



Can Drones Help the Environment?

Due to their ability to reach remote locations and their imperviousness to the kind of errors that make humans unreliable, drones can play an important part in helping the environment. That potential is being taken advantage of in the UAE, where the Abu Dhabi Environment Agency (EAD) is planning to use these remotely piloted machines to plant thousands of mangrove seeds along the country's coast.

The project is the first of its kind to take place anywhere in the world and, after the drones have planted the seeds, they will continue to be utilised to monitor the growth of the crops going forwards. The mangroves themselves offer a number of different environmental benefits and if successful, it's hoped that the project can provide a viable blueprint for how technology can be deployed in other areas of eco-friendly agriculture.

Repopulating the coastline

The Emirati coast is already home to miles upon miles of mangrove forest, which play a number of important functions environmentally. First of all, the mangroves provide a robust breakwater against the tides of the Persian Gulf, preventing coastal erosion and protecting the land from flooding.

Secondly – and the main purpose for which the most recent repopulation project is being undertaken – the mangroves can provide an important carbon sink, absorbing harmful greenhouse gases from the atmosphere and storing them safely within their foliage. With the UAE keen to pursue carbon capture and storage (CCS) projects as a means of reducing its carbon footprint, it's the main reason behind the initiative.

In undertaking the project, the EAD have enlisted the help of a UAE-based commercial drone operating company called Distant Imagery and global utility firm Engie. The former will deploy its own self-engineered drones to plant at least 4,000 seeds along the shoreline in December, before returning to the area periodically to check on both the progress of the mangrove's growth and the amount of CO2 it is absorbing.

Tech to the rescue

The EAD has professed itself very happy with the project and hopes that it can pave the way for similar initiatives to take place in the future. "Using the latest technology in our environmental endeavours are core to what we do," [said Ahmed Al Hashmi](#),



chief of the EAD's Terrestrial and Marine Biodiversity division. "Rehabilitating mangroves for the sequestration of carbon is one of the methods used to combat climate change and EAD are always dedicated to that cause."

The mangrove planting project is just one of many ways in which technology has shown itself capable of aiding the environmental efforts of governments, businesses and individuals across the globe. In one example, drones are also being used to facilitate something called precision agriculture, whereby the machines are deployed to deliver exactly the right amount of fertiliser and pesticide that each crop needs.

Meanwhile, the scientific community has also been investigating other ways of boosting crop yields while minimising resource consumption. One of the more promising discoveries involves the use of [self-watering soil](#), which absorbs moisture present in the air during the humid hours of night-time, then distributes that water among the soil the following day.