



# 3RproMar : Protecting the Marine Environment and Coral Reefs in ASEAN

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**Published by:**

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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**Project description:**

Reduce, Reuse, Recycle to Protect the Marine Environment and Coral Reefs (3RproMar)

<https://www.giz.de/en/worldwide/129342.html>

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**Photo credits/sources:**

Photo and design visual credits of GIZ

This booklet is developed as part of the ASEAN-German project “Reduce, Reuse and Recycle to Protect the Marine Environment and Coral Reefs” (3RproMar) implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) in cooperation with the ASEAN Secretariat to support ASEAN Member States (AMS) in the improvement of implementation capacities for reducing land-based waste leakage to protect the marine environment.

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May 2025

# 3RproMar - Protecting the marine environment and coral reefs in ASEAN



The regional project Reduce, Reuse, Recycle to Protect the Marine Environment and Coral Reefs (3RproMar), funded by the German Government and in collaboration with ASEAN, aims to support the efforts of ASEAN Member States in reducing the leakage of plastic waste from land into the sea. This project has national components implemented in Cambodia, Indonesia, Philippines, and Viet Nam.

The project outputs include interventions in four areas of activities:

1. Enhancing the regional cooperation and knowledge management among the representatives of the ASEAN working groups dealing with marine litter and plastic pollution, to reduce land-based sources of marine litter.
2. Developing national measures for waste leakage reduction within the focal AMS as well as their translation into strategies at the local level.
3. Improving requirements for the establishment of private sector efforts along the value chain to reduce waste leakage into the sea.
4. Pilot projects along the value chain from sustainable consumption to enhanced waste collection and recycling will be implemented in selected municipalities. The pilot projects at the national level will lead to best practices, both in the field of policy development and implementation, which will be made available through regional cooperation and exchange formats for national and regional policy advice to support effective implementation and upscaling.

Project activities are defined and implemented in close cooperation with regional, national, and local partners and the respective AMS representatives. Local institutions, civil society, private sector, and universities were involved.

## More about 3RproMar



3RproMar  
Web page



3RproMar  
Factsheet



3RproMar  
Regional  
Knowledge  
Platform  
(KnowWaste)



Informal sector  
Factsheet



Gender  
Factsheet

## 3RproMar – Results in Number

# 20

knowledge products and the summary were shared and uploaded on 3RproMar Regional Knowledge Platform



# 6

Works in pilot municipalities

- 5 university/campuses (in Philippines)
- 68 sub-districts (commune/sangkat/kecamatan/barangay) in 4 ASEAN Member States

# 53

of study/analysis/policy briefs were developed to support national and local policies implementation

# 115

trainings and capacity building sessions were conducted at regional, national, and local levels with more than

# 4,700

participants, including more than 2,500 female participants, accounting for 55%

More than

# 11,000

participants with more than 55% percentage of female participation joining in multiple activities/events organised by 3RproMar, promoting the protection of the marine environment and coral reefs in ASEAN



# Output 1 - Regional

## 6 webinars in 2024-2025

- **May 2024:** Just Transition, <70 participants
- **June 2024:** Private Sector, <70 participants
- **August 2024:** Microplastics, 104 participants
- **November 2024:** Waste data monitoring, <80
- **February 2025:** EPR, 175 participants
- **April 2025:** 265 registered participants

## 1 Joint EPR workshop with ERIA

## 4 Regional Workshops

- **1<sup>st</sup> Regional Workshop**, May 2022, 150 participants (hybrid)
- **2<sup>nd</sup> Regional Workshop**, 140 participants (100 in person, 40 virtual)
- **3<sup>rd</sup> Regional Workshop**, 138 participants (120 in person, 18 virtual)
- **4<sup>th</sup> Regional Workshop** on 6 May 2025

## 1 Joint training with AMUSE & AIT

On waste management in ASEAN, 50 participants

## 5 Documents/platforms established

- Briefing ASEAN & the UN Plastic Treaty: Potential Options for Elements Microplastics study
- Baseline Study on Microplastics in ASEAN
- Towards a Sustainable Future: Recommendations for a Just Transition in Waste Management and Circular Economy in the ASEAN Region
- Behavioural Change Design Toolbox
- EPR webpage under RKC-MPD



At the regional level, 3RproMar has prioritised strengthening regional cooperation and knowledge management to support AMS in addressing land-based sources of marine litter. The project has worked closely with relevant ASEAN Working Groups (AWGs) to deepen understanding of effective approaches and foster alignment across national and regional efforts. The project aligns closely with the ASEAN Regional Action Plan (RAP) for Combating Marine Debris.

In 2023, the 3RproMar Regional Knowledge Partnership for Marine Litter Prevention in ASEAN was established, bringing together three key institutions in the field: the Asian Institute of Technology (AIT), the Economic Research Institute for ASEAN and East Asia (ERIA), and the Norwegian Institute for Water Research (NIVA). This Partnership aims to bridge knowledge gaps and strengthen the institutional capacities of AWGs in a coordinated and collaborative manner.

Since 2022, a series of annual regional workshops, conducted in close collaboration with the ASEAN Secretariat, has provided a dynamic platform for dialogue among AWG representatives and regional stakeholders. These workshops have explored a wide array of topics across the plastic value chain, including extended producer responsibility (EPR), behaviour change, microplastics, and other emerging issues, reflecting the evolving needs of AMS and aligning with international developments such as the International Legally Binding Instrument (ILBI) on plastic pollution negotiations.

To complement these efforts, 3RproMar has also initiated thematic deep-dive through online webinars in collaboration with other expert organisations. These sessions have shared recent scientific insights and good practices, helping to equip policymakers and other stakeholders with the technical understanding necessary for informed decision-making, both regionally and nationally, and to support AMS in aligning with global commitments

In addition to its own initiatives, 3RproMar has collaborated with other ASEAN partners to co-organise regional conferences, further promoting knowledge exchange and cross-sectoral dialogue. The project has also provided support to AMS and the ASEAN Secretariat in facilitating official ASEAN meetings.





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kNOwWaste Knowledge



Regional Knowledge Center for Marine Plastic Debris (RKC-MPD)



International Knowledge Hub Against Plastic Pollution (IKHAPP)



Baseline Study on Microplastics in ASEAN



Towards a Sustainable Future: Recommendations for a Just Transition in Waste Management and Circular Economy in the ASEAN Region



## Behaviour Change Toolbox Methodology

3RproMar supported the ASEAN Regional Action Plan on Marine Debris by developing the “Behaviour Change Toolbox Methodology.” This document fulfils the project’s aim for a common behavioural change methodology developed based on experiences in the ASEAN region, as well as an applicable impact assessment methodology and ready-to-use Behaviour Change Solutions for the ASEAN Region. This document includes all essential tools, text, and structure.



Stocktaking of Existing Behavioural Change Communication Strategies in the Southeast Asian Region



Behavioural Change Toolbox





# Cambodia

## Output 2

Cambodia is experiencing a rapid increase in waste and plastic waste volumes, driven by economic growth, urbanisation, and rising consumption of single-use plastics. In 2020, per capita municipal solid waste generation reached 0.78 kg/day, totaling approximately 4 million tonnes annually. However, collection rates remain critically low—below 10% in rural provinces, some secondary cities, and even certain districts of Phnom Penh. An informal recycling sector collects selected materials such as plastic, metal, and cardboard for export, mainly to Vietnam and Thailand. These exports face growing uncertainty due to regional import restrictions.

Cambodia has introduced several policy instruments to address these increasing waste volumes. Sub-Decree No. 113 (2015) aims to decentralise waste management, transferring responsibilities to provincial and municipal administrations. Sub-Decree No. 168 (2017) regulates the import, production, and distribution of plastic bags through minimum standards and permit requirements. A draft Sub-Decree on Single-Use Plastics is expected to introduce Extended Producer Responsibility (EPR) in the future.

Moreover, the 2023 Environment and Natural Resources Code modernises Cambodia’s legal framework, aiming to introduce the polluter pays principle and clearer institutional roles for waste management. Complementing this, the Circular Strategy on Environment 2023–2028 outlines a national vision for a clean, green, and sustainable Cambodia. Anchored in three pillars—clean, green, and sustainable—it promotes pollution control, biodiversity conservation, and circular economy practices. It reinforces waste-related policies and aligns with the country's climate and sustainability goals, including carbon neutrality by 2050.

At the national level, the 3RproMar Cambodia team, in close coordination with the Ministry of Environment’s Department of Solid Waste Management, supported the strategy implementation of the Cambodian Government through various activities:



### Policy & Institutional Support

The 3RproMar Cambodia team has made substantial contributions to the development of national measures for waste leakage reduction and their translation into local strategies. In close cooperation with the Ministry of Environment, the team supported regular exchange meetings of the Focal Points of the four technical ASEAN working groups to improve national coordination mechanisms.

A comprehensive capacity needs assessment was conducted for both national and subnational stakeholders, helping to identify institutional and technical gaps and establish a tailored capacity-building approach.

### Capacity Building

To strengthen technical competencies, the team organized targeted trainings on waste composition analysis, the waste flow diagram (WFD), and behavior change methodologies, equipping relevant actors with the tools to monitor and manage plastic leakage more effectively.

A yearly National Stakeholder Forum provided a platform to engage ministries, development partners, private sector actors, and civil society in shaping policy instruments and fostering exchange.

### Multi-Stakeholder Engagement

At the community level, a Knowledge, Attitude, and Behavior (KAB) study was conducted in Phnom Penh to better understand local perceptions and practices around plastic use and waste disposal. Moreover, a Youth Participation Project empowered young leaders to develop localized solutions for plastic reduction and mobilize civic engagement. The project team also developed a Zero Waste Guidebook, offering actionable guidance for municipalities seeking to reduce waste and adopt circular economy practices.



## Output 3

Private sector engagement is a critical component in advancing Cambodia's transition toward a circular economy and in reducing plastic waste generation and leakage along the value chain. In Cambodia, formal waste management and recycling services are limited, and much of the material recovery is driven by an informal sector of waste pickers and traders. However, more and more businesses are increasingly recognised as key actors in closing material loops and innovating waste reduction solutions.

The Cambodian government has begun mobilising private sector contributions through regulatory initiatives, such as the draft Sub-Decree on Single-Use Plastics introducing Extended Producer Responsibility (EPR), and the Circular Strategy on Environment 2023–2028, create enabling conditions for public-private partnerships and investment in sustainable packaging, eco-design, and waste infrastructure.

Some companies have voluntarily taken steps like plastic reduction and reusable packaging initiatives. However, significant challenges persist, including low awareness of circular economy models, limited green financing, and insufficient recycling infrastructure.



3RproMar Cambodia engaged the private sector to develop strategies aimed at reducing waste generation and leakage along the value chain. By collaborating with companies and industry players, they promoted the adoption of more sustainable business practices, helping to align private sector activities with national circular economy goals

### Private Sector Engagement



In 2024, 3RproMar Cambodia partnered with HEINEKEN Cambodia to organize the “Sustainathon,” a competition that empowered university students to create innovative solutions addressing sustainability challenges, particularly within the food and beverage industry. The event highlighted the importance of circular economy principles and provided a platform for youth to showcase their ideas. Ten finalist teams pitched their projects during the final event, fostering a new generation of leaders and innovators in waste reduction and environmental stewardship.

### Innovation & Youth Empowerment



To advance national efforts toward a circular economy, the 3RproMar Cambodia team initiated the first Cambodia Circular Economy Forum, held from September 9 to 11, 2024. The forum served as a vital platform for dialogue among key stakeholders, including government officials, development experts, and private sector representatives. Through knowledge exchange and collaboration, participants worked to strengthen policies and practices for sustainable waste management, supporting Cambodia's broader environmental and economic objectives.

### National Dialogue & Policy Advocacy : Cambodia Circular Economy Forum 2024



The 3RproMar Cambodia team supported the Ministry of Environment's campaign “Today I Do Not Use Plastic Bags” by promoting the introduction of mesh net bags as an eco-friendly alternative in supermarkets. In March 2025, a collaborative meeting led by the Undersecretary of State and attended by major supermarket representatives and GIZ discussed the transition strategy. Following this, supermarkets committed to introducing the new bags starting in May 2025, marking a concrete step toward reducing plastic waste in Phnom Penh and encouraging more sustainable consumer behavior.

### Plastic Reduction Campaign : “Today I do Not Use Plastic Bags”



Cambodia Circular Economy Forum 2024 Video

## Output 4

Kratie Municipality, located along the Mekong River in northeastern Cambodia, was selected as the pilot site for Cambodia under the 3RproMar project. The region is known for its population of endangered freshwater dolphins, once numbering in the thousands in the 1970s, only around 120 remain today. While this number has remained stable in recent years due to the establishment of protected zones and fishing bans, plastic pollution continues to pose a serious threat to the species and their habitat.

With more than 32,000 residents spread across five Sangkats, including the Mekong island of Koh Trung, Kratie faces significant challenges in waste collection—particularly in underserved areas. Uncollected waste is frequently burned or dumped, leading to substantial environmental consequences. Given the municipality’s direct connection to the Mekong, local waste mismanagement poses serious risks to freshwater ecosystems and contributes to marine pollution downstream.

In response, the 3RproMar Kratie Pilot, implemented by The Asia Foundation, trialed integrated, locally adapted waste management approaches. The pilot aimed to address systemic weaknesses through a combination of solid waste planning, informal sector engagement, and community-focused behavior change.



The 3RproMar pilot in Kratie achieved measurable improvements in waste collection, recycling, and plastic leakage reduction. In Koh Trung, the introduction of a door-to-door waste collection system served over 400 households and small businesses. Households were required to use standardised collection bags, and the waste was transferred by ferry to the mainland for disposal. Community-based waste collection created three full-time local jobs and was complemented by the establishment of waste collection points at key locations, including markets and schools.

Waste separation and valorisation were key components of the pilot. Organic waste management included home and community composting whereas recyclables were collected through Waste Banks and transported to the mainland.



**400+**  
household  
and small  
business

served by door-to-door  
waste collection system in  
Koh Trung



Recycling increased by 2.6 tonnes per day over 2022 and 0.57 tonnes of organic waste diverted everyday away from the landfill



Reduced the number of waste hotspots significantly and plastic leakage overall by 82%, avoiding an estimated 0.34 tonnes of plastic daily - equivalent to about three bathtubs daily or 124 tonnes annually, the equivalent of 23 dump trucks - from reaching river waters



These achievements were supported by a strong behaviour change campaign, involving school outreach, public clean-up events, and communication activities that reached over 150,000 people online

# Indonesia

## Output 2

At the national level, the project is implemented in collaboration with Ministry of Environment / Environmental Control Agency (MoE/ECA or KLH/BPLH). The activities were conducted in coordination with three directorates: Pollution and Damage Control to Marine and Coastal Area, Solid Waste Reduction and Circular Economy Development, and Solid Waste Management.



Through National Stakeholder Forum (NSF), 3RproMar initiated dialogues with multi stakeholders along the value chain to enable knowledge exchange, updates, strategies on strengthening waste management and tackling the plastic waste leakage into the ocean. The forum in 2022 was a Policy Dialogue on Plastic Circularity for Addressing Marine Litter. A Dialogue Towards Achieving the National Targets on Plastic Waste Reduction was held in 2023. The topic in 2024 was Collaboration towards Zero Waste Zero Emission as the MoE Strategy to tackle the solid waste issues by 2050.



Video Graphic NSF1



Video Graphic NSF2



Video Graphic NSF3



Indonesia's national measures clustered into three (3) main focuses: marine litter monitoring, waste management, and waste reduction by producers, with interventions in strengthening data quality, policy analysis and strengthening, and capacity buildings implemented in 6 cities and 1 regency in Indonesia.

### Portal Edukasi Sampah Laut: Untuk Laut Indonesia yang Bersih dan Lestari

Pelajari dan pahami isu sampah laut di Indonesia. Bangun kemampuan untuk memantau sampah laut demi laut yang bersih dan ekosistem yang lestari.

- ✓ Belajar Mandiri
- ✓ Bahan Ajar Terkini
- ✓ Dilengkapi Khusus untuk pembelajaran daring



#### Tentang Portal Edukasi

Portal ini dirancang khusus untuk mendukung pembelajaran mandiri mengenai permasalahan sampah laut di Indonesia. Anda dapat menemukan materi pembelajaran mulai dari pengantar serta sampah laut, sumber daya, hingga metode pengolahan dan pengelolaan yang sesuai dengan pedoman nasional Kementerian Lingkungan Hidup.

#### Keunggulan Portal Edukasi

Belajar kapan saja, di mana saja, secara fleksibel. Portal ini terbuka untuk semua kalangan dan menyediakan akses mudah terhadap materi interaktif, infographic, dan animasi yang dapat meningkatkan pemahaman dan wawasan mengenai permasalahan sampah laut.

#### Jelajahi Portal: Kenali dan Pantau, Sampah Laut

Mulai petualangan belajar Anda dengan mengakses berbagai materi pembelajaran yang dikembangkan oleh Direktorat Pengendalian Pencemaran dan Kerusakan Laut (DKL) Kementerian Lingkungan Hidup dan Kehutanan. Teruslah belajar banyak hal yang menarik hingga jajakannya. Portal ini dirancang untuk membantu Anda memahami dan melakukan pemantauan sampah laut secara efektif, serta mendukung ketahanan dan kelestarian ekosistem laut Indonesia.

Jelajahi Sekarang



## Marine Litter Monitoring

The activities are focused on developing e-learning materials for monitoring marine litter based on the guideline SE.9/MENLHK/SETJEN/KUM.1/10/2020 issued by the MoE to monitor marine litter leakage by measuring waste in coastal area and marine area as floating and sinking waste. The e-learning platform is targeted for municipalities, clean up activists, and communities who are interested to improve their knowledge on marine litter.

In addition, marine litter monitoring in the pilot location (Manado city) was conducted in 2023 to provide baseline figures. The sampling was done at Bailang Beach and Malayang Beach. Cloth material was found as the highest in weight and plastic material was the highest in pieces/numbers.

In July 2024, a coastal cleanup in Manado City was conducted with more than 200 participants to raise awareness in preventing waste leakage to the marine environment. Located at Karang Ria Beach, together with MoE and volunteers from students, NGO, municipalities, and society, the cleanup successfully collected 610.75 kg of waste.

## Waste Management

The capacity of local governments on waste management plays a crucial role in achieving a robust waste management system and implementation in Indonesia. To improve the capacity at local level, trainings on waste management fee and retribution tariff in Manado City, Banjarmasin City, and Mataram City were conducted for local government agencies. Following the mandate from Minister of Home Affairs Regulation No. 7/2021, ideal cost for waste management (collection, segregation, and treatment) was calculated by using real data sampling of waste generation from each city. Afterwards, the proper retribution fee for household and business sector was estimated.

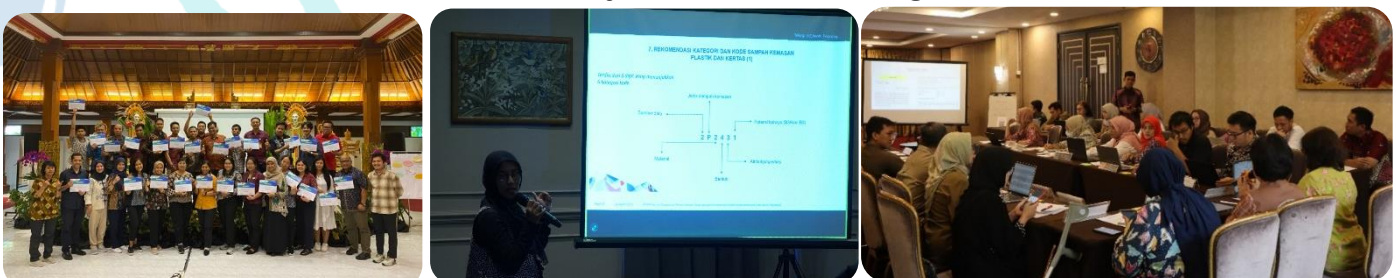
To ensure proper waste treatment operation, training series of recycling centers (*Pusat Daur Ulang/PDU*) targeting waste operators were conducted in Kudus Regency and Palangka Raya City to increase know-how on operation and maintenance (O&M) of the machineries and O&M cost. Suitable institutional set up and business model towards sustainable operation were also introduced to the municipalities. A workshop on Waste Flow Diagram tools was held for national government to introduce a method in measuring waste leakage. Additionally, the project supported improvement of national waste management information system (SIPSN) by using a validation system to obtain representative data by municipalities.



## Waste Reduction by Producers

The project supported MoE in strengthening the policy frameworks for waste reduction by producers. Currently, the MoEF Regulation No. P.75/2019 on Road Map of Waste Reduction by Producers with target to reduce 30% by 2029 serves as the basis for EPR (Extended Producers Responsibility) development in the long run. Activities conducted include comprehensive analysis on framework of EPR to boost recycle, reduce and reuse, with legal assessment to allow stronger regulation start from 2030, by targeting wider producers, penalties, interministerial coordination, and mandatory EPR. For achieving the current target, supports to private sectors to encourage and adhere with the regulation were also given through coaching clinic and FAQ.

In optimizing waste reduction monitoring and developing reliable database on material availability for recycling, the project also explored codification for packaging waste (plastic and paper). Uniform terminology will be used in code for waste categorisation explaining the source, type, material, form, properties, and the potential content of hazardous material. Waste segregation at source and behavior change to do 3R at local level, are led by waste banks and followed by the society. Thus, capacity buildings to waste banks and municipalities as trainers were given in Bandung and Bali, focusing on basic business and empowerment skills, completed with video awareness on less waste lifestyle and understanding waste reduction.



## Output 3

The production of plastic packaging and the advancement of sustainability in packaging ecosystems are something to be addressed collectively, especially the private sector, which plays a key role in preventing plastic pollution and reducing plastic packaging in Indonesia. GIZ 3RproMar works closely with our private sector partners to develop joint solutions in promoting circular economy approach to reduce plastics consumption, prevent plastic pollution starting from the source and along the value chain, and encourage sustainable packaging ecosystems. Thus, 3RproMar implemented pilot projects along the value chain from sustainable consumption to enhance waste collection and recycling in selected municipalities in Indonesia (Thousand Islands and Bandung).



Factsheet  
Private Sector

### Circulating Island

One of 3RproMar's pilots is the "Circulating Island" in Kepulauan Seribu – the Thousand Islands, a region close to Jakarta. This project is a collaboration between 3RproMar and DCA Divers Clean Action (DCA), an Indonesian NGO actively involved in waste reduction since 2017. "Circulating Islands" aims at advancing the Extended Producers' Responsibility (EPR) ecosystem on the islands by introducing "reuse and refill" stores, integrating segregated waste transportation, and launching a public campaign to promote the EPR ecosystem.



Video  
Thousand  
Island (DCA)



Within this collaboration, small-scale reuse and refill stores focus on selling necessary products, with waste bank groups acting as environmental influencers to promote refillable and reusable items. This approach encourages community members to shop at environmentally friendly stores, benefiting from promotions and incentives. The collaboration involves female environmental influencers and entrepreneurs as community actors in Kepulauan Seribu, not just contributing but also increasing their capacities for environmental change.

### Closing the Loop: Enabling Sustainable Plastic Recycling through Digital Return System (DRS) in Bandung, West Java

The Circular Consortium "Closing the Loop: Enabling Sustainable Plastic Recycling through Digital Return System (DRS)" aims to create an innovative approach on plastic waste management in Indonesia, focusing on maximising collection and recycling rates of post-consumer recyclables (PCR) through collaborative efforts between producers/brand owners, waste collectors/informal actors, and recyclers.

The project involved sustainability-driven brands, primarily in the skincare and personal care sector, such as Botanina from Bandung and YAGI Forest, which focuses on eczema-friendly products. These brands actively promoted customer participation in the Deposit-Refund System (DRS), with Botanina's store acting as a collection point. Most collection, treatment, and recycling processes took place in Bandung, although some plastic bottles were returned from a brand partner in Aceh.

By the project's conclusion, over 985 used bottles were collected—well above the initial target of 750. A significant portion of these were dark PET bottles, which are often hard to recycle and end up in landfills. However, the project demonstrated that these could be repurposed into multifunctional panels for industrial use. Additionally, a digital traceability platform, Balik.in, was developed to log monthly waste data, categorise it by brand and location, and track customer participation—providing valuable insights for scaling up similar sustainability initiatives in the future.



Video  
Bandung



Factsheet



Download  
and install  
Balik.in app

## Output 4

Manado, a coastal city located near Bunaken National Park- the Coral Triangle in North Sulawesi, serves as a vital gateway to Indonesia's rich marine biodiversity and beautiful sea. The park's rich ecosystem is vital for global marine health as well as the livelihoods of local fishermen and fishing communities, who depend on the ocean's resources for sustenance and income.

Through close cooperation and coordination with the Government of Manado City and the Office of Environment of Manado City, since the implementation in 2023, 3RproMar Manado has:



**14.401 tumbler** was distributed for school students in Manado and avoided **389 kg/day** plastic bottle waste

**377 kg/day** of **low-value plastic** was collected and sent for co-processing

**350 modules** of waste traps was installed in **20 river points** and trapped **311 kg/day** of plastic waste

**2** **reverse vending machines** and **10 drop boxes** were installed, collected **5 kg** valuable plastic waste per day

Increased plastic waste collection to **109 Kg/day** by supporting the activation of Cempaka and Malendeng recycling centers, which are local facilities to manage waste using the 3R principle (reduce, reuse, recycle)

Rehabilitated facilities in Sumompo landfill to enhance the working conditions of the informal waste workers

Provided assistance to organise the formalisation of an informal waste workers cooperatives at Sumompo landfill

Awareness raising and implemented beach clean ups together with the national partner

**57 tonnes** of waste from rivers and small islands were collected

**37 tonnes** of waste from pilot school were collected and successfully reduced **21 tonnes** of plastic usage through distribution of reusable tumblers

**111 tonnes** of plastic waste collected and processed; and prevented **21 tonnes** of plastic waste in total

**25 local educators** Were trained to spread the message of sustainable plastic management

Increased public awareness to reduce waste and improve the 3Rs by launching the Opa Can mascot, a wise grandfather in the form of a Coelacanth fish from Manado



3RproMar  
Manado  
factsheet



3RproMar  
Manado  
Achievement  
factsheet



3RproMar  
Manado  
Video



3RproMar  
Manado  
Closing  
Video



Strategi  
Perubahan  
Perilaku dan Aksi  
Pengurangan  
Plastik Kota  
Manado





# Philippines

## Output 2

The Philippines as an archipelagic country is faced with marine litter problems, with plastic wastes present along the coastlines, coral reefs, mangrove areas and water ways. These marine wastes pose a serious threat to the economy, environment, and human health of communities.

Approximately 61,000 metric tonnes of waste are generated daily, with 12-24% being plastic waste, including 163 million sachets, 48 million shopping bags, and 45 million thin-film bags. There are several policies and regulations in place to help address the country's problem

on solid waste and marine litter. For the 3RproMar project in the Philippines, the core regulatory and institutional framework critical for its implementation are the Ecological Solid Waste Management Act (RA 9003) of 2000, Extended Producer Responsibility (EPR) Law of 2022 (RA 11898) and the National Plan of Action for the Prevention, Reduction, and Management of Marine Litter (NPOA-ML).

3RproMar – PH, in close coordination with the Department of Environment and Natural Resources (DENR) - Environment Management Bureau (EMB), aligns its activities and addresses key strategies that are contained in RA 9003, the NPOA-ML and the EPR Law.



Philippines Factsheet

**3** National Stakeholder Forums conducted with participants from partner government agencies, local government units, private sector, NGOs, CSOs and academic institutions.

Organised an Informal Waste Sector Conference and peer-to-peer learning visit to provide a platform for sharing experiences and programs on SWM in communities within Iloilo, Guimaras and Negros Occidental.

Identifying key stakeholders along the plastic value chain and relevant actors integral to the project implementation

**4** Workshops organised with DENR-EMB, DENR-Biodiversity Management Bureau (BMB) and DENR-Foreign-Assisted and Special Projects Service (FASPS)

Provision of support to the DENR-EMB for the roundtable discussion entitled: "Rethinking Plastics: EPR Paving the Way Towards Circularity" held in Cebu City and Cagayan de Oro City

## Output 3

### The PH Plastics Value(less) Chain: The Journey to Circularity and Sustainable Packaging



To enhance private sector involvement in waste reduction, a comprehensive analysis of the country's plastic value chain is essential for understanding economic dynamics and identifying sustainable solutions to reduce marine litter. By mapping the functions and roles of key actors across manufacturing, packaging, distribution, and waste management sectors, insights can be gained on innovative approaches that benefit even small businesses. To this end, a Focus Group Discussion (FGD) Workshop was conducted as a platform for stakeholders to share insights on sustainable materials, recycling technologies, and waste management systems in an island municipality context, while also assessing the impact of the recently implemented Extended Producers' Responsibility (EPR) Act of 2022 on the plastics value chain.

### Mapping of Circular Economy Landscape in Higher Education Institutions

The notion of circular economy and its potential to address waste challenges has been gaining traction in the Philippines. With this transition to adopt the circular economy principles and framework, it is unclear if residents in the country are equipped with the knowledge and tools to make circular economy a reality. This gap in understanding was a key driver for 3RproMar conduct the research study to map out the current landscape of circular economy education among higher education institutions (HEIs) in the Philippines.

FGDs among HEIs at the local and national level were conducted separately. After the synthesis of the results of both FGDs, a workshop with the HEIs and the Commission on Higher Education in the Western Visayas region was held to facilitate discussions on how the HEIs can move forward with integrating the principles of Circular Economy within their curriculum.



### Aling Tindera (AT) Plastic Waste-to-Cash Programme



The objectives of Friends of Hope's (HOPE) Aling Tindera (AT) in Negros Occidental is to strengthen the infrastructure and efficiency of plastic waste collection and segregation systems by deploying AT stations; enhance engagement with four (4) local government units and private sector stakeholders (including brand owners and processing facilities) to create an integrated approach to managing post-consumer waste; and increase awareness and behavior change around plastic waste management among local communities.



Aling Tindera video



## Black Soldier Fly Program



The Black Soldier Fly (BSF) is a fly species whose larvae effectively convert organic waste into valuable resources. The BSF initiative aims to provide the Informal Waste Workers Association of Bacolod City (IWSABC) and community stakeholders, especially the women at Barangay Felisa, with alternative income sources while improving waste management practices.

The program promoted circular economy practices by integrating BSF farming in the waste management project of local government units, aid collaborations with educational institutions to incorporate BSF farming into agricultural curricula, and monitor its impact through regular evaluations, adapting strategies based on participant feedback to ensure its relevance and effectiveness in the community.



Black Soldier Fly video

## Projects with additional Funding received from TUEWAS-SNRD Learning and Innovation Fund



Circular Connect: An Innovation Competition for Circular Solutions engaging with the Higher Education Institutions within the Western Visayas Region,



EPR Audit Guideline



Development of a Sustainable Tourism Strategy Integrating Payment for Ecosystem Services (PES) Schemes and EPR Programs.



More than

**30 & 100**

households community

members engaged per site in plastic collection



**57 tonnes** plastic waste

collected by 8 AT stations across 4 cities in Negros Occidental as of March 2025



Agreements established between local partners and private sector: Evergreen Labs (EGL) with Guimaras Province and five LGUs on Guimaras island, Subay Marketing with HOPE for the plastic waste processing in 4 cities in Negros Occidental



Engagement with the youth and academic community on developing circular economy solutions through the Circular Connect Competition



Active involvement of the informal waste sector groups in the ATs and Black Soldier Fly module initiatives in Bacolod City

## Output 4

As a popular island tourist destination with neighbouring urban cities (Iloilo and Bacolod), Guimaras offers a unique lens into the urgency of addressing marine pollution, and an opportunity for scaling and replication of identified best practices across the region, especially in countries that share the same island contexts. The planned Panay-Guimaras-Negros Island Bridges Project is expected to increase traffic and population movement, bringing added pressure to the island's waste systems. The pilot implementation in Guimaras includes three main work packages, supported by policy development and partnerships with other sectors. Work Package 1 focuses on strengthening waste systems and infrastructure, while Work Package 2 engages informal waste workers, and Work Package 3 promotes behaviour change. Capacity-building efforts run alongside each package to support effective implementation



Under Work Package 1, the Plastic Recycling Facility donated by DENR-EMB to the Province of Guimaras was mobilised and put into operation to convert plastic waste, including low-value plastics like sacks, sachets, and soft plastics, into usable products. As similar equipment exists in around 90 provinces across the country, the success of Guimaras in this regard has potential for replication and wider use.

A harmonised provincial policy on ecological solid waste management was drafted to guide LGUs in crafting their own local ordinances. It incorporates the EPR Law and key national programmes, including those from the Department of Interior and Local Government (DILG), to strengthen barangay-level waste efforts and household participation.

Efforts extend to Taklong Island National Marine Reserve in Guimaras island. Building on its own “Carry In, Carry Out” policy, a ban on single-use plastics for catering services, and a Deposit-Refund Scheme under Resolution 2023-16—requiring tourists to pay Php 5.00 per plastic item brought in, refundable upon removal—is currently under DENR review.

To boost plastic collection and segregation, Guimaras partnered with Evergreen Labs Philippines (EGL), a private sector that collects all plastic types and delivers them to its co-processing partners. Local junkshops were also engaged to collect plastic recyclables and transport them to Iloilo. By end of 2024, over 63 tonnes of plastic were diverted from potential marine leakage through plastic waste collection resulting from these partnerships.



The SaveME programme, led by students, promotes 3R awareness and positive waste behaviour among youth and staff at Guimaras State University. The programme led to a unified SWM Policy and Plan across the university system and launched a “bring your own” (BYO) initiative in all of its campuses.



SaveME  
video



Technical support was provided for site design and preparation of the pre-feasibility study for the proposed provincial sanitary landfill in Guimaras.

# Viet Nam

## Output 2



Viet Nam has introduced several policies to manage and reduce plastic waste (PW), yet the country continues to face significant challenges due to rapid economic growth, population increase, and changing consumption patterns. As the agency responsible for the integrated management of marine resources and protection of the marine and island environment, the Viet Nam Agency of Seas and Islands (VASI) plays a key role in addressing marine plastic pollution. Given the project’s focus on reducing plastic waste at source and preventing marine litter, providing support to VASI aligns well with its overall objectives.



**3** with approximately 750 participants in total from ministries, local authorities, businesses, academia, etc.



Conducting baseline studies, analysing and mapping key stakeholders in plastic waste management in Viet Nam and visualize and identify gaps in the current waste management system

### Policy Consultations and Thematic Advisory Support



Has organised with approximately **750** participants in total from ministries, local authorities, businesses, academia, etc.



Consultation on mainstreaming plastic waste management into Coastal Plannings



Technical support in reviewing the implementation of the National Action Plan on Marine Plastic Litter and the Law on Natural Resources and Environment of Sea and Islands .



Linking the Regional Knowledge Hub with VASI’s website to enhance knowledge access for Vietnamese partners



Development of Training of Trainers (ToT) textbook on waste segregation at source



Technical support for the synthesis and review of plastic waste inventory methodologies



Technical support for the assessment and analysis of the application of plastic circularity in Viet Nam



## Output 3

In Soc Trang Province, the pilot region of 3RproMar, shrimp farming is a key economic sector, producing 218,235 tonnes in 2023 and earning over US\$1 billion from brackish water shrimp exports. With 94% of its 52,439 ha devoted to intensive and semi-intensive farming, the sector generates significant plastic waste, especially from pond liners and aquafeed packaging. Despite the widespread use of plastic for its durability and convenience, the fate of discarded plastic remains unclear. As a coastal province bordering the Mekong River—a major global pathway for ocean-bound plastic—Soc Trang faces challenges in establishing effective waste management systems. The contribution of shrimp farming to marine plastic pollution is under-researched, with little data on the volume of waste generated, how it is handled, or who is involved in its downstream management.



Analysis of plastic waste streams and 3R potentials in the shrimp farming sector in Soc Trang Province. The study maps plastic use and waste streams in Soc Trang's shrimp farming sector, identifies key actors and influencing factors, assesses 3R best practices and recycling technologies, and proposes practical, locally grounded recommendations.



Organised a technical meeting to initiate multi-stakeholder discussions on the current situation of plastic waste management in aquaculture, enabling dialogue on integrating Extended Producer Responsibility (EPR) into the shrimp farming plastic value chain, fostering collaboration among actors to support efficient 3R measures for plastic waste management across the aquaculture value chain.

## Output 4

Soc Trang is a coastal province in southern Viet Nam, situated at the downstream end of the Bassac River in the Mekong Delta—one of Southeast Asia's most vital agricultural regions and known as the "rice bowl" of the region. With a population of around 18 million, the Delta faces growing environmental challenges due to rapid urbanisation and economic development. Coastal waters in Soc Trang are increasingly polluted by plastic waste, including transboundary waste carried from upstream of the Mekong River Basin. With a 72-kilometer coastline and two major estuaries—Hau and My Thanh Rivers—Soc Trang has rich marine resources and strong potential for integrated marine economic development, particularly in fisheries, aquaculture, port services, tourism, and maritime transport.



## Strategic Planning Support

- Supported the development of the *Waste Segregation at Source Action Plan for Soc Trang Province (2025–2030)*.
- Contributed to the design of *Household Solid Waste Segregation Plans* in Tran De District, Cu Lao Dung District, and Vinh Chau Town.

## Capacity Building & Training

- Assisted in organising a Training of Trainers (ToT) session on waste segregation for 68 local government officials and 150 teachers and students.
- Supported capacity development for local officials through training workshops and study tours.

## Baseline Study & Campaigns

- Conducted a baseline study on solid waste management in Tran De and Vinh Chau towns.
- Supported community campaigns in Tran De and Vinh Chau:
  - Organised a World Environment Day cleanup with local government and in support facilities for local government to organise monthly clean up at Kinh Ba sluice gate in Tran De town.
  - Distributed branded materials (caps, shirts, mesh bags, notebooks) and waste segregation instruction leaflets to promote awareness and implementation.
  - Held 6 environmental awareness events at 6 Primary and Secondary Schools with about 3,000 participants.
  - Supported to organise recyclable waste collection campaigns for 3 schools (students bringing recyclable waste to schools).

## Waste Management Pilots & Materials Distribution

- Launched 100 “Green House” models and 4,500 mesh bags to store recyclable waste and installed 838 trash bins for waste segregation.
- Distributed 18,300 environmentally themed notebooks and 4,100 shopping mesh bags to bags to replace single-use plastic.
- Supported the development and installation of a 700-meter bamboo waste trap in Vinh Chau Town which has trapped about 3 tonnes of plastic.



Towards a Cleaner Ocean:  
GIZ 3RproMar  
Viet Nam Video



3RproMar in Soc Trang:  
Protecting the marine  
environment and coral reefs  
factsheet



VASI sub-page linking with  
Regional Knowledge Hub

## Voices that matter...



“Through the Cooperative, that 3RproMar supported, all the members and I have learned a lot about how to work together for our common good and we have received recognition being in an official organisation. Starting in January 2025, we started selling recyclable plastic materials together and directly to wholesalers, no longer individually. What is encouraging is that members have started saving through Cooperatives which was never possible before. Through this cooperative organisation, other members and I changed our way of thinking from personal interests to common interests.”

**Ratna Taasuwi, Waste Picker at Sumompo landfill and the Chair of the Sumompo Sejahtera Waste Picker Cooperative**

“Educating students about environmental protection goes beyond the classroom. By participating in school initiatives and leading clean-up campaigns, we inspire children to take pride in their surroundings and understand that every small action contributes to a cleaner, greener future.”

**Ms. Hoang Giang, Teacher, Tran De B Primary School, Tran De district, Soc Trang Province**



“The Sa Plastik Anay ‘Ta campaign encourages our community to rethink their waste habits. It’s not just about collection, but about changing behaviours for the better. Through training and capacity-building, we empower LGUs, SWM workers, and residents to adopt sustainable waste management practices for the long term.”

**Ms. Leah Joy T. Gabayeron, Environmental Management Specialist II, Guimaras Environment and Natural Resources Office**

## General Information about the project



3RproMar Web page



3RproMar Factsheet



3RproMar Achievement Booklet

## Regional



kNOwWaste



Regional Knowledge Center for Marine Plastic Debris (RKC-MPD)



International Knowledge Hub Against Plastic Pollution (IKHAPP)



Baseline Study on Microplastics in ASEAN



Towards a Sustainable Future: Recommendations for a Just Transition in Waste Management and Circular Economy in the ASEAN Region



Behavioural Change Toolbox

## Cambodia



Cambodia Circular Economy Forum 2024



Cambodia Pilot Site Factsheet

## Indonesia



Indonesia's Implementation and Document Compilation



3rd National Stakeholder Forum



Video Thousand Island (DCA)



Video Deposit Return System



Video 3RproMar Pilot project Manado City



3RproMar Manado Achievement factsheet

## Philippines



Philippines Pilot Site Factsheet



Aling Tindera video



SaveME video



Black Soldier Fly video

## Viet Nam



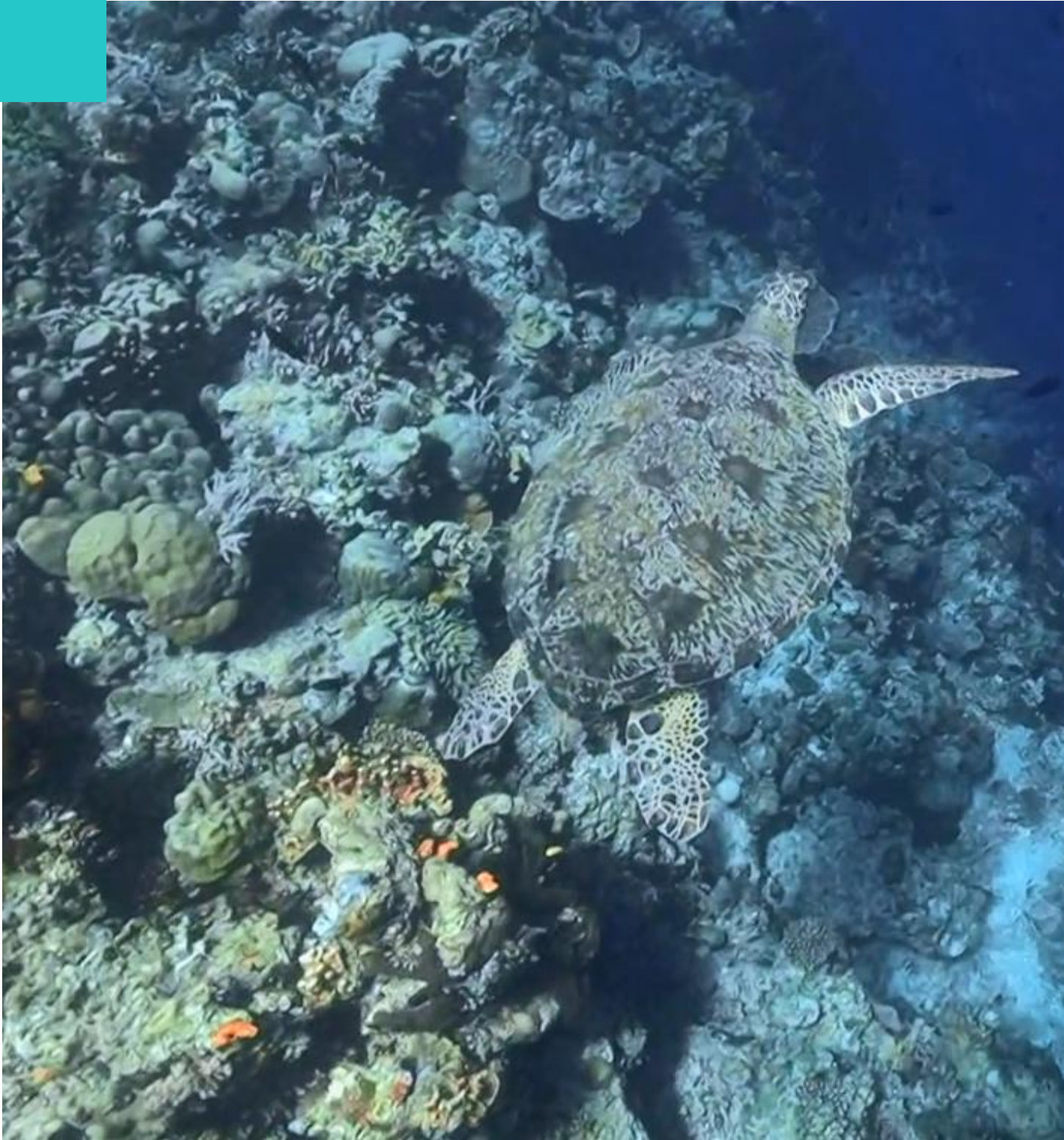
Towards a Cleaner Ocean: GIZ 3RproMar Viet Nam Video



3RproMar in Soc Trang: Protecting the marine environment and coral reefs factsheet



VASI sub-page linking with Regional Knowledge Hub



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