Seawater Desert Greenhouses

→ **The Seawater Greenhouse transforms seawater into cool, humid air, fresh water, salt, and nutrients, enabling crops to be grown in hot, arid regions.**

The world is not short of water; it is just in the wrong places and too salty. Converting seawater to fresh water, in the right places, offers great potential. Seawater Greenhouse uses seawater to **cool, sterilize, and humidify the air** going into the greenhouse. Cooler and more humid conditions reduce the water demand of plants several-fold, typically by 4-8 times that of plants grown outside.

In addition to the saved fresh water, both the **yield and quality of plants are higher**.

Why a Sustainia100 solution?

With an increasing global demand for fresh water, agriculture is under pressure as one of the most water-dependent sectors. In general, agriculture uses 60-80% of the planet's scarce fresh water[1]. Shortage of water affects the carbon cycle, as shrinking forests reduce carbon capture.

ENVIRONMENTAL

Unlike traditional greenhouses, which often rely on fossil fuels for temperature control, Seawater Greenhouses use only seawater and sunlight to control growing environments.

SOCIAL

Food can be grown where agriculture is constrained by a lack of water and high temperatures, leading to improved food access in water-scarce areas.

ECONOMIC

According to the company, the technology enables development of land normally considered unsuitable for agriculture, coupled with lower capital and operating costs.

Developed in UK

Deployed in Canary Islands, Abu Dhabi, Oman, Australia

[1] The Guardian, "growing food in the desert: is this the solution to the world's food crisis?"