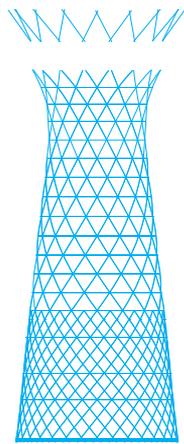


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AFRICA

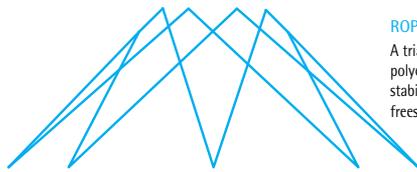
ARCHITECTURE
CULTURE
IDENTITY



ANTENNA
A group of antennas attached to the structure with silver kites attached to their tip reflect light keeping the birds away.

STRUCTURE
The triangulated split bamboo frame provides both robustness and structural strength keeping the overall tower light weight and stable.

CANOPY
The canopy provides shade creating a gathering place for the community.



ROPES
A triangulated network of polyester ropes is used to add stability to the tall, freestanding structure.

MESH
A permeable mesh allows air to pass through the material, capturing water droplets which roll down by gravity.



COLLECTOR
Water droplets falling from the Mesh by the force of gravity are caught by the Collector and channelled to the Water Tank. It also works as dew condenser.



FUNNEL
The water passes from the collector through the filtration system of a Funnel and into the Water Tank.

WATER TANK
A 800 gallon (3000 L) tank is used to contain the harvested water.



BASE
Blocks of stone are used as a platform for the Warka.

Architecture & Vision / Italy

WARKA WATER, ETHIOPIA, 2014

In the highlands of Ethiopia people are living without access to running water and with several hours to the nearest ponds, which are often contaminated. Warka Water is a water collector created by *biomimicry* – an imitation of nature’s own way of collecting water: such as for instance beetles’ shells, lotus flowers, spider webs.

The name originates from the *Warka*-tree, a huge fig tree which often functions as an important gathering place of the rural societies in Ethiopia. Warka Water is both a water tank and a gathering place.

Warka Water is 10 metres high and the load structure is made of bamboo with a web of ropes made of fibres from the banana tree. An inner web of bio-plastic harvesting dew, fog and rain-water collects up to a 100 litres per day. A canopy provides shade imitating the top of the Warka-tree under which the community is gathering.





KEY DETAILS OF WARKA WATER 3.2

Daily water collection: 13 to 26 gallons
annual average

Water tank storage: 800 gallons

Construction: 4 days, 6 people (by hand,
no electrical power machinery required)

Assembly: 3 hours, 4 people.

Weight: 132 pounds

Materials: Bamboo, hemp, metal pins,
bio-plastic

Dimensions: Height 31ft – Footprint Ø
12 ft

Surface Area: Mesh 323 sq ft, Collector:
87 sq ft, Canopy 936 sq ft

Cost: ~ \$1,000 (production in Ethiopia

Maintenance: easy to be maintained,
cleaned and repaired)