

Case Study:

STARBOARD- EXPERIENCES IN PLASTIC OFFSETTING

This case study demonstrates market-based solutions towards “less plastic wasted”, exemplary solutions for transformational changes in the way the plastic is managed in the supply chain. Circular economy approaches, including business incentives for plastic reduction and recycling, are used, leading to increase in plastic re-use and recycle and to the reduction in single use plastic packaging.

- More than 9 million tons of plastic ends up in the oceans, wreaking havoc to marine life and at least USD 8 Billion in damage to marine ecosystems.
- Scientists tells us that the ocean is expected to contain more plastics than fish (by weight) by 2050. The founders of Starboard, being surfers have seen firsthand the impact of plastic pollution in our ocean and how it is increasing at an alarming rate.
- In many developing nations, large populations and rapid urbanization overwhelm the local waste management infrastructure. Low waste collection rates and high littering trends produce substantial pollution both in the surrounding land and marine environments.
- Fishing nets abandoned in the sea – experts estimate that roughly 640,000 tons are currently in the oceans, accounting for 10 per cent of all plastic waste in the sea (FAO-UNEP report). Starboard has incorporated the use of resins from recycled fish nets as fins for their boards.
- People and organizations are becoming more aware about the importance of recycling plastic waste. Companies are embarking on innovations and technology, exploring alternatives to virgin plastic. Some are even incorporating recycling and collection into business models in a way that incentivizes the informal sector, provides income and livelihood, and encourages other businesses to apply circular approaches.

A. Background

Starboard, is a world leading watersports company founded by Olympic windsurfer Svein Rasmussen in 1994. Dedicated to innovation and quality ‘even as it pushes the limits of ocean athletic possibilities’, Starboard’s vision is to change how businesses and the world see plastic and to reshape the plastic economy into a safer and greener system, so that watersport enthusiasts can paddle clean waters and sail plastic-free seas’.

B. The Challenge

As a company that produces boards and related equipment for paddling, surfing, windsurfing and kiteboarding/kitesurfing which are exported to over 70 countries, Starboard is aware of its role in the use of plastic for its products. One of the means sought to address this contribution and become part of the solution is through the company’s determination to:

- calculate its plastic footprint through their Plastic Disclosure Project
- set up an internal plastic offset program
- become Carbon Past Positive, or balancing not only the current carbon footprint, but that of entire 25 years that the business was in existence

C. The Interventions

In 2017, Starboard started foot printing their carbon and plastic use. 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 their product line, and where its plastic footprint could be reduced within its operations.

Starboard went through the process of understanding its complete plastic use and waste footprint and was able to benchmark the amount for its boards, accessories, apparel, packaging, and operations for both 2017 and 2018. The Parley AIR Concept, a hierarchy of "Avoid, Intercept, and Redesign", has been and still is being applied to review the items of plastic used within the company. This helps Starboard recognize where single-use plastic can be eliminated and replaced by other materials such as recycled plastic, bio-resins or natural materials including end grain balsa wood and pine technology.

For the carbon footprint, the Starboard environmental team calculates a Life Cycle Analysis for all boards each year. On average, the manufacturing of a board creates **100 kilograms** of carbon dioxide. To offset this, Starboard works with Worldview International Foundation to plant mangrove trees in the Thor Heyerdahl Climate Park in Myanmar. Each mangrove tree is capable of absorbing 1,000 kilograms of CO₂ within the first 20 years of its life, this 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, electricity use of the various Starboard offices, the creation of all accessories and paper packaging and also from shipping. To verify all calculations, Starboard worked with Carbon Footprint UK and calculates that within the next 20 years, all of Starboards emissions since 1994 will have been absorbed.

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 the Plastic Offset Program clean up team for collecting 1.1 kilograms of plastic trash for each board sold. 1.1 kilograms is the equivalent to the amount of plastic trash entering the ocean, per person, per year. Starboard allocates part of its profit to generate action for the planet.

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

This tax is internalized in the pricing of its products and is used to fund the POP programme. 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. This year, Starboard will be going through another footprint exercise for its new product lines. Each board, each accessory as well as each area in the company that utilizes plastic, will be dissected.
- Research and Development of materials which can replace toxic thermoplastics like PVC, Avoid-Intercept-Redesign philosophy holds products to achieve high performance and lower environmental impact.

funding support for NGOs to reduce plastic pollution impacts in waterways both in Bangkok and world-wide. Starboard works with organizations to collect and upcycle discarded fishing nets, which are fully recycled into material for use in its surfboard components like fins, fin boxes, Stand Up Paddleboard (SUP) pumps and other structural parts in surfboards (Akulon Repurposed). Starboard is now doing this in India and will also work with NGOs based in Thailand (EJF) to recycle the collected fishing nets into resins which will be used in the production of its board fins.

D. Impacts

The POP program encourages Starboard to rethink and reinvent how plastic is used and further reduce the 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 reengineer and reduce their plastic consumption habits.

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

By accounting for the plastic lifespan, harm to the environment, and recycled/bio content in its products with an offset price, the Plastic Offset Program acknowledges the dynamic nature of the problems caused by plastics and further clarifies – and quantifies – the investment necessary to mitigate the impact of plastic used. Such a pricing scheme also encourages companies like Starboard to rethink and reinvent how they use plastic in an effort to reduce the external cost of the plastics they use.

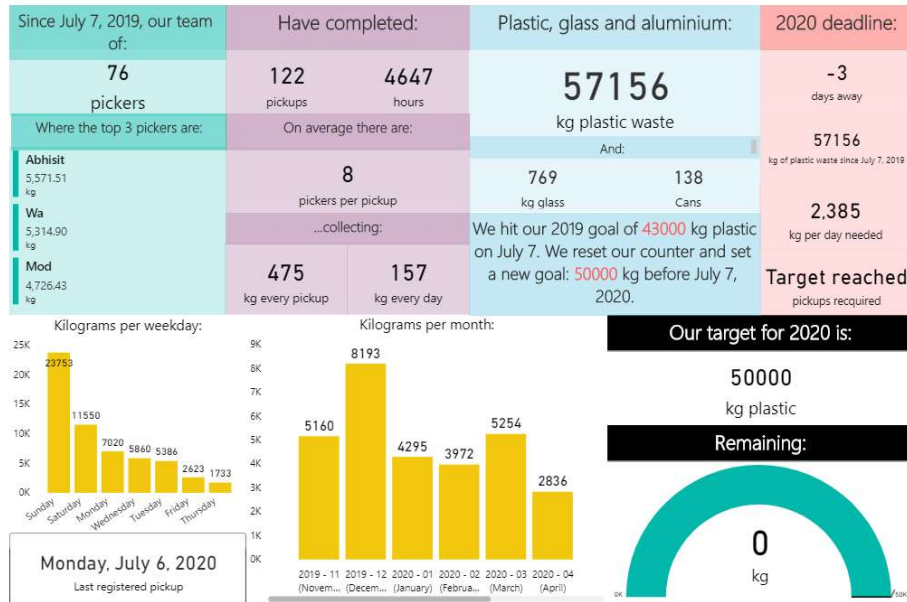
E. Results and Outcomes

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

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

2019-2020 – 50,000 kilograms of plastic collected!

We have successfully reached our target of 2018 – 2019. To check out our final results and how many kilos we collected to reach our goal, see our POP chart.



F. Challenges

Engagement of the people – Trash volumes in the beaches differ, depending on the season and the time of year. Retaining manpower can also be a challenge. Nevertheless, continuous efforts are made to educate the pickers. Training and retraining them to understand why they're doing it, and the opportunities for income are always stressed.

(Include photos of the beaches during this monsoon season).

G. Moving Forward

Starboard plans to work using the POP scheme with more communities in Thailand. Each year, the team identifies locations with large volumes of plastic trash needing removal and works with the local authorities to be granted permission to do so.

The company will also be launching a new clothing brand in 2021, which is heavily environment focused. The weight of the product will be matched with an equivalent weight of plastic to be removed from the environment. This cost will be reflected in the pricing of the garments and will be set aside from the sales proceeds for use in the collection efforts. This provides an opportunity for consumers to support a cause that reduces the amount of plastic pollution entering our oceans.

Quotes:

We're outside in nature all the time. When we're out in the water, we see what's happening. And for us to be producing and contributing to this economy that uses plastic, we decided to show what we could be doing.

We want companies to join us. We already have the teams that go out every day (like adding to the fund for paying collectors)

People are choosing Starboard because of their work with the mangroves and the Plastic Offset Program

We want to change the social aspect, how people tend to view waste. There's a disconnection of the waste that goes into the environment and human health. There's no care. We need to look after what's around us in order for us to have a better life.

Links to further information:

<https://blue.star-board.com/news/starboard-launches-worlds-first-plastic-offset-program/>

<https://blue.star-board.com/news/plastic-offset-program-19-20-target-reached-what-have-we-learnt/>