

CASE STUDY:

Enaleia

Teaching fishermen how to fish: reviving an industry and dealing with plastic

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 value 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.

**I'm acting for nature ...
by creating a movement
to clean up the
Mediterranean.**

**Winner for
Europe
Lefteris Arapakis**



#YoungChamps

Introduction

Lefteris Arapakis comes from a family of fishermen. Instead of pursuing the profession, however, he went on to get a business and economics degree in his homeland, Athens. Nevertheless, he could not be unaware of the reality that his family and his community was facing: the quality of the catch, the scarcity of fish, and the increase in plastic that came with each haul worried him to no end.

“I was deeply concerned that my father, and now my brothers, could not make a living out of this job, which is what they learned to do and what they love to do.”

Seeing the opportunities to improve the ways to fish and manage sustainable fish stock, he was inspired to start Enaleia, the first professional fishing school in Greece. This was in 2016, a time which also coincided with job scarcity brought about by the ongoing financial crisis in Greece, when a number of young, unemployed men were looking at available economic opportunities.

The problem being addressed

In recent years, discarded plastic has impacted an already declining industry, which has been severely impacted by overfishing and pollution. In fact, fishing catch in the Mediterranean has fallen as much as 34% over the last 50 years.

Fishermen were collecting not only fish in their nets, but also plastic. They would throw these back to the sea saying “this is not our problem”. This prompted Enaleia to supplement the school’s formal curriculum by working directly with the fishing community to address the issue.

THE CHALLENGE IN NUMBERS

570,000

tons of plastic end up in Mediterranean waters every year

33,800

plastic bottles per minute respectively

– WWF Greece 2019



THE NEED FOR CLEANER SEAS

20-30%

of global marine plastic pollution consists of ghost nets

8,000,000

tons of plastic spilling into the ocean, equivalent to throwing an entire garbage truck into the ocean every minute

– Ellen MacArthur Foundation

THE FISHING SEASON

October 2018 – May 2019

10

fishing boats

cleaning marine litter in Piraeus and Lavrio

16,000kg

marine plastic

cleaned from the seabed

5,000kg

fishing nets

collected and recycled so as not to end up at sea or in landfills

October 2019 – May 2020

40

fishing boats

cleaning marine litter in 10 Greek ports

42,900kg

marine plastic

cleaned from the seabed

10,000kg

fishing nets

collected and recycled so as not to end up at sea or in landfills

October 2020 – May 2021

229

fishing boats

cleaning marine litter in 21 Greek and Italian ports

100,000kg

marine plastic

cleaned from the seabed

20,000kg

fishing nets

collected and recycled so as not to end up at sea or in landfills

Interventions. What's Innovative? How does it work?

Enaleia started by training the fishermen from the local port of Keratsini to collect the plastic which they fished from the sea. With the encouraging results from this initial location, they created the Mediterranean Cleanup* project, spreading the idea of fishing for plastic to the rest of the country. Now working with hundreds of fishermen not only in Greece but also in Italy, Enaleia is collecting thousands of kilos of plastic from the sea, every week.

> 1,000 fishermen on 229 trawlers and boats from almost 21 ports / collection points in Greece and Italy collect plastic from the sea. These are collected from depths as deep as 500 meters. This can amount to almost 12-16 tonnes of plastic each month.

> Enaleia provides the special container bags for the collected plastic for each of these boats.

> The collected plastic is weighed and is noted on a ledger. The amounts for each boat are collated and totaled.

> In collaboration with certified recycling companies, Enaleia also facilitates the temporary storage of the plastic in each port until it is transferred to its final destination, which is either the recycling or upcycling facilities.

> Payments are made at the end of each month for each of the participating boats. These can range from EUR0.30 to EUR 0.50/ kg in Greece and Italy.

> Fishermen can make on average more than EUR100/boat.

> It is important to mention that the payment is a symbolic reward for fishers, not for the plastic per se, but for their effort to bring it back to the port. The quantity of the collected ocean plastic is only a criterion to measure the effort of each boat. Enaleia does not buy any ocean plastic, but motivates local fishing communities to collect it, facilitating at the same time the integration of this plastic to the circular economy.

The collected plastic is sorted, cleaned and stored in facilities organized by certified companies.

The materials are integrated into the circular economy, through Enaleia's recycling and upcycling partners.

- > Recycled with certified local recycling companies -> 50% upcycled into new products
- > PET plastics to fashion company in Madrid (clothes).
- > Fishermen in 13 ports of Greece hand over their nets to us so that we prevent them from ending up at sea or in landfills and instead be used to create products through recycling or upcycling.
- > Fishing Nets – conveyed to an environmental organization (Healthy Seas), which upcycles it into swimming suits and socks

Enaleia is a not-for-profit organization. Funding is provided by foundations and companies support, and all revenues are invested to getting more plastic from the sea, to expand to more ports, and to invite more fishermen to participate.

The Mediterranean Cleanup project garnered the Young Champion of the Earth award for Lefteris and for Enaleia, representing Europe!

Results - The Impacts.

Around 160,000 Kg of plastic has been collected and removed from the sea since 2019

> In the framework of sea pollution prevention, 10,000 kgs of used nets have been collected and were used to create more than 230,000 pairs of socks, during 2020

> 229 medium-sized fishing trawlers and boats are participating in the activities of cleaning plastic from the seas, providing extra income for 1000 professional fishers

> 260 seaside professional fishermen have been trained in sustainable fishing techniques

> 114 unemployed people were trained in professional fishing

> With the revenues, Enaleia has expanded the capacity to clean an average of 12,000-16,000 kilos of ocean plastic

> The project has invited media exposure, providing further opportunities for fishing tourism and hence mobilizing more fishing communities in the region to participate.

> The quantity of the collected ocean plastic as a criterion for the fishermen reward has resulted in certain cases even 7x impact.

> Professional fishermen are trained how to earn more money while catching less fish, have learned to adopt new sustainable fishing techniques (fishing tourism), and were provided opportunities to fish for plastic (the "Fish Smarter" project)

> The project has resulted so that plastic was cleaned and removed from the seabed in the most efficient way that has ever been applied in Greece (in terms of cost, time, and quantities collected).

Income opportunities are presented through:

- > Sustainability of fish stocks
- > Sustainable Fishing tourism
- > Revenues from their effort to collected plastic

Challenges

- > Fishing is traditionally seen as a low-status job. Promoting fishing tourism creates more revenue, requiring fishermen to fish much less. Tourism has been limited by the current pandemic environment.
- > Need to work with the communities, in order to empower them during the pandemic period and make it feasible to contribute to our actions in an impactful manner.
- > Access to markets for the waste is important to support, incentivize, and to deliver value for the collected plastic.
- > COVID is a challenge. One needs to be on-ground to deliver more effective and hands-on training. Enaleia anticipates the work will pick up as the restrictions related to COVID-19 are lifted.
- > Securing funding and support from corporations to help pay for the clean-ups, cost of the materials, and for marketing campaigns can be challenging.

Moving Forward

The fishing for plastic model can be expanded from the Mediterranean, to locations which have big fishing communities and with big problems with plastic. With this, Enaleia and team are looking to share and scale activities in the region, and are looking for key partners to work with.

“Every action counts. Start locally. Start small – but start. All together we can make a global impact.” Lefteris Arapakis

Links to more information:

<https://enaleia.com/en/>

<https://www.unep.org/news-and-stories/story/fishing-plastic>