

WARKAWATER COLLECTING WATER FROM THE SKY TO THE GROUND

An interesting new prototype of technology capable to collect potable water from the air by condensation, called [WarkaWater](#) was designed in 2012 by the firm [Architecture and Vision](#).

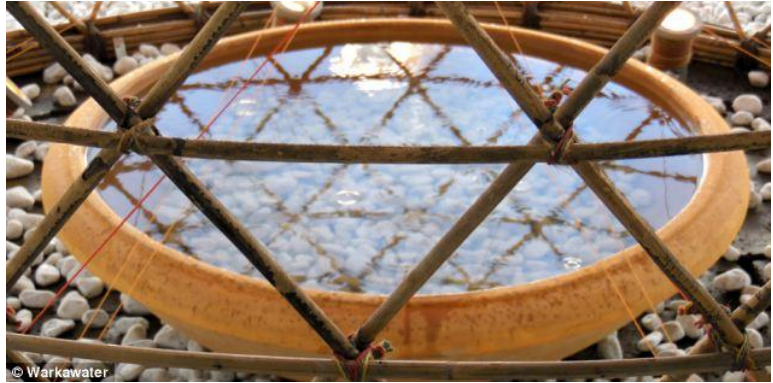
Designed to solve the problems of water shortage of the rural population of north-eastern Ethiopia, the prototype was created by *Architecture and Vision* in collaboration with the University of Architecture of Addis Ababa and the IUAV University of Venice. The tower that captures drinking water from the air has been called Warka by the name of the local Warka tree, a large fig tree native to Ethiopia that is commonly used as a community gathering space.

Tests conducted for the construction of the prototype have shown that a Warka tower can provide more than 100 litres of water per day, and the study estimated that in the desert, where the temperature range between sunset and sunrise can be huge, its effectiveness can be further increased.

WarkaWater is a 9 m tall bamboo framework, consisting of a modular lattice structure, made of Ethiopian natural locally sourced materials such as bamboo and rattan. With a weight of 60 kg, it is composed of 5 sections assembled and installed from top down and it can be lifted and fixed to the ground by 4 men, no scaffolding needed. A special fabric hanging inside is capable to collect potable water from the air by condensation and at the base there is a container.

The special type of fabric that picks up the water with great efficiency is the significant technological innovation of this tool. The structures, made of bio-degradable materials are easy to clean and can be erected without mechanical tools in less than a week. The material is cheap because Ethiopia is the leading producer of bamboo in Africa.

A Warka tower costs about \$ 500, but its mass production could further reduce the cost. Once transferred the necessary know-how to local technicians and operators, the Tower could easily be reproduced at large scale in the area. This technology is very advantageous, given the costs of current practices involving the wells dug 500 feet deep, the pumps that require electricity to operate, maintenance of pumps and spare parts needed to cope with breakdowns currents.



The Prototype of WarkaWater was exhibited, with great success, at the 13th Venice Architecture Biennale in 2012 (Italy) and at the Exposition of the *Cité des Sciences et de l'industrie* in the Parc de la Villette in Paris (France). *Architecture and Vision* is currently seeking financial sponsors to build two WarkaWater in real scale in the North East of Ethiopia during 2014 and to start its dissemination on a national and regional level. Initiatives are also already underway for the [promotion of this technology in Lebanon](#), in cooperation with the Kaslik University.

Hopefully these technologies based on the processes of condensation water collection, developed and used for the first time in Chile back in the 50s, can attract more and more attention from the scientific community and policy makers systems of the various countries, and adopted to solve the problems of water shortage affecting large areas of the world.

Meanwhile the WarkaWater, designed by *Architecture and Vision*, has gained the interest of many magazines and websites specializing in the promotion of innovative technologies.

To know more

[Architecture and Vision website](#)

[Brochure of WarkaWater](#)

[Video in Youtube](#)

[Video in Youtube](#)

[Article in On/Off Magazine](#)

[Article in Buzz News](#)

[Article in Wired](#)

[Article in Daily Mail](#)

[Article in Inhabitat](#)

[Article in Technocrazed](#)

[WarkaWater in Google](#)

