



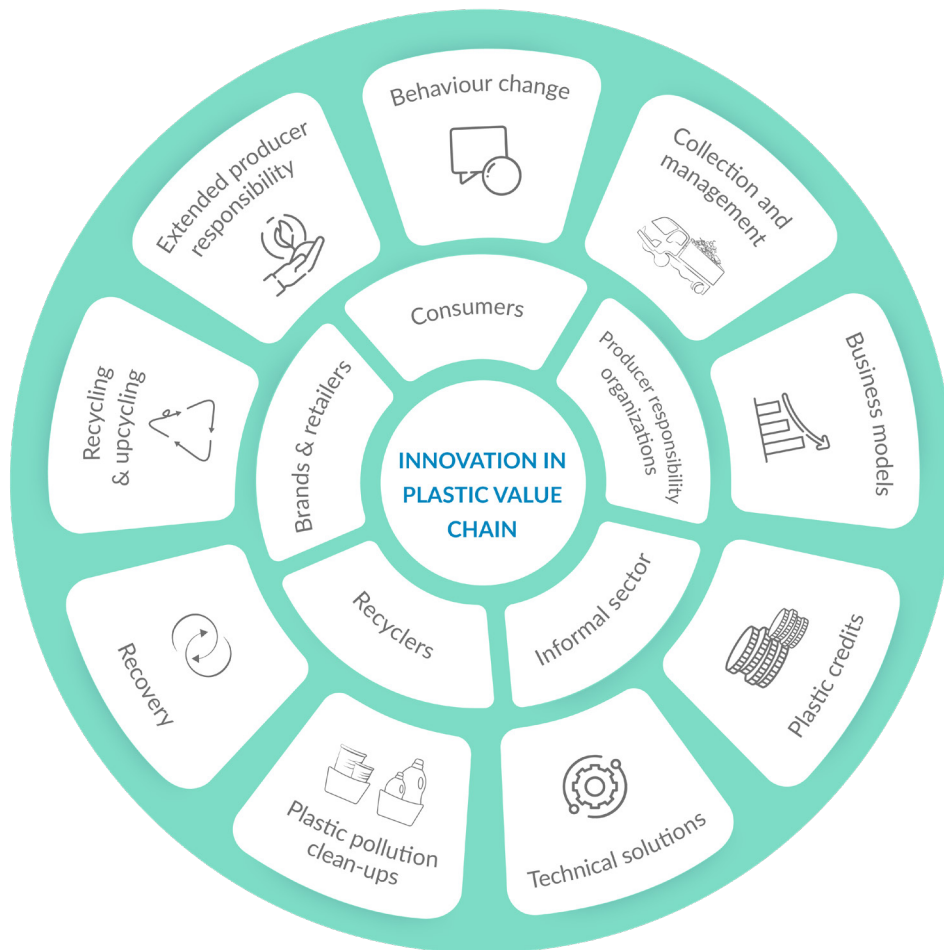
Circular solutions for plastic pollution

A plastic offset programme is encouraging
companies to reduce their plastic footprint

About the case study

This good practice case study is part of a series of knowledge products developed by the SEA circular project to showcase exemplary market-based solutions that bring about transformational changes in the way plastic is managed in the value chain. This series captures circular economy approaches, ranging from innovative business models to behaviour change initiatives, to address plastic pollution. These approaches form part of the SEA circular project's "circularity framework for the plastic value chain".

Circularity framework – plastic value chain

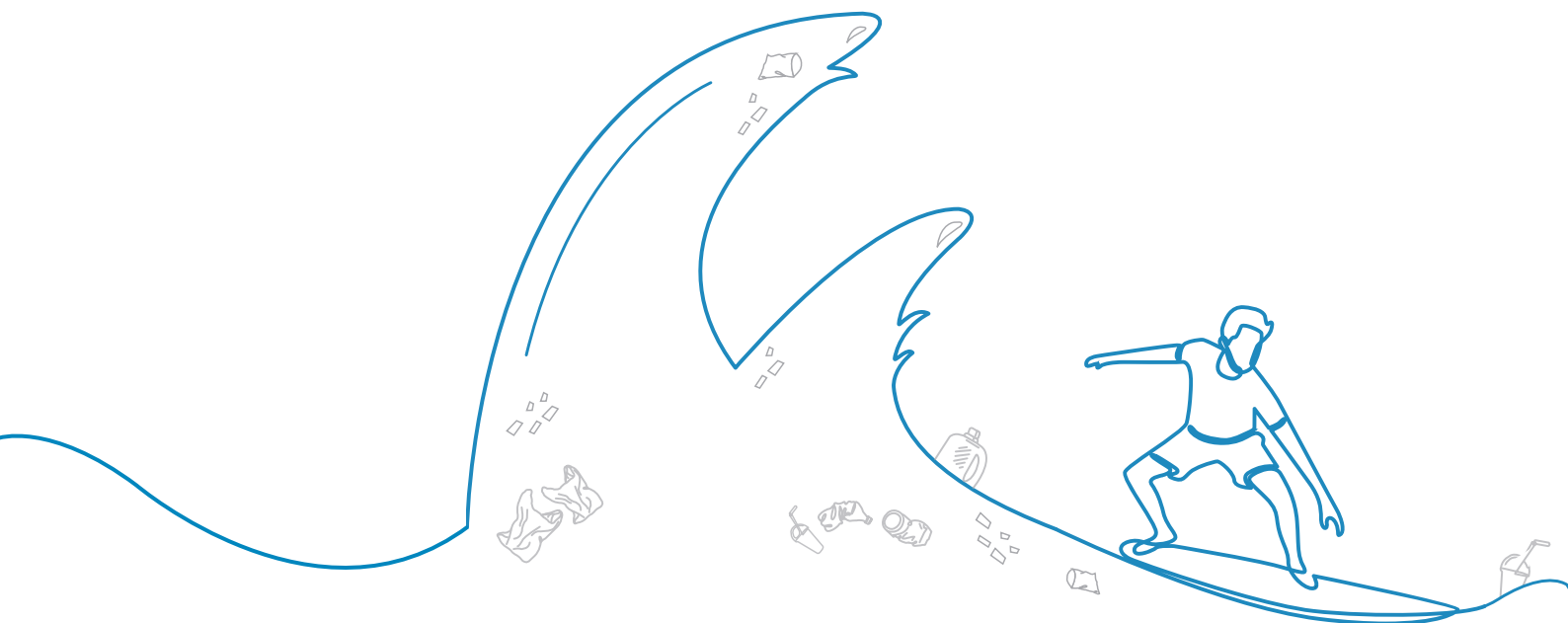


Background

In many developing nations, large populations and rapid urbanization are overwhelming local waste management infrastructure, which along with low waste collection rates and high littering trends is resulting in substantial pollution in both surrounding land and marine environments. In terms of marine environments, more than 9 million tons of plastic ends up in the world's oceans, including an estimated 640,000 tons of abandoned fishing nets that is currently in oceans,¹ with scientists reporting that oceans are expected to contain more plastics than fish (by weight) by 2050.

However, people and organizations are becoming more aware of the importance of recycling plastic waste, and companies are exploring innovations, technology and alternatives to virgin plastic. Some are even incorporating recycling and waste collection into business models in a way that incentivizes the informal sector, provides income and livelihoods, and encourages other businesses to apply circular approaches.

One such company is Starboard, a world-leading paddleboard company founded by Olympic windsurfer Svein Rasmussen in 1994. As surfers, the founders of Starboard have seen first-hand the impact of plastic pollution in oceans and how it is increasing at an alarming rate. Dedicated to innovation and quality while pushing the limits of ocean athletic possibilities, Starboard's vision is to change how businesses and the world view plastic and to reshape the plastic economy into a safer and greener system, so that water sport enthusiasts can paddle in clean waters and sail plastic-free seas.



1. Greenpeace, *Ghost Gear: The Abandoned Fishing Nets Haunting Our Oceans* (Hamburg, 2019).



Interventions

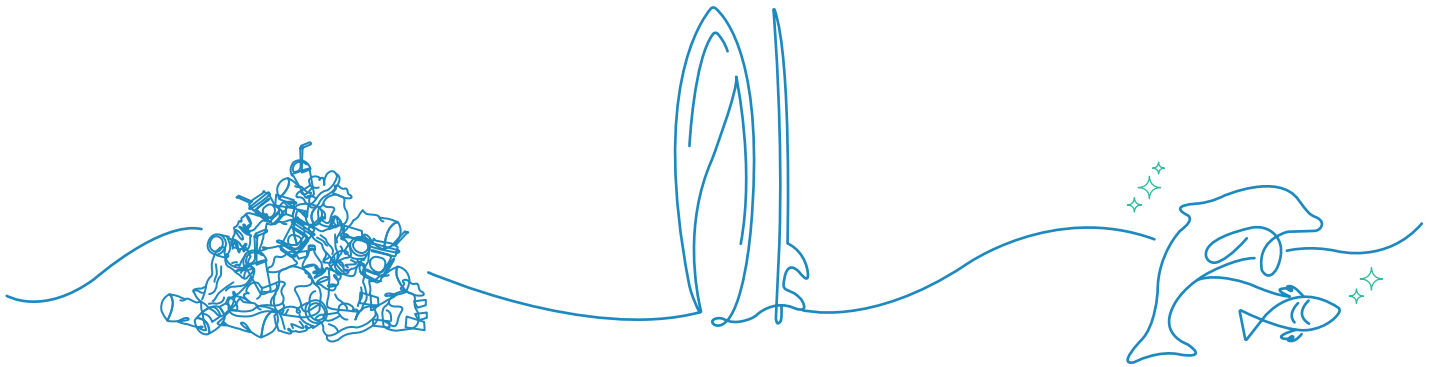
As a company that produces boards and related equipment for paddling, surfing, windsurfing and kiteboarding/kitesurfing (which are exported to 70 countries), Starboard is aware of its role in the use of plastic for its products, and is implementing various approaches to address this and become part of the solution.

In 2017, Starboard started calculating its carbon and plastic footprints. Using the Plastic Disclosure Project methodology, Starboard understood and quantified the areas where recycled content, increased material recovery or the use of eco-innovation changes could be made in its product line, and where its plastic footprint could be reduced within its operations.

Starboard analysed its processes to understand its complete plastic use and waste footprint, which enabled it to benchmark the amount for its boards, accessories, apparel, packaging and operations for both 2017 and 2018. The Parley avoid, intercept and redesign (AIR) concept has been and is still applied to review the company's use of plastic items. This helps Starboard recognize where single-use plastic can be eliminated and replaced with other materials, such as recycled plastic, bioresins or natural materials, including end grain balsa wood and pine technology.



For every board sold,
**Starboard collects part of the profit,
which is used as a tax to compensate
its Plastic Offset Program,
generating action for the planet.**



For its carbon footprint, Starboard's environmental team calculates a life cycle analysis for all boards each year. On average, the manufacturing of a board creates 100 kg of carbon dioxide (CO₂). To offset this, Starboard works with the Worldview International Foundation to plant mangrove trees in the Thor Heyerdahl Climate Park in Myanmar. Each mangrove tree can absorb up to 1,000 kg of CO₂ within the first 20 years of its life, which means that the emissions of a Starboard board is more than matched, making it carbon positive. Starboard covers its carbon footprint for all areas across the company, including the travel of employees and team riders, the electricity use of its various offices, the creation of all accessories and paper packaging, and shipping. To verify all calculations, Starboard worked with Carbon Footprint, calculating that all of the company's emissions since 1994 will have been absorbed within the next 20 years.

For every board sold, Starboard collects part of the profit and sets it aside as a plastic tax for each board produced. The company uses this tax to compensate its Plastic Offset Program clean-up team for collecting 1.1 kg of plastic trash - which is equivalent to the amount that enters oceans per person per year - for each board sold. Starboard allocates part of its profits to generate action for the planet.

Starboard initiated the world's first plastic offset programme at the end of 2017 to reduce the company's plastic footprint. It does this by assigning an internal price/tax on each plastic material used, which is then multiplied by its usage in each Starboard product. The dollar value assigned to each of the plastic materials is based on: 1) its duration of use (lifespan); 2) its toxicity (harm to the environment); and 3) its creation of waste (recycled/bio content). By accounting for these factors with an offset price, Starboard's Plastic Offset Program acknowledges the dynamic nature of the problems that plastics cause and further clarifies - and quantifies - the investment needed to mitigate its impact.



This tax is internalized in its products' pricing and is used to fund the Plastic Offset Program. Starboard also pays for the following plastic net-positive activities, such as:

- Advocating for legislation that taxes the use of plastic materials and bans several single-use plastics in Thailand. This means companies will be required to internalize the social cost of carbon and plastic waste into their production costs.
- The research and development of materials that can replace toxic thermoplastics such as PVC. The Parley AIR philosophy holds products to achieving high performance and lowering their environmental impact.
- Funding support for non-governmental organizations (NGOs) to reduce plastic pollution impacts in waterways, both in Bangkok and worldwide. Starboard works with organizations to collect and upcycle discarded fishing nets, which are fully recycled into material for use in various board components, such as fins, fin boxes, stand up paddleboard pumps and other structural board parts (Akulon RePurposed). Starboard is now carrying this out in India and also plans to work with NGOs based in Thailand (Environmental Justice Foundation) to recycle the collected fishing nets into resins that will be used in the production of its board fins.

The Parley AIR philosophy holds products to achieving **high performance and lowering their environmental impact.**



The challenge

Engaging people

Retaining pickers to collect plastic trash – the volumes of which differ on beaches for example, depending on the season and the time of year – is a particular challenge. However, continuous efforts are being made to educate individuals, with training and retraining carried out to help pickers understand why it is an important activity and that it is an opportunity for income.



Impacts

The Plastic Offset Program encourages Starboard to rethink and reinvent how it uses plastic and to further reduce its plastic consumption. Eliminating plastics from production or switching to less harmful varieties (and thus with lower offset prices) will lead to a reduced investment in the Plastic Offset Program, thereby incentivizing companies to re-engineer and reduce their plastic consumption habits.

For each board produced, Starboard enables the collection of 1.1 kg of beach/ocean plastic trash, which is equivalent to the amount entering the ocean per person per year.

By using an offset price to account for the lifespan of plastic, along with its harm to the environment and the recycled/bio content in the company's products, the Plastic Offset Program quantifies the investment required to mitigate the plastic's impact. Such a pricing scheme also encourages companies such as Starboard to rethink and reinvent how they use plastic in an effort to reduce the external cost of the plastics they use.

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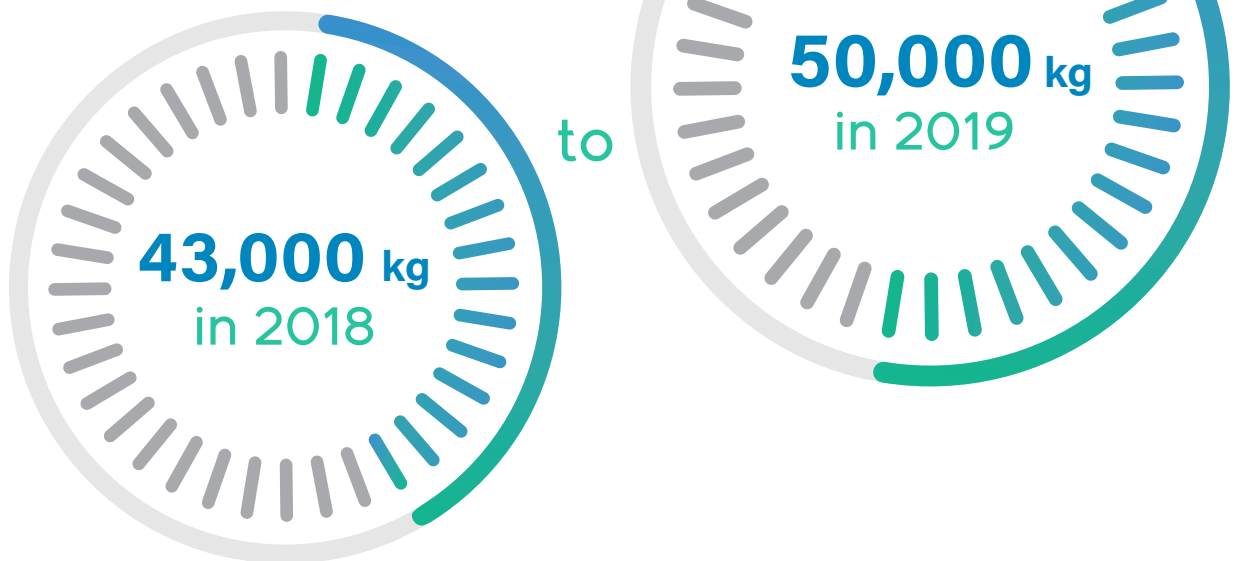


Results and outcomes

Over the past 12 months, Starboard has replaced over 21.2 per cent of virgin plastic with recycled plastic, and has reduced its overall plastic consumption by 6.5 per cent by using more biomaterials.

It has also increased the amount of plastic collected from 43,000 kg in 2018 to 50,000 kg in 2019.

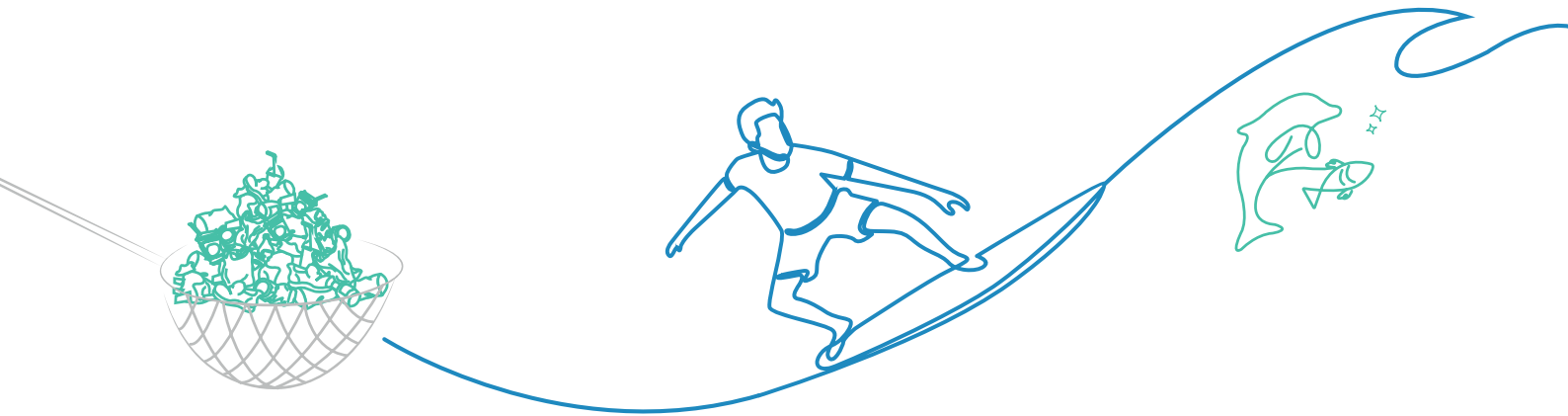
Increased
amount
of plastic collected:



Moving forward

Starboard plans to work with more communities in Thailand to implement its Plastic Offset Program. Each year, the team identifies locations with large volumes of plastic trash that need removing and works with the local authorities to be granted permission to do so.

Starboard also launched a new clothing brand, which has an environmental focus through matching the weight of its products with an equivalent weight of plastic waste to be removed from the environment. The cost of this activity is reflected in the clothing's pricing and is set aside from sale proceeds to fund collection efforts. This provides an opportunity for consumers to support a cause that reduces the amount of plastic pollution entering oceans worldwide.



We thank Starboard for sharing details of their exemplary innovations in the SEA circular project's series on the plastic value chain.



The SEA circular project Reducing marine litter by addressing the management of the plastic value chain in Southeast Asia is implemented by the UNEP Regional Office for Asia and the Pacific and the Coordinating Body on the Seas of East Asia (COBSEA), with funding support from the Government of Sweden. SEA circular aims to reduce and prevent plastic pollution and its impact by working with governments, businesses, civil society, academia and international partners. The initiative promotes market-based solutions and enabling policies to transform plastic value-chain management, strengthens the science base for informed decision making, creates outreach and raises awareness. The project leverages COBSEA's regional mechanism to tackle the transboundary challenge of marine litter in a harmonized manner.

 www.sea-circular.org

