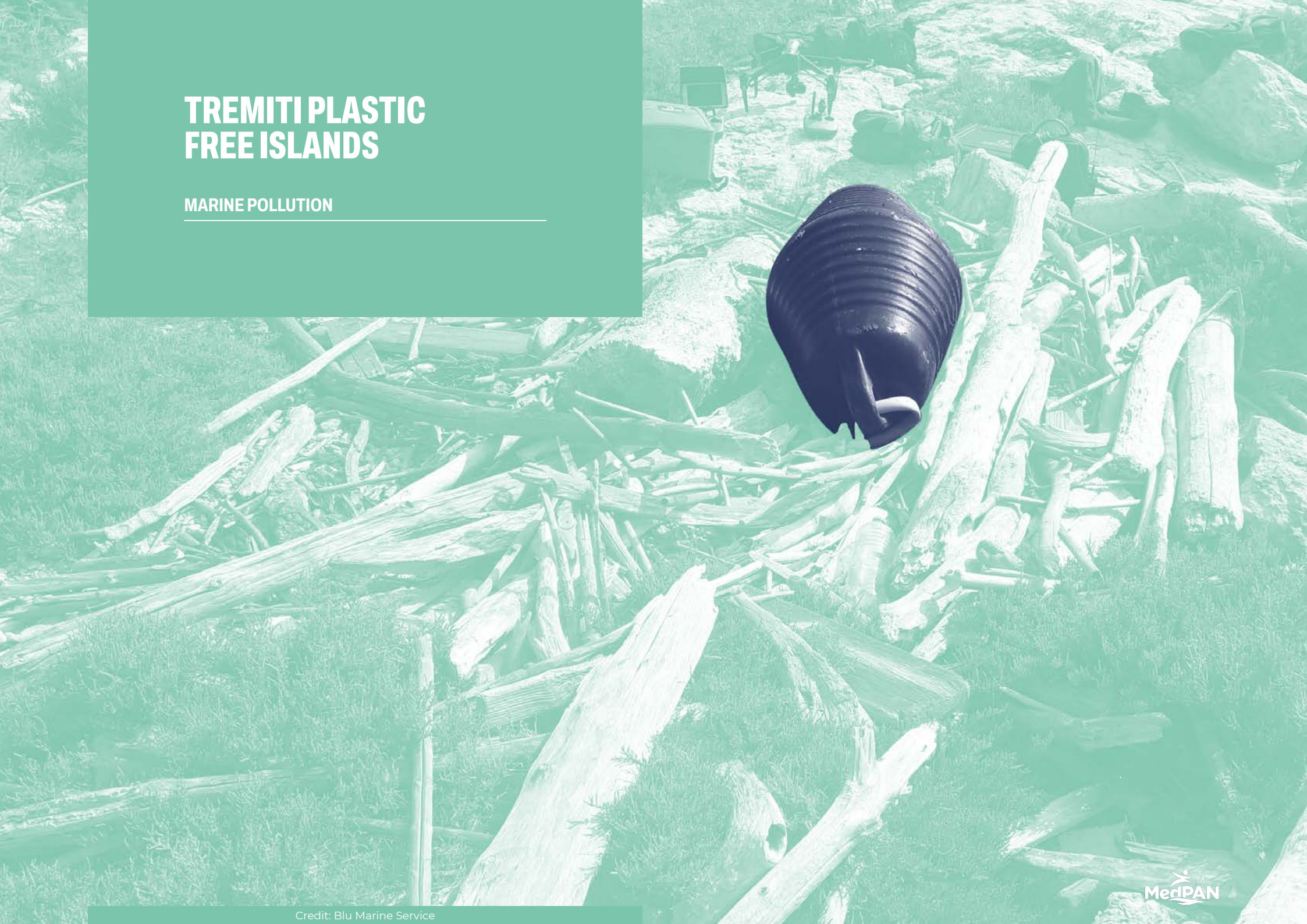
TREMITI PLASTIC FREE ISLANDS

MARINE POLLUTION



Credit: Blu Marine Service

MedPAN

TREMITI PLASTIC FREE ISLANDS

MARINE POLLUTION

Country: Italy

Project leader: BluMarine Service

MPA: Natural Marine Reserve of Tremiti islands

Partner: Gargano National Park Authority

Duration: 17 months (2019-2020)

Budget: €24 400 (€18 000 MedPAN)

CONTEXT

The Mediterranean sea has been recognized as a hotspot of the world for plastic pollution (Sharma S, Sharma V and Chatterjee S, 2021). Concentrating 7% of all global microplastics, the Mediterranean is the sixth greatest accumulation zone for marine litter in the world (link). Every day, around 730 tons of plastic waste are thrown away in the water, which represent between 95 to 100% of total floating litter, and more than 50% of seabed litter. In addition, single-use plastics constitute more than 60% of the total recorded marine litter on beaches (link). As a semi-enclosed area, the Mediterranean Sea is highly vulnerable to microplastic pollution. In particular, studies have demonstrated that Expanded polystyrene (EPS) is one of the three main marine litters.

Located in the Adriatic Sea, Tremiti islands host a marine reserve which is managed by the National Park of Gargano. The population of these touristic islands grows by more than ten in summer which increases the amount of waste produced and left on the islands. Despite the Municipality's ban on single-use plastic items in April 2018, the islands have struggled to put in place a sustainable mechanism to reduce plastic use. In fact, the islands are still dependent on seafood products from outside - local production relies on just a few fishermen, which is insufficient – so that it does not make it easy to implement strict rules on the islands to reduce plastic, and EPS in particular, highly detrimental to marine environment quality. Moreover, the development of aquaculture (mussel farming plants) between the Italian coast and Tremiti islands have generated another pressure for the marine ecosystems in terms of production of waste.

This general situation claims for the creation of a sustainable waste management system on the islands, promoting recycling and reducing the quantity of waste produced, and involving all the stakeholders.

OBJECTIVE OF THE PROJECT

The objective of the project was to support the MPA action plan in reducing human pollution by implementing concrete activities with local population and seafood suppliers. The idea was mainly to: i) reduce marine litter and improve the organic waste management through the construction of self-made domestic composers with old buoys ; and ii) reduce plastic pollution through introducing alternative packaging processed by innovative composer.

MAIN RESULTS DETAILING ACTIVITIES UNDERTAKEN AND TOOLS

The capacity building of local citizens

At the launch of the project, around 150 people attended the different workshops, meetings and presentations for raising awareness of islanders about plastic pollution, marine litter and waste management organized by the MPA. Other two workshops were then organized to train 30 people in building self-made composters with abandoned buoys and other recycled material (ropes were used to handle the composters, for example) collected during beach and coastal cleaning activities implemented yearly by the MPA. Guides have also been produced to help people build and use their composters.

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The use of biodegradable and compostable packaging replacing the expanded polystyrene (biodegradable and compostable fishing boxes)
500 bioplastic devices were delivered to two seafood wholesalers and an innovative bioplastic composter to one hotel of the island. It is a kind of composter which works under high temperatures for processing bioplastic material, turning it into humid fraction of organic waste. A dedicated information was delivered to the waste management company for ensuring the good use of the composter. Another composter was kept in the BlueMarine office in order to control the efficiency of the process.

Credit: Blu Marine Service

GOOD PRACTICES AND LESSONS LEARNED

The project succeeded in improving the waste management of Tremiti islands through adopting domestic composters, and testing the use of innovative composters able to process almost all bioplastics. As the cost of the bioplastic devices is not interesting for the transportation of fresh food (1,20€ per unit for PLA vs. 0,65€ per unit for EPS), it seems difficult for the Municipality to go further and ban the single-use polystyrene device. Despite the expensive cost of the PLA, seafood suppliers have agreed on the interest of such materials and shared the initiate with a starred restaurant on the French Riviera which have then developed a Plastic free certification.

RECOMMANDATIONS

Continue raising-awareness activities to the population through social media activities and learning networks and spread methodology to produce compost and valorize waste. These activities must mainly take place in the winter season, when islanders have more free time than during summer.

TRANSFERABLE TOOLS OR METHODOLOGIES

The brochure and user manual for building self-made composters from abandoned buoys is easily transferable. The MPA of Torre Cerrano in the neighbor of Tremiti islands has already received these material during a training, as well as the National Park of Gargano. It is available in English and in Italian.

ADDITIONAL INFORMATIONS

For more information, refer to
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Credit: Blu Marine Service