



Growing Trees in Deserts with Minimal Water Use

Solution by: **Groasis**



→ The Groasis Waterboxx grows plants and trees in desert areas using limited water resources with no continuous need for energy or irrigation.

The Triple Bottom Line



ENVIRONMENTAL

Research has shown that a large-scale plantation could capture 17 - 25 tons of CO2 per hectare per year from the atmosphere in hot and dry areas around the world.¹



SOCIAL

Productive trees and plants produce accessible food for the local community.



ECONOMIC

According to the company, productive trees create one job per hectare.

The Groasis Waterboxx is a **planting technology for eroded, rocky, dry, and desert areas**. It is filled with a one-time dose of 15 liters of water, which the design of the box prevents from evaporating. Instead, water is slowly released into the soil surrounding the seeds. Rain and condensation from surroundings are also collected in the box. In this way, a heavy rain shower of just 10 minutes once a year can be **stored and apportioned to the plant until the following season**.

The box releases only 50 ml of water per day. With such a limited amount of water the plants are forced to search deeper into the ground, and over time the roots - even in the driest areas - typically find water within just a few feet.

Why a Sustainable100 solution?

According to the company, the average survival rate for the trees is over 90%, no matter how difficult the circumstances. Likewise, water savings are more than 90% compared to any other planting method during the first year. From the second year onwards, water savings become 100% as no artificially added water is used.

Developed:
The Netherlands



Deployed: 18 countries, including Argentina, Kenya, and Kuwait



"IF THE 2 BILLION HECTARES OF MAN-MADE DESERTS WAS SMALL ENOUGH TO CUT, IT IS CERTAINLY SMALL ENOUGH TO REPLANT."

¹Earth Systems Dynamics. "Carbon farming in hot dry coastal areas". 2012

Pieter Hoff, Founder, Groasis



Beechwood plant two months after planting in Ecuador with temperatures of up to +40.5°C and only 211 mm rain per year.