

# OASiS

Bringing water from the air to homes

## The Problem

A woman in Sub-Saharan Africa walks **5-20 km each day** to collect water. And women across the world spend up to **200 million hours** every day collecting water. This prevents them from going to school or working, and puts them at risk of violence and injury.

## The Opportunity

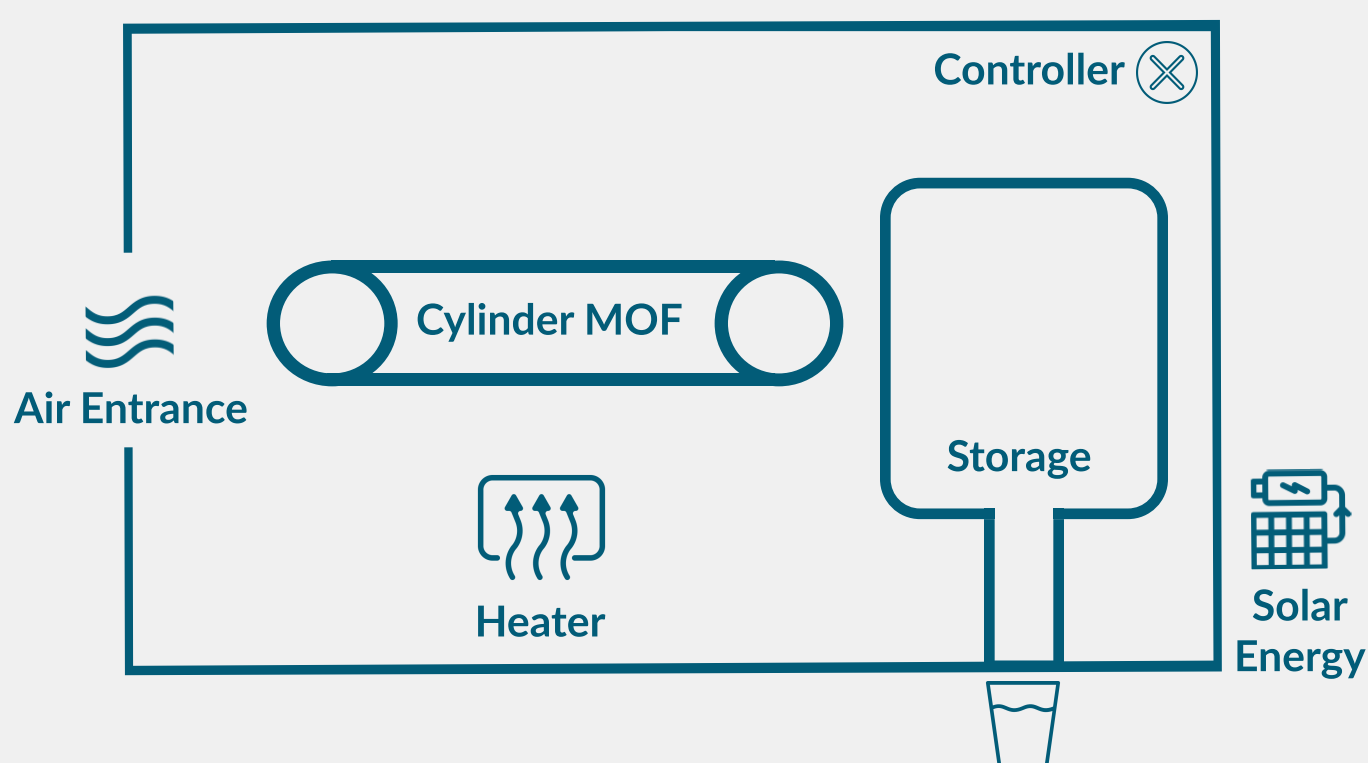
There are an estimated **13 trillion liters of water** floating in the atmosphere, which is equivalent to **10% of all of the freshwater** in our planet's lakes and rivers. By harvesting this water, we can provide clean and safe water, **even to the driest areas of the world.**

## Vision

We want to create a world where women and children can achieve their full potential and have a high quality life.

## How it works

Our goal is to bring an Oasis to every rural home.



### 2 Spiral Wound

Spiral wound-shaped metal-organic frameworks attract water molecules like a magnet and cage them as the air flows inside the device. They can generate 30L a day in the worst conditions!

### 3 Solar Panels - Releasing Water

After adsorbed, a change in **temperature** powered by solar panels **releases the water** from the MOFs to condense them into the storage unit.

### 4 Drinkable Water

Harvested water can be extracted from the container using the tap and **used for drinking**. The cycle of harvesting can be repeated to produce water as needed.

### 1 Metal Organic Frameworks

Metal-organic frameworks can **adsorb** water from the air thanks to their porosity. By dipping MOF solvent to a cylinder skeleton -spiral wounds, we increase the number of exposed particles, thus the adsorption potential.

## Impact

In Sub-Saharan Africa alone women spend **40 billion hours** a year in collecting water, equivalent to a **year** worth of **labour** from the entire French workforce. With Oasis, we hope to alleviate that burden by bringing safe water from the air to every rural home.

## Why it makes sense



### Economically Feasible

by using durable materials - our device has a lifespan of 10 years or more - hence \$1 can generate more than 476L - prices we have not seen before in MOFs



### Energy Efficient and Mobile

An Oasis device is powered by off-the-grid electricity harvested by small solar panels embedded in it and doesn't require additional energy sources.



### Meets Water Needs

The average African rural household consumes 18.9L of water per day, so the daily 30L produced cover way more than needed - without having women put in labour to harvest water