



Marine Litter Issues Overview

WFO tracks the latest news and developments on marine litter to bring you its monthly overview on the issue. Working on solutions? Send us your story to be in next month's edition!



City workers and residents cleaning up trash along Hong Kong's shore



Litter on Shui Hau beach in Hong Kong

Environmental disaster causes Hong Kong locals to cry out against marine litter

Over the past few weeks, overwhelmingly large amounts of waste have washed up on Hong Kong's beaches, prompting public complaints about the problem of marine litter and calling on the government to act immediately. Marine litter has inundated Hong Kong's south-facing beaches, particularly on Lantau Island, causing many residents and environmentalists to raise awareness on the issue on social media. The Facebook group 'Save Aberdeen Harbour Alliance' for example posted pictures of the harbor and commented that it is "some of the most serious instances of marine debris on the shores of Hong Kong's beaches and harbours in living memory". Photos and videos of locals show the vast coastlines filled with trash.

Analyzing the brands and labels seen on the waste, local authorities and the Hong Kong chapter of Sea Shepherd, an environmental and maritime activist organization, noted that the majority originated from Hong Kong and from mainland China. Another potential source includes the trash dumpsite on the island of Wai Lingding and the large amount of household waste dumped into the Pearl River – normally blowing out into the South China Sea but the change of wind and currents brought it back to the shores.

A report by the Environmental Protection Department (EPD) estimates that the city's landfills will reach full capacity by 2019. In the meantime, smaller temporary landfills have appeared and the city's recycling rate has been declining.

Sources: [The New York Times](#), [Sea Shepherd Hong Kong](#) and [South China Morning Post](#)

Hong Kong's environmental disaster in pictures



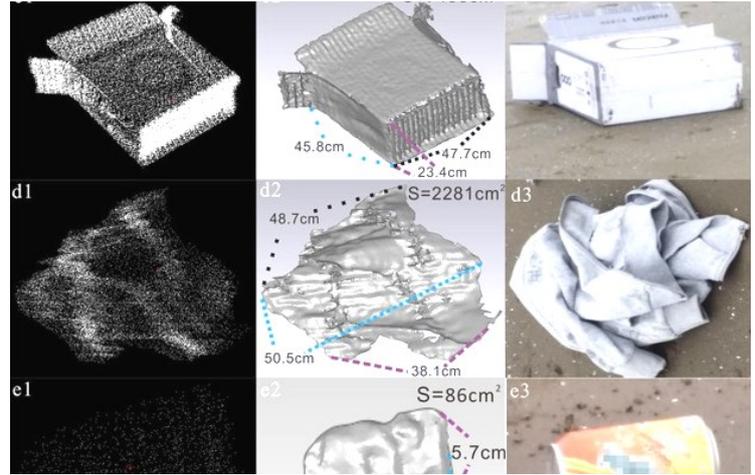
Photo [posted on Facebook](#) of Cheung Sha Beach on Lantau Island, Hong Kong



Trash dumpsite on the island of Wai Lingding (China)



The Arctic has a fragile ecosystem and marine life



The use of LIDAR scanning to map beach litter

Research finds UK waste accumulating in the Arctic

According to researchers studying ocean currents at Imperial College London, marine litter originating from the UK is accumulating in the Arctic and damaging the fragile and remote ecosystems. The Imperial researchers were able to track the ocean currents using PlasticsAdrift.org, a tool developed by scientists from the university's climate change and environment institute, Grantham Institute. The team of researchers discovered that waste from the UK coastline that didn't sink to the ocean floor or wash back to the shore spent over two years drifting towards the north of Norway to the Barents Sea before reaching the Arctic Ocean.

Dr. Erik van Sebille, an oceanographer leading the team states: "It would be impossible to ban plastic, and undesirable as it is a useful material that offers many benefits. We should instead have a holistic approach to improving the situation, including social and behavioural, chemical and engineering solutions - aiming to minimise the amount of plastic that ends up in the oceans".

The findings were presented as part of the Royal Society's Summer Science Exhibition that took place in early July.

Sources: [The Guardian](#) and [London Imperial College](#)

Read the institute's briefing paper [here](#).

New technology helps map beach litter in record time

A team of researchers has developed a 3D laser scanner to semi-automatically measure and analyze trash found on beaches thereby replacing the tedious act of manual counting. Zhijun Dai from the East China Normal University in Shanghai lead his team to develop a better system for surveying beach litter. Dai used the specific type of scanning technology that uses light detection and ranging (LIDAR) with the help of lasers. After training the computer algorithm to classify its surroundings, he was able to create a 3D map of the litter found on a beach.

When testing the method, it was found that the LIDAR scanning was approximately 75% accurate. The new technology only took 20 minutes to scan the beach and create a 3D map whereas it took between two and half to three hours for the researchers to manually track and tally the same littered beach.

The report, "Semi-automatic recognition of marine debris on beaches", published in *Nature*, strongly suggests "that LIDAR could be implemented as an appropriate monitoring tool for marine debris by global researchers and governments". The group of researchers believe the technology can be improved and hope to mount it on a robotic vehicle in the future.

Sources: [Nature](#) and [The Atlantic](#)



Chopsticks made from ocean litter



The making of the chopsticks

Chopsticks made from ocean litter

A student in the Netherlands has created reusable chopsticks out of recycled ocean litter. The project is called UmiHashi, meaning Ocean Chopsticks in Japanese, and the designer, Yavez Anthonio, was driven by his passion for sushi and his desire to reduce the amount of floating waste in the ocean. His goal is not only to raise awareness on marine litter but to also make UmiHashi “the symbol for sustainable sushi”.

At the moment, the manufacturing process requires the plastic to be collected, separated and washed by hand. Yavez launched a crowdfunding campaign on [Kickstarter](#) in order to raise funds to invest in specialized machinery, research and safety testing. The deadline for project funding was June 28th and at that time it did not reach its objective.

Source: [Anthonio.info](#)

The Whale Protection & Crab Gear Retrieval Act passes in California

In California, a bill was recently voted on allowing crab fishermen to actively protect whales and other marine life from entanglement. The bill, called The Whale Protection & Crab Gear Retrieval Act, received widespread support in the Senate, passing on a 38-0 vote. Senator Mike McGuire who introduced the bill said: “California crabbers, environmentalists and the state have come together to protect whales and keep our ocean clean of old fishing debris”.

In addition, a best fishing practices guide was developed by the California Dungeness Crab Fishing Gear Working Group which is comprised of crab fishermen, conservation groups, and government agencies working together on solutions to reduce whale entanglements. Tim Sloane, Executive Director of the Pacific Coast Federation of Fishermen's Associations (PCFFA) stated: “the measures they've adopted to reduce entanglements reflect [the fishermen's] unparalleled knowledge of the ocean and the fishery, and that's why they're going to be effective”.

Sources: [Del Norte Triplicate](#) and [PCFFA](#)



Whale Entanglement Team volunteers free a whale from entanglement



Crab fishing pots stacked in Santa Cruz, California