

Integrated solid waste management good practices to prevent plastic marine litter in the East Asian Seas region



Untia, Makassar, Indonesia

Community-based waste management

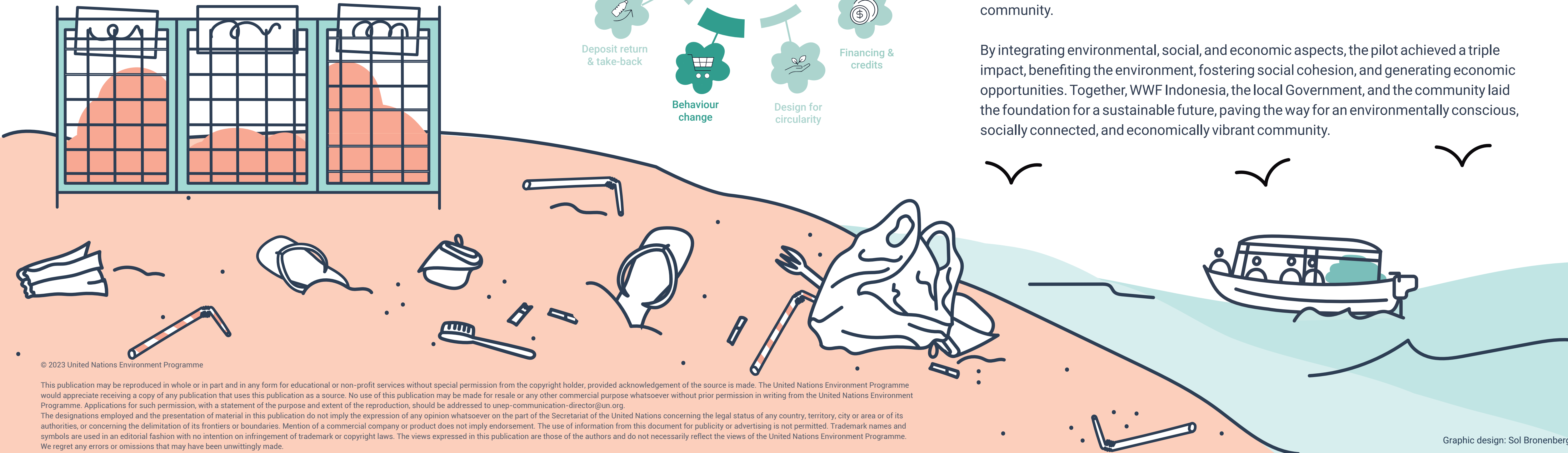


Case overview:

With support from the US Environmental Protection Agency (USEPA), the Coordinating Body on the Seas of East Asia (COBSEA) piloted an integrated waste management system in Untia, Indonesia, in partnership with the World Wide Fund for Nature (WWF) Indonesia.

The pilot aimed to overcome the pollution challenges faced by this remote community by enhancing the capacity of Untia's Materials Recovery Facility (MRF). The initiative provided essential machinery, established a network of waste banks, enhanced local knowledge and understanding of waste management practices, and generated income for villagers involved in waste collection, promoting economic empowerment within the community.

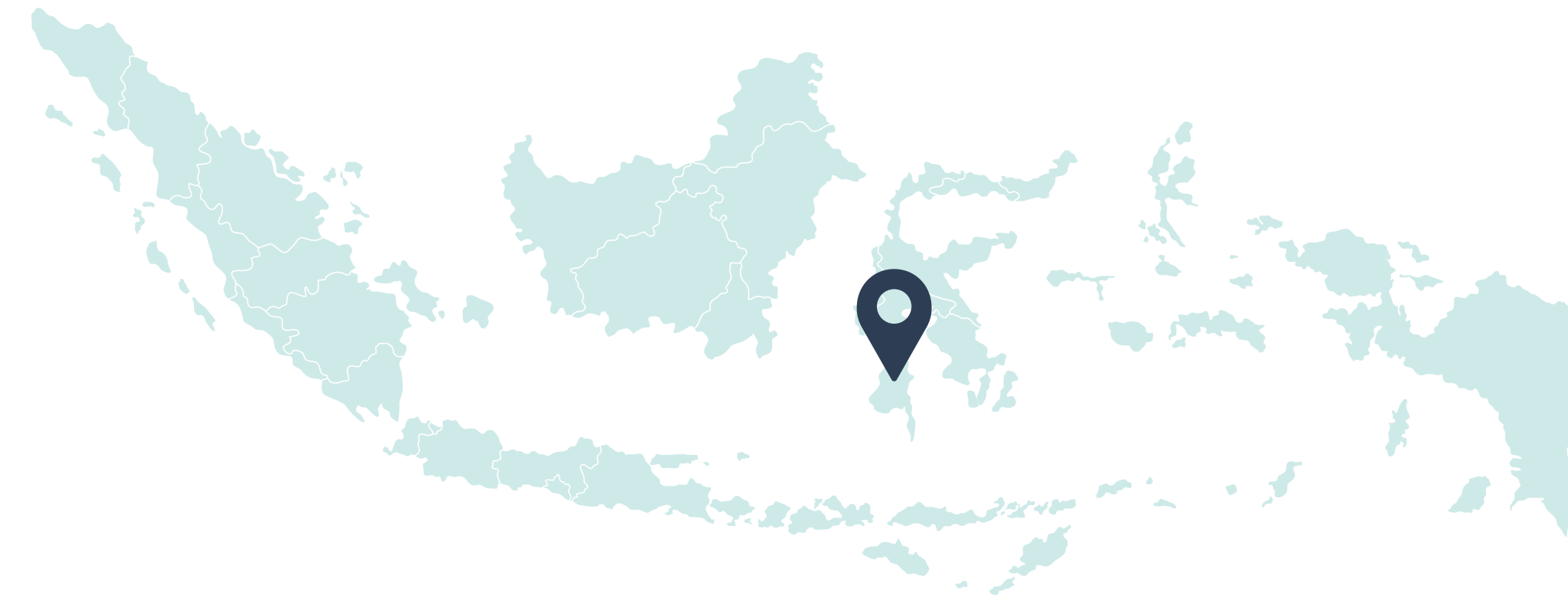
By integrating environmental, social, and economic aspects, the pilot achieved a triple impact, benefiting the environment, fostering social cohesion, and generating economic opportunities. Together, WWF Indonesia, the local Government, and the community laid the foundation for a sustainable future, paving the way for an environmentally conscious, socially connected, and economically vibrant community.



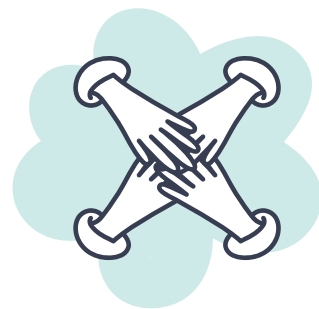
The situation in Untia, Makassar, Indonesia

Untia is a fishing village on the northern tip of Makassar, Indonesia. This traditional fishing village has an area of approximately 2.89 km² and consists of 14 neighbourhoods and five hamlets. The population of Untia in 2019 was recorded to be at 2,438 people.

Untia already contained an existing community-based MRF, belonging to the Environmental Agency of Makassar City. This MRF had not been in operation for some time. In October 2021, the MRF was revitalized by Yayasan Peduli Negeri (YPN), a local fundation, with financial assistance provided by WWF Indonesia and further support from the Environmental Agency of Makassar City. The revitalization of the MRF included renovating the building as well as optimizing the facility's operation through educational activities in Untia.



Case description:



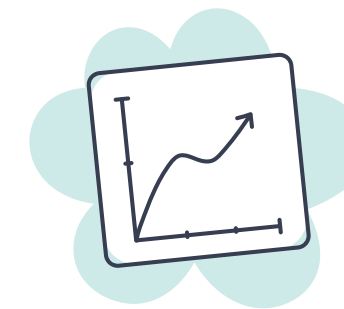
Work in communities

The pilot took a holistic approach by actively engaging the entire community in an education campaign that included school children, ensuring the pilot's impact would endure for future generations. YPN worked closely with the support and involvement of the local Government. This collaborative effort fostered a sense of ownership and ensured the successful execution of the initiative. A key aspect of the pilot was the provision of economic incentives to the local community. By offering additional income opportunities, the initiative empowered participating households to enhance their financial wellbeing.



Funding

WWF Indonesia provided initial funding to revitalize the MRF and establish three waste banks in Untia. With additional funding through COBSEA, WWF Indonesia expanded the infrastructure of Untia's MRF, provided waste management education, established additional waste banks, and provided seed funding to expand the waste bank network further.



Long term sustainability, transparency & traceability

Waste banks receive financial compensation from Untia's MRF each time they submit recyclables. Untia's MRF then sells these recyclables to Makassar's central MRF. This income enables the waste banks to fund the purchase of more recyclable materials brought in by community members.

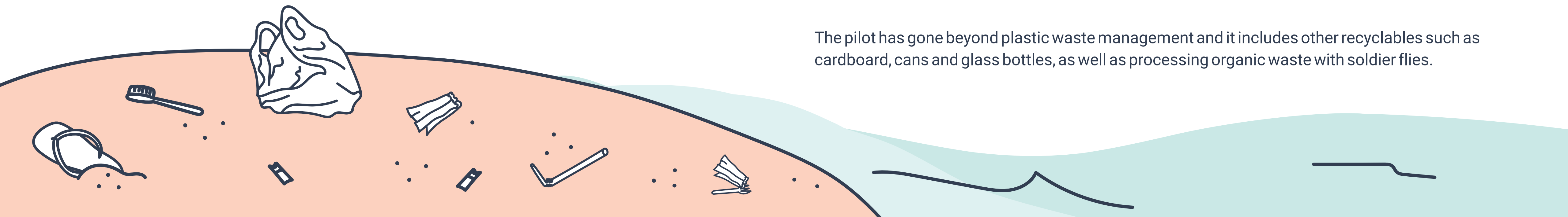
As a result, the waste banks are now tasked with ensuring their own sustainability and profitability, fostering a self-reliant system that can continue to thrive independently. YPN will offer ongoing assistance and staff support to all waste banks in Untia, as well as the MRF, to ensure their sustained operation and utilization.



Expansion

The mayor of Makassar has expressed their commitment to replicating this successful system in other parts of the city. WWF Indonesia will also continue to replicate this pilot in other areas in Indonesia.

The pilot has gone beyond plastic waste management and it includes other recyclables such as cardboard, cans and glass bottles, as well as processing organic waste with soldier flies.



Achievements (Mid May – End of Nov 2022):



Increase in recyclables collected

The local MRF in Untia achieved a significant increase in recyclables (plastics, aluminium, paper, cardboard and glass) processing, from 1 tonne to 2.4 tonnes between May and November 2022.



Awareness raising activities

A series of educational activities were conducted engaging 50 women and men from the community, including students, teachers, and employees.

These activities aimed to raise awareness and knowledge about waste management and environmental conservation.



New waste banks established

Three new unit waste banks were successfully established at different locations, thanks to the collaboration between WWF, YPN, and local stakeholders. A formal connection was established between the Untia MRF and these waste banks, streamlining payment, transport, and subsequent processing of recyclables.



Overcoming challenges:



Creating long-term support and sustainability

The pilot was implemented in a short timeframe which was made possible thanks to YPN's connections with local champions, leaders and the local Government.



Gaining government support

The local Government was initially sceptical that the pilot could prove successful due to the non-operational MRF and the lack of prior waste bank trials in Untia. However, the Government's support grew significantly after it witnessed the programme in action, facilitating permits and enhancing the community's support.



Community engagement

At the outset of the pilot, there was a notable lack of knowledge and interest in waste banks. However, the project's success was achieved by actively engaging community leaders and fostering community involvement, as well as promoting the financial incentives of recycling.

Key success factors:

▶ Community participation :

The project achieved adaptability, flexibility, and sustainability by meaningfully engaging with the community. Residents actively participated in environmental education and recycling initiatives, and they were provided with financial compensation for depositing their recyclables.

▶ Financial incentives:

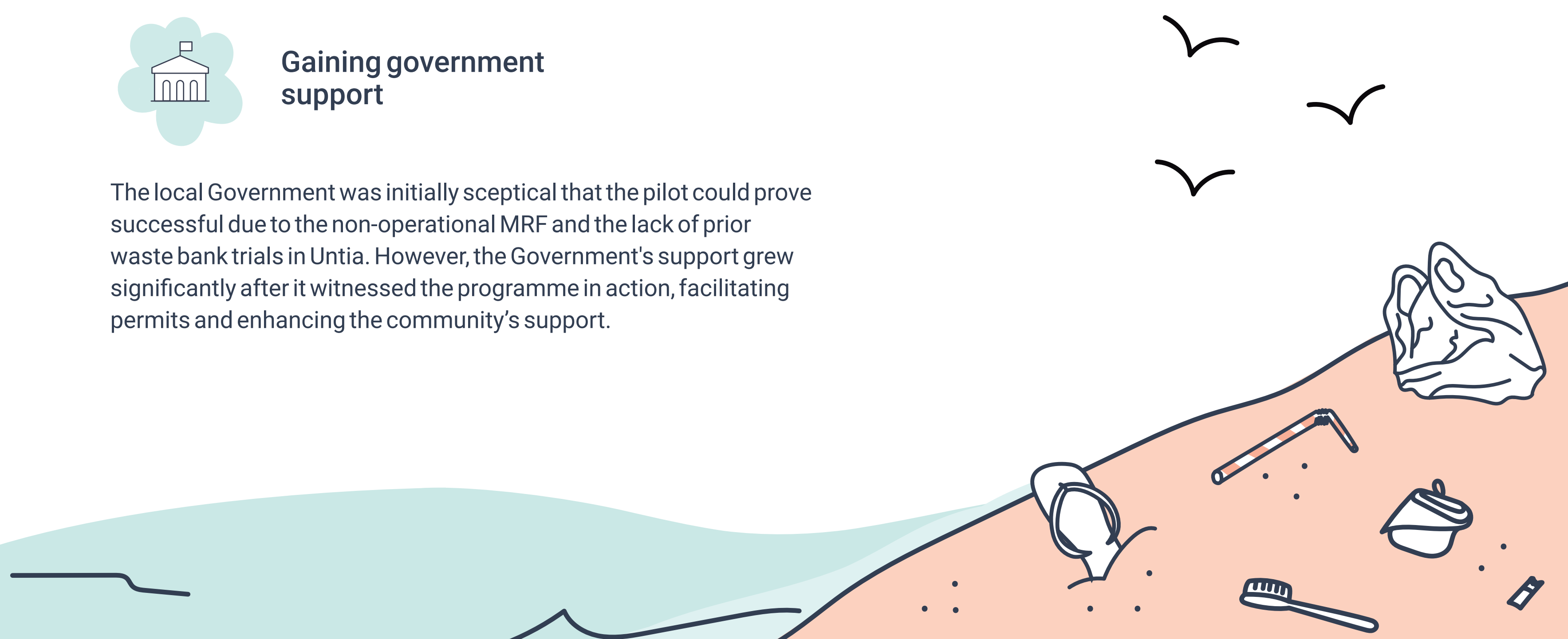
The economic incentives offered for recyclables were compelling enough for the fishing community to separate and deliver their recyclables to the waste banks.

▶ Financing mechanism:

Waste banks receive funds from the MRF each time recyclables are handed in, which enables them to compensate locals for their recyclables. The waste banks now have the responsibility of ensuring their own sustainability and profitability.

▶ Scalability and cost-efficiency:

The project maximized the use of existing resources by reviving inactive waste banks and establishing new ones. This approach reduced initial investment costs by utilizing available infrastructure. For instance, the MRF was already operational and only required activation.



What do you need to replicate this practice?

01

Seed funding is required to establish partnerships and set up the necessary infrastructure for an MRF and waste banks.

02

Access to the local community, which is interested in implementing the pilot.

04

Local and state government willing to support the recycling system.

05

Existing recycling infrastructure in the area to pay the local MRF for recyclables.

06

Access to cost-effective transport, in particular in remote and island communities.

Videos showcasing the pilot

English:



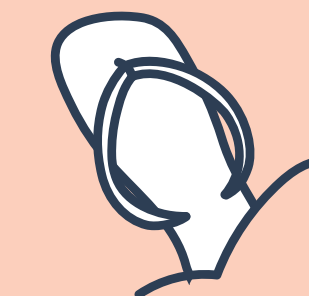
Bahasa Indonesian:



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keep plastic out of nature by 2030

