

Trees in the Desert

With our innovative Trees in the Desert project it is our main ambition to prevent further desertification.

The Problem

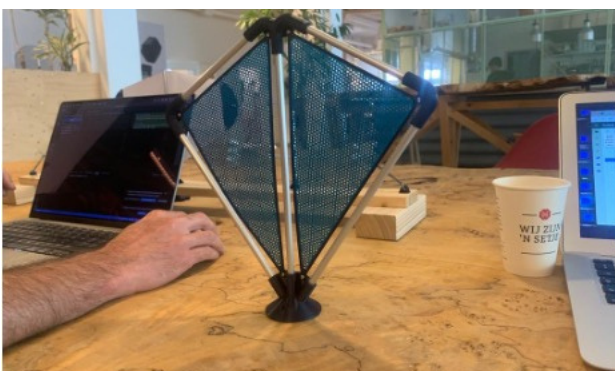
Tarfaya, Morocco, faces pressing challenges from climate change-induced desertification leading to severe water scarcity and environmental degradation. Despite initiatives like the Great Green Wall, set up by the African Union, certain areas like Tarfaya with minimal rainfall (less than 400mm a year) remain overlooked. This not only challenges food security but also undermines the **resilience** of local communities.

With this project we want to investigate where it is possible to plant 500 trees in the desert of Tarfaya. We will combine several water harvesting methods, with our main focus on **fog nets**.

Solution

Fog nets have a simple design that collects water drops from fog through a mesh. They are typically used in areas close to the sea where there is constant wind and other water resources are scarce, like Tarfaya. The fog nets work with condensation, meaning that the water damp in the air condenses on the surface of the net and the water drops are collected in a reservoir. The usage of fog nets can be an important sustainable source of fresh water for households, agriculture, or agroforestry projects. By placing 20 fog nets in Tarfaya, **3000L of water** could be collected a day.

Our goal is to design fog nets that fit in the local culture. Currently, the designs are inspired by airplanes, based on the story of **Le Petit Prince**, which is partly written in Tarfaya and therefore very popular there. The goal is to design the fog nets as a landscape art piece that attracts tourists. The fog nets are relatively easy to maintain and can be made with cheap local materials, like **recycled fishing nets**, making them a good option for water harvesting.



The Team

The project of Trees in the Desert is initiated by nonprofit organization **Duurzame Innovatie**. This nonprofit is started by employees of Recycle Valley, an organization that has a lot of experience with education on plastic pollution and recycling. We will work together with **Hogeschool Utrecht (HU)** to develop the first technical designs of the fog nets. Besides, **Benjamin Droerig**, our partner designer, will work on the appearance of the fog nets. For the agroforestry part of the project, we work together with **Wageningen University**.

Lastly, we will work together with **local communities** and **organizations** in Tarfaya. Our aim is to send an employee to the location to start collaborations and set up a focus group. It is important that the local community feels included in the project so that they can help us make it truly beneficial for them. For example, the local community can help us by transforming fishing nets into fog nets.

Next Steps

2024	Develop fog nets prototypes with HU students, test in the Netherlands and refine designs with Benjamin Droerig.
2025	Test the prototype in Tarfaya, make necessary adjustments and engage the local communities.
2026	Finalize production and implement fog nets in Tarfaya, monitoring their impact and scalability.

We invite you to join us in supporting Trees in the Desert and making a difference in the fight against desertification. Your contribution will not only benefit the community of Tarfaya but also inspire future projects aimed at restoring ecosystems in arid regions globally. Together, we can turn the tide against desertification and build a more sustainable and resilient future for all.

