

Fighting Coastal Erosion With The Power of Mangroves

The concrete tetrapod gets a green makeover

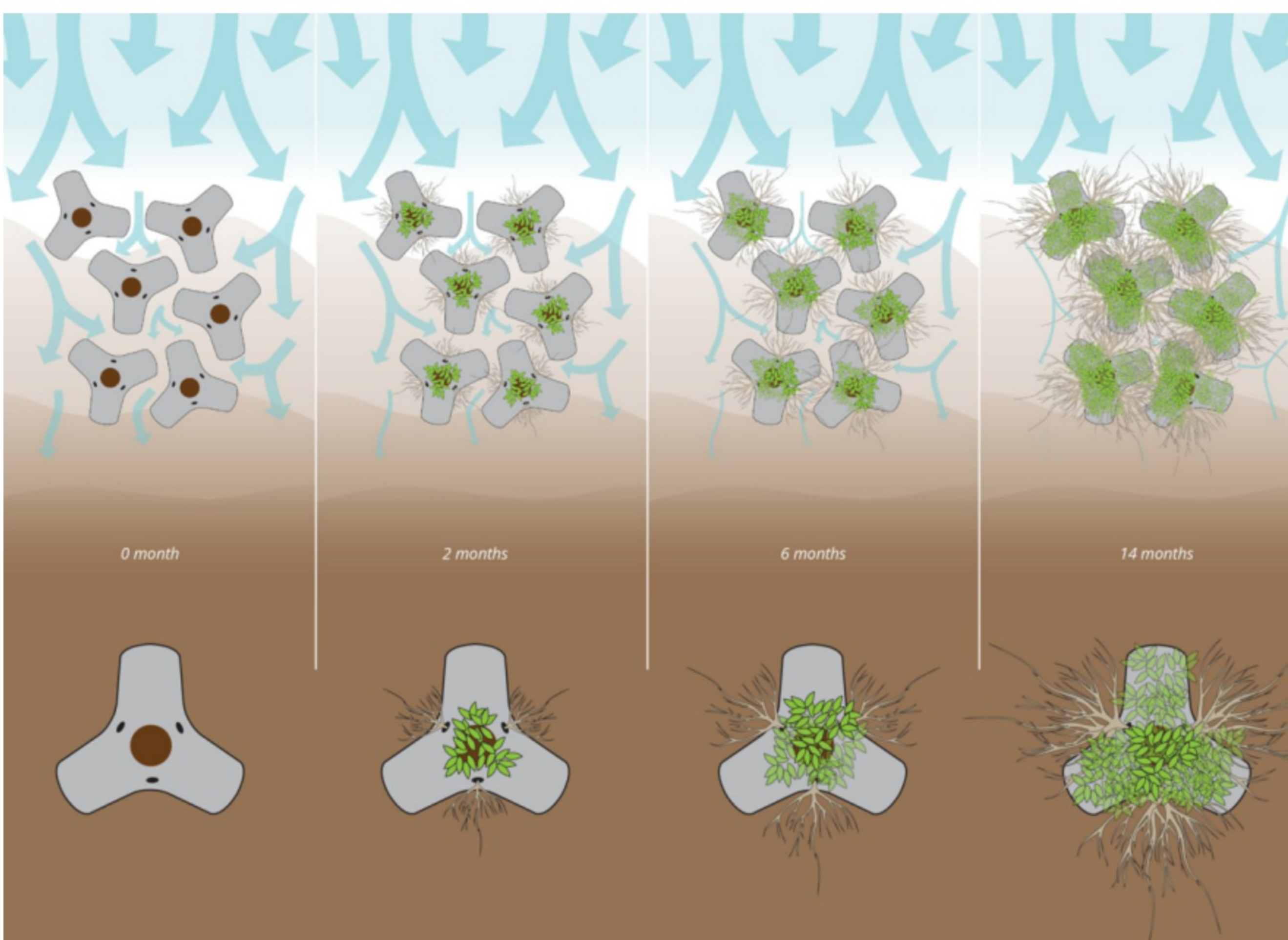
By [Kat Bauman](#) - November 15, 2016 in [Sustainable Design](#) | [Urbanism](#)

Leggy concrete tetrapods are commonly used as a bulwark against coastal erosion and tidal violence, but they can leave a bit to be desired. In designer Sheng-Hung Lee's opinion, they're both ineffective and unattractive. Looking at Taiwan's bleak beaches he began to notice that the heavy concrete blocks aren't as permanent as they appear, and that they appear... pretty ugly. The solution is the TetraPot, an amended tetrapod that taps the structural benefits of mangrove trees.



Mangroves are rightfully famous for their resilience in stagnant and saltwater environments. Their long rooting structures add strength against erosion in swamps and coastal areas all around the world. Designed around a 3-part mold similar to the traditional model, the TetraPot adds a central chamber where a biodegradable planter and seedling tree can be installed.

Placed densely, the concrete blocks would provide initial stability while the quickly growing trees develop root structures that reach towards the water. As they grow, the trees would create a deeper tie to the soil, protecting the concrete blocks and each other from watery abuse.



The concrete and trees would provide a helpful sanctuary for local animals and other plants, adding to the ground stability in the area and improving the visual landscape immeasurably.

As oceans rise and coastal security becomes a more pressing issue, this type of ecologically minded resilience tool will become increasingly valuable. The [TetraPot](#) has won a host of attention this year—from a James Dyson Award to the Red Dot—so maybe you'll see some growing on a coast near you.

