

# CHAAC HA WATER COLLECTOR HARVESTING CLEAN WATER FROM DEW

Six students of the *Universidad Autónoma de Yucatán UADY* (Mérida) in Mexico, advised by the professor Erendira Estrella Martinez have recently designed a water collector, which can collect up to 2.5 litres of clean water each night from dew and more in case of rain. The project has been thought to provide regular and drinkable water to rural Mexican communities where access to this resource is limited.

The water collector is called Chaac Hà (Mayan God of Rain) and it has been developed according to the theories of biomimicry, the study of systems and substances used to find solutions to human and technical problems.

Chaac Hà is composed by a rainwater catching membrane made with Teflon that has the properties to be flexible and waterproof, it mimics the way in which bromeliads (plants native mainly to the tropical Americas) derive nutrients from the air and rain by their hydrophobic leaves.

The structure of this system takes inspiration from spider webs, made by a set of radial bamboo sticks, reused from the fishing in the region, and concentric radial cords. The materials used are locally available and biodegradable. Additionally, it is collapsible to make it portable.

The Chaac Hà system was recognized with the *Autodesk Sustainability Workshop Award* during the 2012-2013 Students Design Challenge, that invites students to work collaboratively in teams to apply biomimicry concepts to reach a sustainable and innovative design solution to a real-world problem.

The students who take part to Chaac Hà are Diana Carolina Vega Basto, Luis Didier Cox Tamay, Andy Francisco Arjona Massa, Cindy Beatriz, Shirley Molina, and Álvaro Jesús Buenfil Ovando.

This interesting prototype of water collector can generate studies aimed at its production, dissemination and use in rural communities not only in Mexico, but also in many other territory, where there is water scarcity.

## To know more

[Autodesk sustainability workshop Article on Chaac Hà project](#)

[Chaak Hà video on Biomimicry](#)

[Biomimicry design challenge](#)

[Article on Inhabitat](#)

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