Capiz, Philippines

Community and nature-based coastal defense
T-Fence Mangrove Rehabilitation Pilot Project


Courtesy of Bangon Agojo Fisherfolk Association (2021)


Courtesy of Tagle (2022)


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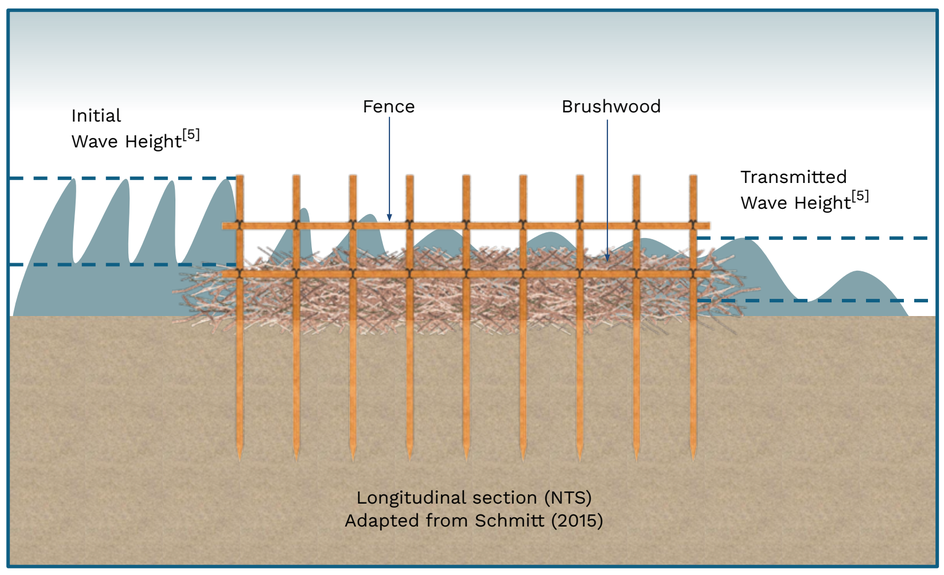
Inherent to its geography, Agojo, Capiz in the Philippines is susceptible to coastal hazards such as typhoons, storm surges, tsunamis, coastal erosion, and flooding.

In the aftermath of Super Typhoon Haiyan, 200 out of 200 houses in Agojo were totally damaged[1]. More recently in 2019, the entire province of Capiz was flooded due to Typhoon Ursula, and Agojo was among those most badly hit[2]. Further, their shoreline had been receding[3], making them even more vulnerable to coastal hazards.

The Agojo Seawall, which was built to protect the coastal community, corroded within just five years of construction and could no longer protect them[4].

The Agojo fisherfolk community soon turned to **mangrove rehabilitation,** coupled with the construction of a **T-shaped bamboo fence or T-Fence.**

NbS in depth

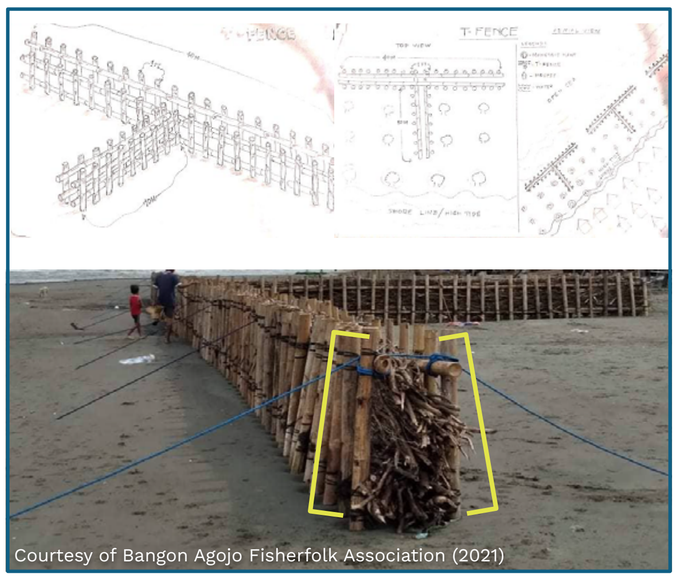


The T-fence is a mangrove rehabilitation and coastal defense structure consisting of bamboo poles inserted into the ground and arranged with cross-shore and long-shore sections, hence the T-shape.

Behind the fence, mangroves or beach forest species are planted to work in tandem as a coastal defense nature-based solution (NBS).

The T-Fences in Agojo were inspired by the T-Fences along the Mekong Delta in Vietnam[5], localized to use shorter bamboo poles that are locally-available and more suitable to the sandy soil type of the area. The Agojo T-fence is also oriented only 5 meters from the shoreline (vs. the 10-meter clearance of Vietnam T-Fences).

Most interestingly, the Agojo T-Fence is angled like the letter “A,” with rows of bamboo poles leaning inwards to better welcome the impact of water waves, which according to the fisherfolk are akin to their own practice of using angled bamboo as shields for their boats parked on shore[3].



Courtesy of Bangon Agojo Fisherfolk Association (2021)

Environmental benefits

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The fence provides **physical protection** from strong wave action for both the community and plantings behind it[6].

It also acts as a **sediment trap**, capturing water-carried sand particles which over time build up around the base, creating a suitable substrate for seedlings to take root and grow[7,8,9]. This has been observed with the Agojo T-Fence, accreting 1-meter of sand in just a span of three (3) months since implementation**.**

Moreover, its **permeable nature** enables the exchange of nutrients which facilitate growth[7].

Socio-economic benefits


Courtesy of Bangon Agojo Fisherfolk Association (2021)

The T-Fence and mangrove rehabilitation project in Agojo, Capiz, Philippines is a testament of a **community and nature-based initiative**, promising long-term coastal protection with low-cost infrastructure, reducing disaster risk, safeguarding homes from typhoons and flooding, offering sustainable livelihoods through restored fish stocks in mangrove ecosystems, and overall fostering community resilience, empowerment, and self-reliance.

References:

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Credits

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