enough to redirect water flows. The original program had men in mind, but none accepted the \$3 per day pay rate. The women volunteered, and now they often bring home more income than their spouses, between intermittent grant funding and the crabs and snails they collect from the ecosystems they are restoring.



Angie Alejandra Martínez Castillo, left, 49, receives clients every afternoon in her beauty salon after long mornings of work with the *Chelemeras*. Here, Ek Lira gets a pedicure. Her daily treks through mud and marsh in tough boots make foot care much more than an aesthetic concern. Her fingernails, on the other hand, are pure style.





Ek Lira prepares to plant saplings in *tarquinas*, shelters made of wooden posts and hand-woven mesh that the women build after painstakingly scouting the right locations for them. This bay may well be forested in a few years. Mangroves are known for being highly adaptable, thriving in harsh environments, and creating sanctuaries for a vast array of life. So are the *Chelemeras*.

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