

# Future50

Food, Agriculture and  
Land Use (FALU)

Earth and Marine Protection, Deforestation  
Prevention, Reforestation and Afforestation



## Archireef

Archireef



<https://archireef.co>

#ClimateTech  
#NatureBasedSolution

### Highlights:

Archireef was founded in Hong Kong, and notes that it expanded in early 2022 to Abu Dhabi, setting up an **eco-engineering facility** at KEZAD to scale production and to improve product quality.<sup>163</sup> Archireef adds that this has allowed it to deploy ecological engineering solutions across marine ecosystems at pace, and that it has **one patent pending for its quay wall panel product**.

Archireef's local ecosystem partners include **ADQ**<sup>164</sup> and **Hub71**,<sup>165</sup> with the company also indicating that it is in talks with several governmental and non-governmental entities to deploy multiple new coral sites across the UAE and the wider GCC region.

### Strategic alliances:

- Private Sector
- Governments
- Universities
- Research Institutes
- NGOs

### List impact technologies:

Active Restoration, Nature Positive Technology

## Headquarters and Middle East operational countries:

United Arab Emirates

### Summary:

Archireef is a nature tech start-up that 3D-prints reef tiles using terracotta clay to **restore coral reef ecosystems**. It states that its proprietary reef tiles integrate **biomimicry designs** and secure a stronger foundation for corals, enhancing coral survivorship and growth.<sup>162</sup>

Archireef's **3D-printing methodology** involves an algorithm that can be dynamically adjusted to local conditions, allowing for design changes as needed and for the tiles to therefore be tailored to different environmental settings.

### Impacts:

Archireef reports a **95% coral survivorship rate** at the four sites across Abu Dhabi and Hong Kong that it has deployed its tiles on. The company notes that by rebuilding marine ecosystems, which then start performing their natural duty of keeping the oceans healthy, its solution tackles climate change. Archireef adds that its use of natural materials **prevents the leaching of toxicity into the ocean**, in contrast with other existing restoration solutions, including concrete structures.

