Ghost Islands

Laurent Gutierrez (1)
Valérie Portefaix (2)

Abstract

Ghost Islands is a series of installations which investigates numerous fishing related activities, invisible stories, and multiple cultures. As part of a network of artworks set up in different regions of Asia, it addresses the issue of fishing nets discarded or lost at sea, as well as the health of our oceans, corals, and sea creatures. Shaped in the form of a group of islands and made from a complex assemblage of bamboo poles and disused fishing nets, Ghost Islands are composed by the accumulation and stratification of these numerous, yet distinct, layers. In addition, the construction of each new island helps to clean up the marine ecosystem through the collection of the nets from the surrounding sea. This process also engages with activist divers and establishes connections with fisherman to create new domestic products with the broken nylon threads of the collected nets.

Affiliation
(1) Hong Kong Polytechnic University, School of Design
(2)The University of Hong Kong, School of Architecture

Contacts:
(1) sdlgut [at] polyu [dot] edu [dot] hk
(2) mapoff [at] gmail [dot] com

Received:
26 March 2019

Accepted:
04 November 2019

DOI:
10.17454/ARDETH05.08

ARDETH#05

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Fig. 1 – Fishermen weaving traditional fishing nets made of coconut fibre in Koskoda Beach, Sri Lanka – MAP Office, 2018.

A brief history of fishing nets

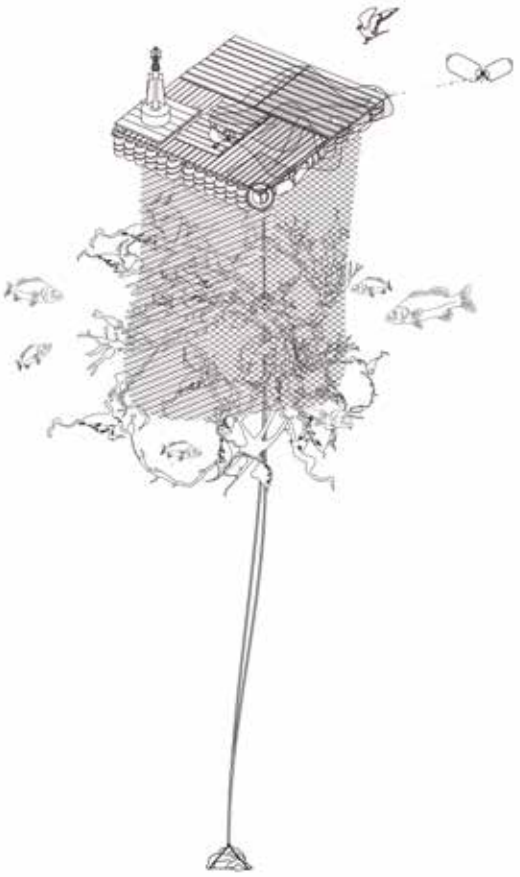
The earliest history of net making shows major points to apprehend the development of human kind along coastlines. In 1914, Finish archeologists excavated a net from the silty clay of a wetland with an AMS radiocarbon dating back to 8300 BC. Recorded as the 'Antrea Net Find', the net cords were made of willow bast, weaved together and already implemented with floats and stone sinkers. From prehistoric time, nets were used in a wide range of accomplishments beyond fishing, including land traps, military equipment, transport of goods, clothing and accessories. Yet the prodigy of the net relies in its strength, potentially to be extra wide, but also its capacity to be finely meshed to catch the smallest species of fishes. From a designer's perspective it is interesting to note that the woven geometry and the node technique are the same worldwide. So that the main difference from the original net is in its material, grass, flax, tree fibers and cotton in the early days, while today long duration nylon material is largely commonly used.

Fig. 2 – Sectional perspective of the Island of Sea enhancing the balanced life with the sea of a group of fishermen in High Island, Hong Kong – MAP Office, 2014.

Marine foraging and subsistence

While competitive fishing industries struggle more each year, we can still locate successful model of subsistence economy by the sea. In Hong Kong, traditional floating villages are a significant model of vertical lifestyle, in which a fish farm directly located underneath the living platform.
The contiguous fishing nets enclose many species of fish, squids and lobsters that are either consumed or traded at the market. This way, the sea replaces the land to feed directly the residents' community. The resurgence of the idea of foraging for food shows that there are clear benefits to wild harvesting in a society of abundance. In that sense, traditional marine foraging and activities are proving a perfect balance between the fishermen and the marine ecosystem. In Japan, this equilibrium has been promoted as *satoumi*[1] by Professor Hiroyuki Matsuda and implemented in various coastal areas to restore a damaged sea and stimulate ingenious agricultural heritage systems. In South East Asia, the 'floating community' known as sea-gypsy shows other modes of subsistence at sea that documented in fiction film Ghost Island. Further, as researchers, we are pointing the wellbeing benefits framing the coast and the sea as a treasured therapeutic landscape.

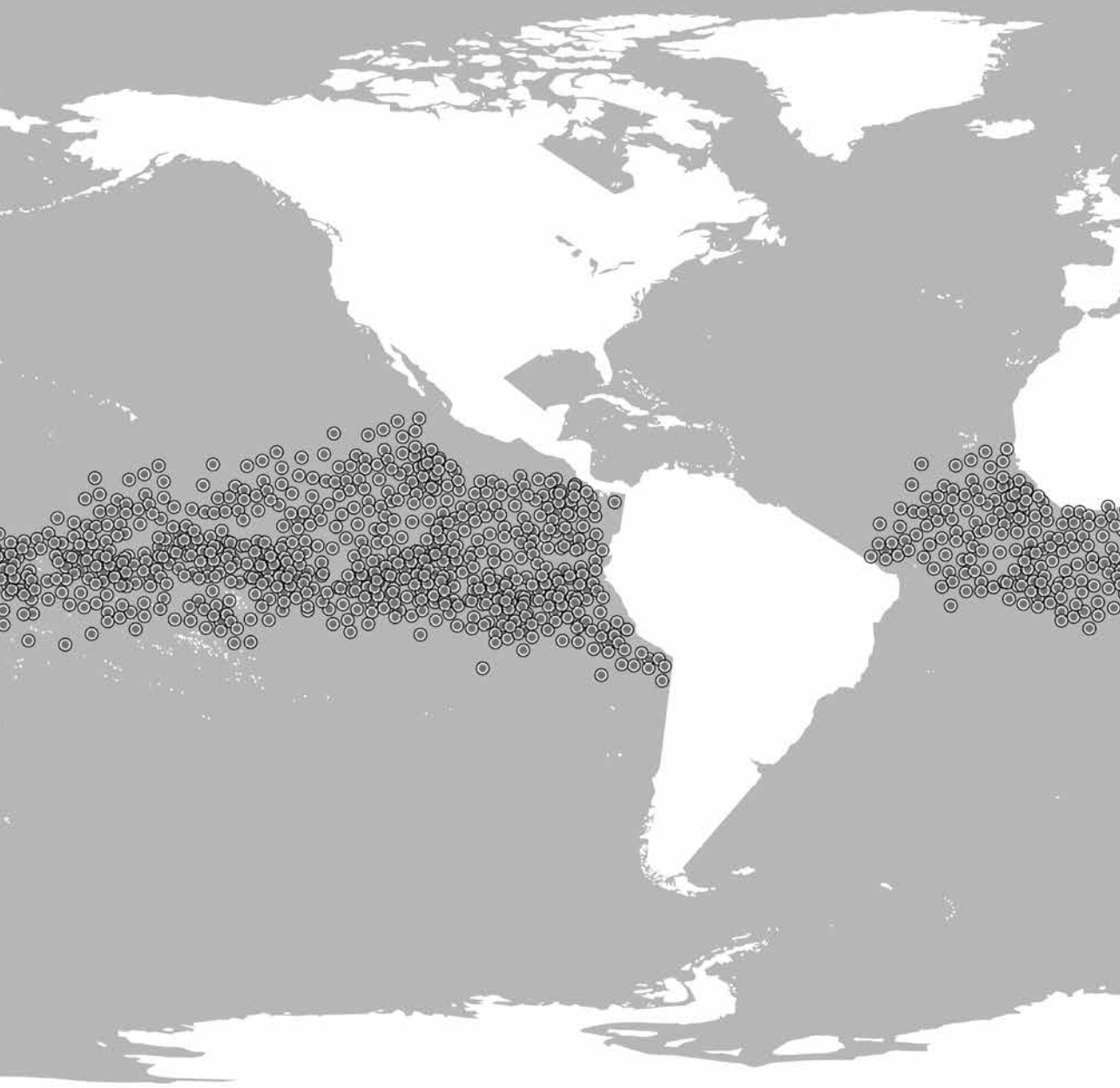
1 - Satoumi is defined as marine and coastal landscapes that have been formed and maintained by prolonged interaction between humans and ecosystems.



Fish aggregating device (FAD)
They are small and may seem harmless, yet Fish Aggregating Devices (FADs) are today multiplied by tens of thousands and have quickly become the hidden killers of ocean life.

Operating far at sea with powerful radar reflector, they allow the large fishing corporates to catch in no time a large numbers of fishes, including the juvenile. Once the radar is disactivated to bypass fishing quota restrictions, FADs are left, drifting drift at sea, especially in the Indian Ocean and along the equator trapped by the counter currents. Once they sink to the bottom of the ocean floor, they transform into ghost nets are destroying the benthic ecosystems that exist in the deep, including all marine life, and the vulnerable species.

Fig. 3 – Axonometric drawing of a Fish Aggregating Device – MAP Office, 2019.



Abandoned, lost or otherwise discarded fishing gear (ALDFG)
Fishing industry has been one of the most challenged with monstrous factory boats over fishing entire zones, leaving little change to smaller fishing boats to make an income. Over the past ten years, ghost fishing nets have become another major threat for the reproduction of life at sea. The most recent figures are exceptionally alarming, with half of the trashes invading our oceans classified by the Food and Agriculture Organization of the United Nations under Abandoned, Lost or otherwise Discarded Fishing Gear (ALDFG), which includes lines, traps, hooks, dredges and buoys. Developed for catching fish, the nets are now performing the

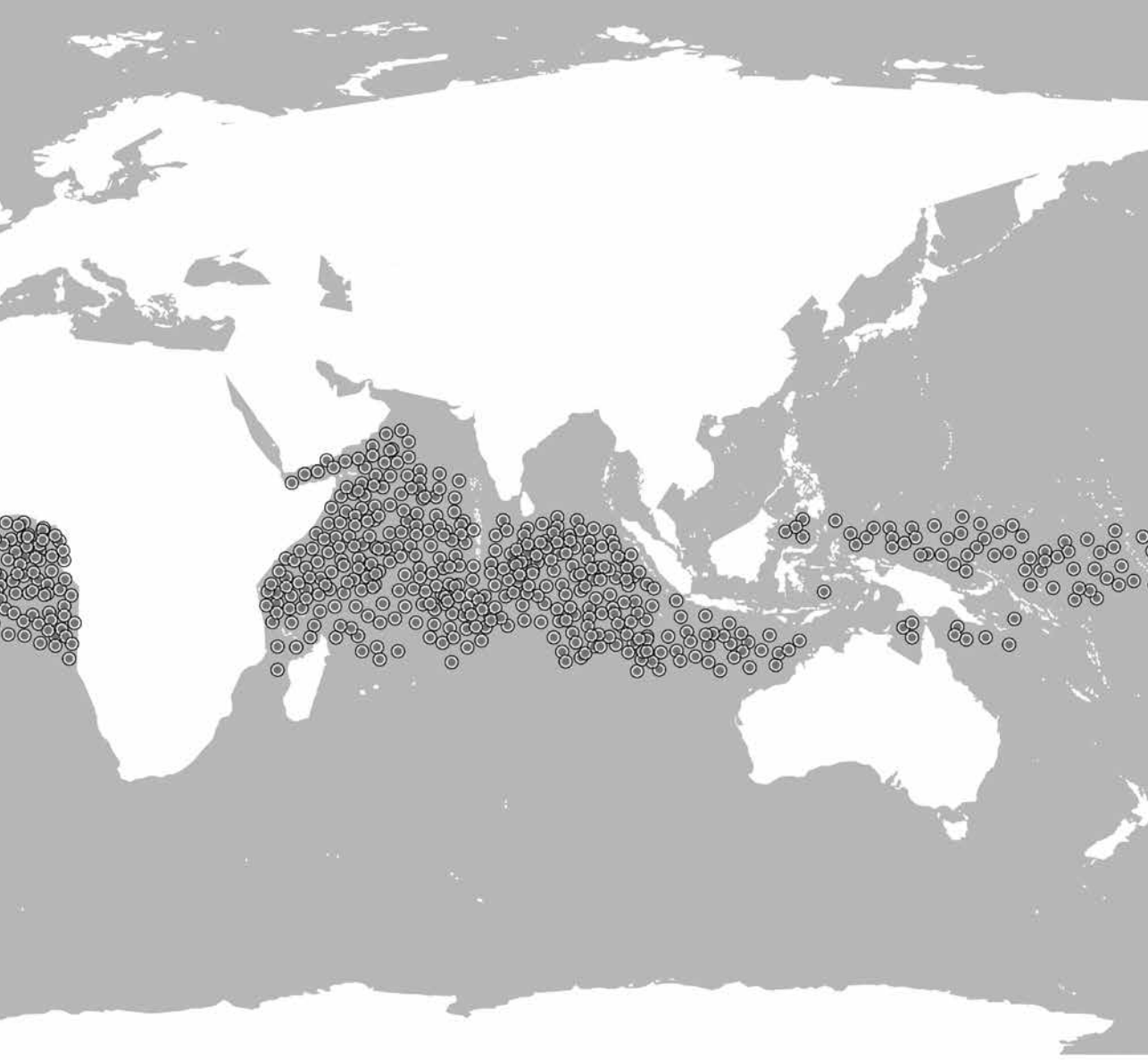


Fig. 4 – Map of drifting Fish Aggregating Device drifting along the Equator – MAP Office, 2019. Source: http://marinedebris.engr.uga.edu/fish-aggregating-devices/

exact opposite of their original purpose, entrapping fishes and corals underwater. Furthermore, the shift in the manufacture of fishing nets, with high quality, solid and durable synthetic material means that they are no possibility of biodegrading, as the natural fiber nets would do. Multiple options can be implemented to prevent the proliferation of ALDFG. The first is preventive and by enforcing industrial fishing regulation a system of tags, commonly used on basic products. They could be attached to each gear in order to prevent its discard or to geo-localize it once lost at sea.

Fig. 5 – Diver activist removing a Ghost Fishing Net from young corals in Krabi National Park, Thailand – MAP Office, 2017.

Ghost nets activist diving

There are many ways to approach the catastrophe, upfront and once the damage is done. At the global scale, an active network of activist divers are deploying immense energy to remove the nets, one by one, in the deep sea or on the seashore. Yet it is difficult to evaluate the ratio of their action with what is left into the ocean. Also scale does not matter, as tiny nets will be as harming as large ones, entrapping baby corals trying to survive the ocean warming and acidification. In this context we should approach ghost fishing nets as an hyper material, unable to reconnect with its original purpose. Recognized as a priority issue by the United Nations Environment Programme (UNEP), ghost nets represent massive amount of material, therefore a great opportunity that should be addressed by art and design.

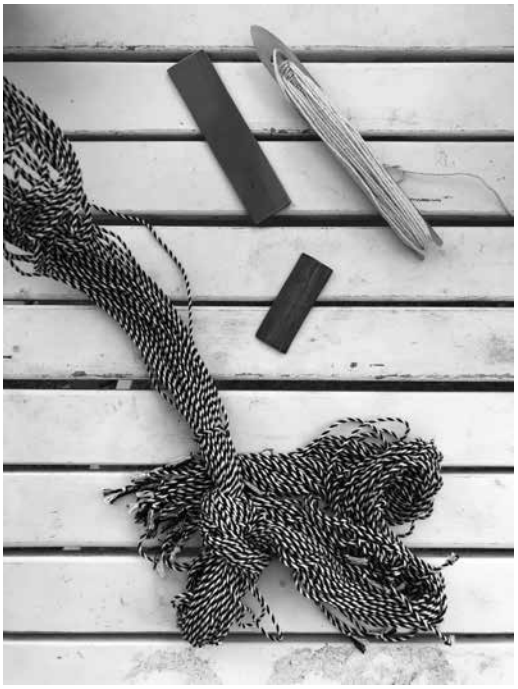


Fig. 6-1 – Fisherman tools to weave net bags, Cheung Chau Island, Hong Kong – MAP Office, 2018.

Fig. 6-2 – Net bags weaved by retired fisherman, Cheung Chau Island, Hong Kong – MAP Office, 2018.

Upcycling and domestic activities

The major problem faced by the various diver activist groups is the future of ghost nets once they reach the land, often packaged into hundreds kilos of dirty material, crammed with crustaceans, live or dead, fishes and other debris including plastic and metal. In most cases, the informal pile is burnt creating harmful dioxins, or ends in landfill, with some potential to be sent back into the sea. Raising the fundamental question of waste, the reality is that ghost fishing net offer a very limited amount of possibilities for recycling or upcycling. Those processes mainly serve as communication to construct awareness and the necessity to address the materiality of the net with new natural fibers with biodegradable abilities. The upcycling process allows the materiality to enter the domestic environment and reveals the main characteristic of the material as a surface with pattern and as a container to protect or host. Net bags, hammocks, lamps, fabrics to wrap object, are the many possible deviations bringing a positive attitude and awareness.

Fig. 7 – Ghost Island is made from an accumulation of reclaimed fishing nets that have been left behind in the sea around Krabi National Park, Thailand – MAP Office, 2018.

Ghost Islands

In fall 2017, MAP Office received an invitation from curator Jiang Jiehong to participate in the first Thailand Biennale, *Edge of the Wonderland*. It opened in the Province of Krabi in November 2018 and continued for a duration of four months. From this opportunity, we engaged the multiple components of our research based practice on the ecology and economy of the coastline. It also propelled a series of art installations giving visibility of this still most unknown phenomenon that is the ghost net. For this public project, we constructed the first *Ghost Island*, revealing "the Edge of the Wonderland" with the upcycling of 300 kilos of fishnets rescued by multiple activist divers groups around Krabi National Park.

Fig. 8 – Ghost Island installation with hammock made from upcycled Ghost Fishing Nets by retired fisherman from Cheung Chau Island, Oi! Art Space, Hong Kong – MAP Office, 2019.

This experience is now repeated in Hong Kong with the construction an indoor Ghost Island transformed into a small cinema inside the former colony's Yacht Club. For this iteration, it serves as a flagship to research various local issues regarding the pollution of the sea, a space for discussion involving diverse groups (politics, environmentalists, scientists, designers, etc.) with the Hong Kong group of activist divers. This new collaboration extended to a small group of retired fisherman weaving net bags and upcycling hammocks to transmit the cultural heritage of their Cheung Chau Island community.

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