

 **Norway**



Ending Plastic Pollution Innovation Challenge (EPPIC)

FINAL REPORT

December 2019 – September 2025



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LIST OF ACRONYMS

Acronym	Meaning
AIGIF	ASEAN-India Grassroots Innovation Forum
ASEAN	Association of Southeast Asian Nations
ASEANO	ASEAN-Norway Cooperation Project on Local Capacity Building for Reducing Plastic Pollution in the ASEAN Region
AWGCME	ASEAN Working Group on Coastal and Marine Environment
CE	Circular Economy
CEI	Centre for Entrepreneurship and Innovation
CO(s)	Country Office(s)
CSEAS	Center for Southeast Asian Studies (Indonesia)
DENR	Department of Environment and Natural Resources (of Philippines)
DIM	Direct Implementation Modality
DWP5C	Domestic Waste and Plastic Management in Five Cities
EPPIC	Ending Plastic Pollution Innovation Challenge
EPR	Extended Producer Responsibility
ERIA	Economic Research Institute for ASEAN and East Asia
GESI	Gender Equality and Social Inclusion
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GPAP	Global Plastic Action Partnership
HAC	High Ambition Coalition
HCMC	Ho Chi Minh City
HDPE	High-Density Polyethylene
ICD	International Cooperation Department
INC	Intergovernmental Negotiating Committee
ISF	Impact Seed Funding
ISPAE	Institute of Strategy, Agricultural Policy and Environment
ISPONRE	Institute of Strategy, Policy on Natural Resources and Environment
IWWs	Informal waste workers
KAP	Knowledge, Attitude, and Practice
Lao PDR	Lao People's Democratic Republic
LDPE	Low-density polyethylene
LEP	Law on Environmental Protection
LSPP	Local Solutions for Plastic Pollution

MAE	Ministry of Agriculture and Environment
MRF	Material Recovery Facility
MTT	Mekong Thought Leadership and Think Tanks Network
N/A	Not applicable
NAP	National Action Plan on Marine Plastic Litter
NATEC	National Agency for Technology Entrepreneurship & Commercialization Development
NIVA	Norwegian Institute for Water Research
NOK	Norwegian Krone
Norad	Norwegian Agency for Development Cooperation
NPAP	National Plastic Action Partnership
NPOA	National Plan of Action
OPTOCE	Ocean Plastic Turned into an Opportunity in Circular Economy
PAPI	Provincial Governance and Public Administration Index
PDP	Philippine Development Plan
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PP	Polypropylene
PPP	Public-Private Partnership
PRO(s)	Producer Responsibility Organization(s)
Q&A	Question and Answer
QNC	Quang Ninh Construction and Cement Joint Stock Company
SEI	Stockholm Environment Institute and WaterAid
SIBs	Social Impact Businesses
SINTEF	Norwegian: Stiftelsen for industriell og teknisk forskning, “The Foundation for Industrial and Technical Research”
SOP	Standard Operational Procedures
SUP(s)	Single-use plastic(s)
UN	United Nations
UNDP	United Nations Development Programme
UNEA	United Nations Environment Assembly
USAID	United States Agency for International Development
USD	United States dollar
VASI	Viet Nam Agency of Seas and Islands
VEA	Viet Nam Environment Agency
VEPF	Vietnam Environment Protection Fund
VNAAPP	Vietnam Action Against Plastic Pollution
WWF	World Wildlife Fund

1. PROJECT INFORMATION

- **Name of the grant scheme:** Ending Plastic Pollution Innovation Challenge (EPPIC)
- **Project ID:** 00119237
- **Project location:** Viet Nam, Thailand, Indonesia, the Philippines, Cambodia and Lao PDR
- **Donor:** Norwegian Agency for Development Cooperation (Norad)
- **Agreement title:** RAS-19/0026
- **Agreement number:** 00119237
- **Total grant:** NOK 14,256,000
- **Project duration:** December 2019 – September 2025

2. ABOUT THE GRANT RECIPIENT

- **Name and abbreviation:** United Nations Development Programme (UNDP)
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3. ABOUT THE PROJECT

3.1. Cooperating Partners

Viet Nam Agency of Seas and Islands (VASI)

- **Name:** Viet Nam Agency of Seas and Islands (VASI)
- **Address:** 83 Nguyen Chi Thanh, Ha Noi
- **Contact Person:** Mr. Nguyen Duc Toan - Director General
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UNDP Thailand

- **Name:** UNDP Thailand
- **Address:** 12th Floor, United Nations Building, Rajdamnern Nok Avenue, Bangkok 10200, Thailand
- **Contact Person:** Ms. Lisa Louveton, Biodiversity and Climate Change Adaptation Specialist
- **Email:** lisa.louveton@undp.org

The primary government partner in Thailand for this Project is the Greenhouse Gases Management Organization, at the Ministry of Environment and Natural Resources.

UNDP Indonesia

- Name: UNDP Indonesia
- Address: Menara Thamrin, Kav 3, 8th Floor, Jakarta 10250, Indonesia
- Contact Person: Mr. Ahmad Bahri Rambe, Climate Change Advisory Council Coordinator
- Email: ahmad.rambe@undp.org

The primary government partner for this Project in Indonesia is the Solid Waste, Hazardous Waste, and Hazardous Substances Management, at the Ministry of Environment and Forestry.

UNDP Philippines

- Name: UNDP Philippines
- Address: 15th Floor, North Tower, Rockwell Business Center Sheridan, St. corner United St., Highway Hills, 1550 Mandaluyong City,
- Contact Person: Gwyneth Anne Palmos, Programme Analyst, Climate Action Team
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UNDP Lao PDR

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- Address: P.O. Box 345 Vientiane, Lao PDR
- Contact Person: Korakot Tanseri
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The primary government partner for this Project in Lao PDR is the Ministry of Natural Resources and Environment, Department of Environment.

UNDP Cambodia

- Name: UNDP Cambodia
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- Contact Person: Nac Mi
Project Technical Coordinator
- Email: nac.mi@undp.org

The primary government partner for this Project in Lao PDR is the Ministry of Natural Resources and Environment, Department of Environment.

3.2. Grant recipients and cooperating partner's respective roles in the Project

The Project operates under Direct Implementation Modality (DIM), with the United Nations Development Programme (UNDP) Viet Nam serving as the primary grant recipient. In this role, UNDP Viet Nam is responsible for completing all approval procedures and establishing the project team, composed of both national and international experts, for the overall management and implementation of project activities. Due to the transboundary nature of plastic pollution, the EPPIC project was designed with a regional scope, aiming to source innovations from ASEAN countries to address localized challenges. This approach involves several cooperating partners:

- Viet Nam Agency of Seas and Islands (VASI): As a key government partner under the Ministry of Agriculture and Environment (MAE), VASI is mandated to lead, formulate, and implement national policies related to marine plastic in Viet Nam. Through a formal agreement with UNDP Viet Nam, VASI is responsible for implementing specific activities, including policy support, technical training, national and regional advocacy efforts, and supporting the scaling-up of innovations.
- Besides VASI, the Project also work closely with other departments under MAE in specific area including:
 - Viet Nam Environment Agency (VEA): Supports the formulation of technical regulations on co-processing and shaping Extended Producer Responsibility (EPR) policy and Decree.
 - International Cooperation Department (ICD): Provides deep involvement in supporting Viet Nam's team for global plastic treaty preparation and negotiation.
 - Institute of Strategy, Agricultural Policy and Environment (ISPAE), formerly the Institute of Strategy, Policy on Natural Resources and Environment (ISPONRE): Supports circular economy work, particularly the preparation and issuance of the Draft National Action Plan on Circular Economy.
- UNDP Country Offices (COs) in other ASEAN countries: UNDP Viet Nam has formal agreements (Letters of Agreement) with UNDP COs in Thailand, Indonesia, the Philippines, Lao PDR, and Cambodia. These agreements stipulate the roles of the respective COs in executing a set of activities, including indicative timelines and the amount of grant funds disbursed to them. In later phases (from 2021 onwards), the roles of these UNDP COs were expanded, particularly in response to COVID-19 related travel restrictions. They took on increased responsibilities, such as overseeing the 9-month impact acceleration programs for winning teams in their respective countries.
- Government Partners (in other countries): Each UNDP Country Office works with specific government partners in their country:
 - Thailand: The primary government partner is the Greenhouse Gases Management Organization, under the Ministry of Environment and Natural Resources.
 - Indonesia: The primary government partner is the Solid Waste, Hazardous Waste, and Hazardous Substances Management, at the Ministry of Environment and Forestry.
 - The Philippines: The primary government partner is the Department of Environment and Natural Resources and the Local Government Unit of Samal Island.
 - Lao PDR: The Ministry of Natural Resources and Environment, Department of Environment, is the primary government partner.
 - Cambodia: The Green Department, at the Ministry of Environment, is the primary government partner.

Local Governments (such as Quang Ninh, Thua Thien Hue, Binh Dinh, Ho Chi Minh City in Viet Nam, Da Nang, and Samal Island in the Philippines): The project collaborates with these local authorities on various initiatives including launching innovation hubs like the EPPIC Shop, supporting metabolic studies, and providing innovation capacity building. This localized engagement helps foster grassroots innovation and improve waste management practices directly within communities.

3.3. Viet Nam and other countries context

3.3.1 Viet Nam

At the time the Project started in 2020, Viet Nam faced a severe challenge with plastic pollution. The country generates over 2.9 million tons of plastic waste annually, with a low recycling rate. This

inadequate collection and improper disposal led to increasing pollution of terrestrial and marine ecosystems, negatively impacting the environment, human health, and local livelihoods.

In response to this pressing issue, Viet Nam had already taken a role in ASEAN by developing and implementing circular economy policies with ambitious targets. Key policy documents and initiatives in place or being developed around the project's start included:

- The National Action Plan on Marine Plastic Litter (NAP) was approved by the Prime Minister's Decision 1746/QĐ-TTg on December 4, 2019, this plan set specific targets for 2025, such as reducing marine plastic litter by 50% by 2025 and 75% by 2030.
- Law on Environmental Protection (LEP) 2020 was under discussion for renew and revision, with EPR was among the hottest topic.
- Movement "Say No To Plastic Waste" was launched in June 2019, prompted ministries, agencies, and localities to develop their action plans to combat plastic pollution.

The Viet Nam Administration of Seas and Islands (VASI), under the Ministry of Agriculture and Environment (Ministry of Natural Resources and Environment previously), was the key government partner, mandated since 2008 to formulate and implement national policies related to marine plastic. VASI was also responsible for the implementation of Decree 26/NQ-CP on Sustainable Development of the Ocean Economy. These frameworks formed the backbone of Viet Nam's efforts to address marine plastic pollution and foster a blue economy.

Furthermore, Viet Nam was actively engaged in regional cooperation, notably being a signatory of the Bangkok Declaration on Combating Marine Debris in ASEAN, which was adopted at the 34th ASEAN Summit in June 2019. The EPPIC project itself was designed with a regional scope, acknowledging Viet Nam as one of the top five countries contributing to marine plastics. This context of significant pollution, coupled with ambitious national policies and strong governmental commitment, set the stage for the EPPIC project's interventions to strengthen a circular economy for plastics in Viet Nam.

Since 2015, plastic pollution had become a critical and growing concern across Southeast Asia. The project was designed with a regional scope, recognizing the transboundary nature of plastic pollution, and initially focused on four of the top five countries globally contributing to marine plastics: Viet Nam, Thailand, Indonesia, and the Philippines. Each of these countries faced significant challenges and had begun to develop specific policy and legal frameworks to address the issue.

3.3.2 Thailand

Thailand was identified as the 6th largest contributor of marine waste globally. Annually, the country produced 2 million tons of plastic waste, of which only 0.5 million tons were recycled, leading to up to 60% of the remainder leaking into the sea. In 2017, an average Thai person reportedly used eight plastic bags per day.

In terms of legal and policy responses, Thailand's waste management was governed by fundamental laws such as the Environment and Conservation of National Environmental Quality Act B.E. 2535 (A.D. 1992) and the National Solid Waste Master Plan (2015-2021). Critically, Thailand's Roadmap for Plastic Waste Management (2018-2030) set ambitious goals: by 2019, it aimed to eliminate all cap seals, Oxo-biodegradable plastic, and microbead plastics. By 2027, the roadmap targeted the complete phase-out of Styrofoam food containers, single-use plastic bags (<36 microns thick), single-use plastic cups, and plastic straws, alongside achieving 100% recycling and reuse of targeted plastic materials. As the Chair of ASEAN in 2019, Thailand played a key role in the adoption of the Bangkok Declaration on Combating Marine Debris in ASEAN in June 2019. The primary government partner for the EPPIC project in Thailand was the Greenhouse Gases Management Organization under the Ministry of Environment and Natural Resources.

3.3.3 Indonesia

Indonesia faced a significant increase in plastic waste, with its composition in overall waste rising from 9% in 1995 to 16% by 2016. A 2018 study by the Indonesian Institute of Science estimated marine plastic leakage into Indonesian oceans to be between 0.27 and 0.59 million tons.

Indonesia's legal framework included Act Number 18/2008 on Waste Management and Government Regulation Number 81/2012, which focused on waste reduction, reuse, and recycling. By 2020, over 30 cities, regencies, and provinces had implemented policies to limit single-use plastics. The Presidential Regulation No. 83/2018 on Marine Debris Handling committed Indonesia to a 70% reduction of marine plastic litter by 2025, supported by a National Plan of Action (NPOA) on Marine Plastic Debris (2018-2025) and a National Coordination Team involving 16 ministries and one institution. Additionally, the Regulation of the Minister of Tourism and Creative Economy Number 5/2020 placed responsibility for plastic waste management on tourism businesses and local authorities in coastal destinations. The Ministry of Environment and Forestry was the key government partner for EPPIC.

3.3.4 The Philippines

The Philippines was identified as the third-largest source of marine litter globally in 2015. The country's waste generation continued to rise, with plastic accounting for 11% of solid waste in 2019 and a projected 165% increase in urban waste by 2025.

In response, the Department of Environment and Natural Resources (DENR), supported by UNDP Philippines, was leading the development of the National Plan of Action (NPOA) on Marine Litter, which was in its finalization stage and expected to launch in the first half of 2021. This NPOA aimed for a holistic approach to prevent marine litter, promote sustainable consumption and production, and foster a circular economy. It aligned with the updated Philippine Development Plan (PDP) 2017-2022, which reinforced the implementation of Republic Act 9003, also known as the Ecological Solid Waste Management Act. The DENR was the primary government partner for the EPPIC project.

Across these countries, a shared commitment to combating marine debris was solidified through the Bangkok Declaration on Combating Marine Debris in ASEAN, adopted at the 34th ASEAN Summit in June 2019. This regional declaration provided a common framework for addressing plastic pollution, underscoring the urgency and collaborative spirit present at the time of the EPPIC project's inception.

3.3.5. Lao PDR

Lao PDR is currently grappling with a surge in plastic waste driven by rapid urbanization and changing consumption patterns, with total municipal solid waste reaching approximately 910,000 tons per year as of 2020. In urban centers like Vientiane, plastics now constitute roughly 12% of the total waste stream, much of which remains uncollected or is subject to illegal dumping and outdoor burning. A significant 2022 study revealed that 95% of plastic pollution in the country's rivers originates from just ten items, predominantly SUPs like bottles, caps, and food containers.

In 2022, the Government of Lao PDR accelerated its efforts to transition toward a green and circular economy to mitigate the severe public health and economic costs of pollution, which are estimated to account for 15% of the national GDP.

- The 9th National Socio-Economic Development Plan (2021–2025), which underwent significant implementation and refinement in 2022, prioritized "green development" as a core pillar. It explicitly called for reduced pollution and the promotion of circular economy principles to manage limited natural resources more effectively.

- National Plastic Action Plan (NPAP): In response to requests from the Ministry of Natural Resources and Environment (MoNRE), 2022 saw the foundational development of the National Plastic Action Plan (NPAP) with support from the World Bank. The plan's roadmap designed to cover the 2022–2030 period, initially focused on creating management frameworks, determining site locations for MRF, and launching public awareness campaigns to reduce SUPs.
- The government began strengthening the capacity of the Urban Development Administrative Authorities (UDAAs) to improve waste collection efficiency, which has historically been as low as 30% nationwide.
- By 2022, Lao PDR solidified partnerships with international bodies like the Global Plastic Action Partnership (GPAP) and the World Bank to mobilize technical and financial resources for waste infrastructure upgrades, particularly at the Km 32 landfill in Vientiane.

In Lao PDR, plastic waste management is inextricably linked to broader Municipal Solid Waste (MSW) challenges. The prevailing waste management method relies heavily on "collecting and disposing" without sorting at the source, and policies supporting the 3R principles (Reduce, Reuse, Recycle) are not yet widely implemented. In the target site of Kaysone Phomvihane City (Savannakhet), the collection rate remains low, with only 30% of households having a contract with a service provider. Consequently, significant amounts of plastic waste are discarded or burned carelessly along roads and riverbanks, increasing the risk of leakage into the Mekong River.

3.3.6 Cambodia

In 2022, Cambodia faced a critical challenge as rapid urbanization and an annual GDP growth of 7% led to a surge in plastic consumption that outpaced the nation's waste management capacity. Urban centers like Phnom Penh, Sihanoukville, and Siem Reap became focal points for this crisis, contributing to a total annual output of roughly 4 million tons of municipal solid waste. Despite collecting over 222,000 tons of recyclables, the domestic recycling rate remained a low 6.4%, even though plastic accounted for nearly the entire volume of materials actually processed. This gap in infrastructure resulted in severe environmental leakage, with the Mekong River serving as a primary conduit carrying up to 95% of the country's plastic pollution into the oceans.

To combat these pressures, the Government of Cambodia pivoted toward a Circular Economy framework in 2022, moving away from traditional linear consumption models. Central to this shift was the Ministry of Environment's development of the Roadmap for Sustainable Consumption and Production (2022–2035) and the Urban Solid Waste Management Policy 2020–2030. These initiatives prioritized the "4Rs" approach: Refuse, Reduce, Reuse, and Recycle, to institutionalize sustainable waste practices across the country's expanding urban landscape and developing provincial landfills.

Regulatory reform also accelerated in 2022 through the active review of a Sub-Decree on Plastic Management and the introduction of a dedicated Policy Matrix on Single-Use Plastic. These measures were specifically designed to curb the use of non-biodegradable items and plastic bags while laying the groundwork for EPR, green procurement, and eco-labelling. By introducing these policies, the government aimed to hold manufacturers directly accountable for the end-of-life management of their plastic products.

Complementing these internal efforts, Cambodia strengthened its international engagement by joining the Partnership for Action on Green Economy (PAGE) in 2022. This partnership provided essential technical support for a resilient post-COVID economic recovery centered on sustainability. Through these combined national roadmaps, legislative reforms, and global collaborations, Cambodia established a comprehensive strategic foundation to mitigate plastic pollution and foster a more sustainable, circular economic future.

4. ARRATIVE RESULTS OF PROJECT OUTPUTS

OUTCOME 1: A portfolio of solutions is selected, supported and scaled-up through the EPPIC in four countries (Viet Nam, Thailand, Indonesia, and the Philippines).

Under this OUTCOME, a portfolio of solutions is selected, supported and scaled-up through the EPPIC in four countries (Viet Nam, Thailand, Indonesia, and the Philippines). The Project has contributed to advancing the circular economy of plastic products by fostering innovative solutions. The project attracted 298 applications from innovators across ASEAN, with 31 teams selected as finalists who underwent a three-month incubation program, and 8 winning teams receiving equity-free seed funding and a nine-month impact acceleration program. These winning solutions demonstrated substantial financial and environmental impacts: by December 2024 finalists from Phase 1 alone secured 461,500 USD in additional external investment, with notable successes like GreenJoy, Galaxy Biotech, Refill Day, and CIRAC attracting significant funding. Cumulatively, by January 2025, the efforts of the 8 EPPIC winners prevented 383.1 tons of plastic from entering the environment, including 182.8 tons by Viet Nam's winners, 126.6 tons by winners coming Indonesia and the Philippines. EPPIC provided comprehensive support through technical training, mentoring, and field trips, and notably established the EPPIC Shop in Ha Long Bay, serving as a sales point, synergy hub, and awareness platform for local communities. The project also strongly promoted gender equality, with 7 out of 14 Phase 1 finalist teams led by women, and in Phase 2, 9 out of 17 finalist teams led by women, ensuring high female representation among judges, speakers, mentors, and coaches. Despite significant challenges posed by the COVID-19 pandemic, EPPIC demonstrated remarkable adaptability by shifting activities online and securing necessary no-cost extensions, ensuring continued delivery and reach beyond initial targets.

Output 1.1: A portfolio of innovative solutions to combat plastic ocean pollution is selected and designed

Under this Output, a portfolio of innovative solutions to combat ocean plastic pollution is selected and designed, the EPPIC has demonstrated significant success in identifying and preparing a diverse range of solutions across Viet Nam, Thailand, Indonesia, the Philippines. This output laid the crucial groundwork for supporting and scaling up innovations to strengthen the circular economy of plastic products.

The Project systematically prepared and conducted 04 baseline studies and more than 30 consultations to underpin its innovation challenges across its target countries. For Viet Nam and Thailand, two baseline assessments were completed in Ha Long Bay and Koh Samui during the second quarter of 2020. For Indonesia and the Philippines, baseline assessments were conducted for Mandalika (Lombok) and Samal Island, respectively, following initial delays caused by COVID-19 travel restrictions. These studies were complemented by extensive consultations both online and in-person. Collectively, the project conducted 30 consultations with local stakeholders across these countries, exceeding its initial targets.

The competition consistently surpassed its initial targets for innovator engagement. In Phase 1 (Viet Nam, Thailand), EPPIC received 163 applications, with 159 meeting requirements, greatly exceeding the target of 70. In Phase 2 (Indonesia, the Philippines), 139 applications were received from innovators across seven ASEAN countries, again doubling the target. For the third phase extending to Lao PDR and Cambodia, 50 applications were received from six ASEAN countries. Overall, the project successfully attracted over 300 innovators across all phases.

From these applications, a substantial number of teams were selected for intensive support. Initially, 15 finalists were chosen for Phase 1, with 13 ultimately joining the program. Subsequently, 17 finalists were selected for Phase 2 (Indonesia and the Philippines). For the expansion into Lao PDR and Cambodia, 16 teams were chosen as finalists. This cumulative effort resulted in 31 innovative teams selected as finalists across the various phases of the challenge. Detailed of finalists are attached in the [Annex 3](#).



A strong emphasis on gender equality was integrated into the selection process, with diversity and inclusivity criteria accounting for 10-15% of the overall scoring. This intentional design yielded impressive results:

- **In Phase 1:** 7 out of 14 finalist teams were led by women, and 12 out of 14 teams included at least one woman.



- **In Phase 2:** 9 out of 17 finalist teams were led by women, and all finalist teams included at least one female core member, with 50% having more than half female members.



- **In the most recent phase for Lao PDR and Cambodia:** 18 out of 50 entrants were women-led (36%), and all 15 finalists included at least one female core member. This commitment also extended to the judging panels, with 5 out of 8 EPPIC Judges being women in Phase 2.

The selected finalists then benefited from comprehensive incubation programs, typically lasting three months. These programs, adapted to hybrid or fully online formats due to the COVID-19 pandemic, included technical training, one-on-one coaching, workshops on crucial topics like waste management policy, circular economy principles, business readiness, HR management, impact measurement, and impact investment. UNDP Country Offices actively built the capacity of local incubators to deliver these specialized programs, fostering a broader impact ecosystem in ASEAN. Critical to the design were field trips to project sites such as Ha Long Bay, Koh Samui (First Innovation Challenge), Mandalika, Samal Island (Second Innovation Challenge), Kaysone Phomvihane City, and Sihanoukville (the most recent

one). These trips allowed innovators to directly engage with local challenges, stakeholders, and government partners, aiding in the refinement of their solutions and fostering local partnerships.

The foundation for these challenges was laid through baseline assessments and local consultations. Two baseline assessments were conducted in Ha Long Bay and Koh Samui in Q2 2020. Subsequent phases saw a baseline assessment in Mandalika (Lombok) and Samal Island, along with 15 consultations conducted with local stakeholders in Indonesia and the Philippines to define specific challenges. For Lao PDR and Cambodia, two baseline assessments were completed in Kaysone Phomvihane City and Sihanoukville.

Extensive communication and media outreach played a vital role in attracting high participation rates. The project utilized social media, blogs, radio, and TV campaigns, including live-streamed launch events that attracted thousands of viewers. For instance, in 2021, EPPIC generated over 188 media clippings and achieved over 1.86 million total reach, engagement, and impressions on social media. Total reach, engagement, and impressions on social media of the 4 COs from 2020 to 2022 were more than 10,417,000 viewers.

- Viet Nam: 481 articles published, 36 national televisions broadcasted the project (including news, longer reportage programmes and TV talks).
- The Philippines produced a **podcast series** collaborating with [SUSTAINARUMBLE!](#), a PH-based podcast channel that focuses on highlighting sustainable development issues. The collaboration produced a four-episode series on EPPIC and circular economy.
- Indonesia: 104 articles published in English and Bahasa languages

By 2024, the project's online channels reached more than 3.8 million people. These efforts ensured wide dissemination of information about the challenge and the critical issue of plastic pollution.

Output 1.2: Tailored support to grow and scaleup provided to the identified solutions

Tailored support to grow and scale-up provided to the identified solutions, The Project successfully implemented comprehensive programs to nurture and scale innovative solutions combating plastic pollution across Viet Nam, Thailand, Indonesia, the Philippines. This output focused on empowering selected innovators with the resources and guidance necessary to expand their impact and achieve sustainability.



The core of this support involved incubation and acceleration programs, designed to meet the evolving needs of the innovative teams. Firstly, a three-month incubation program was provided to finalists, followed by a nine-month impact acceleration program for the winning teams. Due to the COVID-19 pandemic, these programs rapidly adapted to hybrid or entirely online formats, proving effective in reaching a wider audience and ensuring continued delivery despite travel restrictions. The curriculum for these programs included essential topics such as waste management policy frameworks, circular

economy principles, business readiness, HR management, impact measurement, and impact investment. Beyond formal training, participants benefited from one-on-one coaching, mentorship sessions with experts, and valuable networking opportunities with venture capitalists and other key stakeholders.

A critical component of the tailored support was the provision of equity-free seed funding, with 8 winning teams receiving 18,000 USD each across the two competitions. This initial funding served as a catalyst for further growth. The project successfully attracted significant additional external investment for the solutions: Finalists from Phase 1 alone secured a cumulative 461,500 USD by 2024. In particular:



- (1) GreenJoy received 1,600 USD from International Innovator Award, 110,000 USD from USAID - Clean Cities Programme (sponsor), 35,000 USD from Viet challenge Competition, 2,000 USD Second Muse - Schoolab (SUP Challenge), 5,000 USD from ISEE COVID - Social Impact Business, 13,000 USD from the International Sustainability Academy, 700 USD from ASEAN SEDP and 9,700 USD from PREVENT2Innovate.
- (2) Galaxy Biotech received 23,000 USD from Circular Valley and 40,500 USD from Social Business Creation.
- (3) Refill Day received 22,000 USD from sponsor.
- (4) CIRAC in Thailand winning a USD 100,000 grant from the Alliance to End Plastic Waste, alongside discussions for potential investments up to USD 4 million.
- (5) Additionally, Mgreen (in the Top 14 Finalist) received 66,000 USD from the HCMC Department of Science and Technology/ Speed Up Programme and 33,000 USD from WWF.

The impact of this tailored support is evident in the tangible results achieved by the solutions. By January 2025, the combined efforts of all EPPIC finalists had led to an impressive 382.1 tons of plastic prevented from entering the environment and 765 tons of plastic treated. Specific achievements include:

- In Viet Nam, winners prevented over 182.8 tons of plastic. The EPPIC Shop in Ha Long Bay, launched in January 2022, played a crucial role by showcasing and selling EPPIC products, fostering local synergies, and raising awareness, expanding to two new locations by August 2022 and initiating a pilot program for tourist boat owners resulting in the adoption of sustainable products and waste classification measures.
- In Indonesia, as of 2024, Siklus avoided 60.6 tons of single-use plastic sachets by promoting refilling models, and Alterpacks prevented 64.1 tons of plastic food packaging. Finalists from



Phase 2 also engaged in a speed dating session with 10 local investors, with Siklus successfully closing its funding round.

- In the Philippines, as of 2024, Pure Oceans diverted and upcycled 1.4 tons of plastic, and TrashCash diverted 0.8 tons of plastic waste from landfills/waterways, notably through its mobile application reaching over 27,440 users.

Moreover, the project fostered a broader impact ecosystem by building the capacity of local incubators, enabling them to design and deliver new programs focused on the circular economy of plastics. Field trips were organized to project sites like Ha Long Bay, Koh Samui, Mandalika, Samal Island, allowing innovators to engage directly with local challenges and government partners, strengthening local partnerships and solution refinement. Participant satisfaction surveys indicated that 60% of participants rated the program as "excellent," deeming all sessions useful. Despite implementation delays primarily caused by the COVID-19 pandemic, leading to no-cost extensions, EPPIC's adaptive strategies ensured robust support and achievement of its objectives.

Output 1.3: Dissemination and replication strategies designed and delivered – From ideas to impact

This Output focused on ensuring that innovative solutions combating plastic pollution were effectively shared, adopted, and scaled within various local contexts across the target countries. This output moved beyond simply identifying solutions, concentrating on their practical implementation and long-term sustainability.

A key aspect of this output was providing technical support to localities for the implementation and dissemination of solutions. This involved organizing field trips where EPPIC finalists directly engaged with local stakeholders, including government departments (e.g., Department of Tourism, Department of Planning and Investment), local authorities (e.g., Mayor's advisor, Sanitation Technical Officer), and mass organizations in project sites like Ha Long Bay, Koh Samui, Mandalika, and Samal Island. These engagements allowed innovators to pitch their solutions, discuss feasibility, and refine their approaches based on local challenges and needs, fostering critical local partnerships.

A significant achievement under this output was the establishment and expansion of the EPPIC Shop in Ha Long Bay, Viet Nam. Launched in January 2022, this shop served as a multi-functional hub, acting as a communication and sales point for EPPIC innovations like Galaxy Biotech's breathable bags, GreenJoy's grass straws, and Refill Day's refilling model, as well as local green brands. Furthermore, it enhanced synergies across the portfolio of innovations by showcasing multiple solutions and functioned as a local hub for raising awareness among communities, particularly those in the fishery and tourism sectors, encouraging behavioral change towards reducing single-use plastics. By August 2022, the EPPIC Shop successfully expanded to two new locations within Ha Long, demonstrating its potential for broader reach. The EPPIC shop was setup in collaboration with the Quang Ninh Farmer's Union to ensure local ownership and sustainability, with sharing for replication



in other Vietnamese localities and potentially across ASEAN. A pilot program stemming from this initiative led to the adoption of EPPIC products by 26 tourist boats and 17 local restaurants, along with the introduction of waste classification measures on tourist boats, directly promoting sustainable practices in the local tourism sector.

The project also focused on assessing the replication potential of solutions to other localities. An initial replication analysis was conducted for Thailand in 2022, and there was an initiation to replicate the EPPIC shop model in Thua Thien Hue Province, Viet Nam, with a support from Norway/WWF funded project. The EPPIC shop was also visited by the Cambodian delegation, led by the Deputy Minister of Environment Cambodia.

We need further info showing local authorities in Thailand, Cambodia and the Philippines, also for Laos and Cambodia in the other Outcome, to adopt and support information.

Efforts were made to disseminate lessons learned and best practices through various networking events and by making incubation program materials openly available, empowering other innovators and local incubators to build capacity in circular economy principles for plastics. EPPIC solutions were also showcased at numerous national and regional events, contributing to broader awareness and potential uptake.

OUTCOME 2: Capacity building in Viet Nam for the prevention and reduction of plastic pollution, and networking and experience sharing in ASEAN countries are strengthened.

The EPPIC project played a supporting role in enhancing national policy frameworks and international engagement. It provided technical advisory to Viet Nam's government, particularly VASI and MAE, in implementing policies such as the National Action Plan on Marine Plastic Litter (Decision 1746/QD-TTg) and Directive 33/CT-TTg on strengthening plastic waste management. Notably, the project offered initial support to Viet Nam's preparation and negotiation for a global treaty on marine plastic pollution, which was not initially foreseen but became a focus.

Furthermore, EPPIC supported the design and operationalization of the Viet Nam Circular Economy Hub, the country's first government-led platform on circular economy, included in Decree 08/2022/ND-CP. It aimed to enhance dialogue, share knowledge, and mobilize collective action. While the ASEAN Centre on Combating Marine Debris was not established due to governmental restructuring, its planned activities were largely re-purposed to support the global treaty negotiations.

EPPIC implemented extensive communication and awareness campaigns. The launch of the EPPIC competition alone attracted over 21,000 viewers in 2020. Campaigns like "From the Mountains to the Sea - Beat Plastic Pollution" achieved a social media reach of over 2 million persons. The "Trash Hunt" mobile app, downloaded by over 7,000 people, facilitated mapping plastic waste hotspots and raising public awareness. An ASEAN Photo Contest garnered thousands of submissions, including over 7,500 photos from 2,700 authors across Southeast Asia. The project also supported Press Awards to encourage media engagement on marine debris. A survey in Viet Nam revealed 90% public awareness of the plastic issue, though 70% still used single-use plastics daily, highlighting persistent behavioral challenges. Total media outreach in Viet Nam amounted to 481 articles.

Knowledge sharing extended regionally through various platforms and products. 23 national and regional workshops/events were organized, including participation in the Sea of Solutions Event and ASEANO

workshops, where EPPIC's approach and lessons were presented. Knowledge briefs (e.g., "15 lessons learned from running an Innovation Competition"), blogs, and op-eds were consistently produced and shared. Videos showcased EPPIC winners and field trips, and a podcast, "The Descendants of Hai Ba Trung," highlighted women's roles in climate action and circular economy initiatives. Regional visits, such as the Cambodian delegation's visit to the EPPIC shop, further facilitated experience exchange.

Output 2.1: Increased awareness of plastic pollution and circular economy for plastics in Viet Nam

This Output has demonstrated significant progress in raising public and business understanding of these critical environmental issues, ultimately fostering behavioral change and supporting policy implementation within Viet Nam and beyond.

Broad Outreach and Engagement through Communication Campaigns The project successfully generated substantial interest and widespread communication reach. The initial launch of the EPPIC competition in 2020 garnered over 21,000 viewers through live-streamed events in Vietnamese and English, signifying a higher level of interest than initially foreseen. This intensive communication, which included Q&A sessions and an extended application period, led to a large number of applications, 163 received against an expected 70. Throughout its implementation, EPPIC achieved extensive media coverage in Viet Nam, with 481 articles published and 36 national television broadcasts, including news and talk shows. Social media campaigns, such as "From the Mountains to the Sea - Beat Plastic Pollution," reached over 2 million people in Viet Nam, and cumulatively, the project's social media presence across four Country Offices achieved over 1.8 million engagements, impressions, and reach in 2021.

The project also developed a mobile application, "Trash Hunt," which was downloaded by over 7,000 people to map plastic waste hotspots and raise public awareness.

Further enhancing public engagement, an ASEAN Photo Contest attracted thousands of submissions, including over 7,500 photos from 2,700 authors across Southeast Asia, and two Press Awards were organized in 2021 and 2022 to encourage media engagement on marine debris. In October 2022, UNDP launched "The Descendants of Hai Ba Trung," a bilingual podcast (English and Vietnamese) to highlight women's roles in climate action and circular economy initiatives, aiming to inspire a new generation of women leaders.



Targeted Initiatives and Behavioral Change Promotion Beyond broad campaigns, the project implemented targeted initiatives to foster local awareness and behavior change. The EPPIC Shop in Ha Long Bay, Viet Nam, launched in December 2021 and expanded in August 2022, served as a crucial hub to showcase EPPIC innovations, raise local awareness, and promote sustainable products. Furthermore, waste classification measures, including the introduction of 3R (reduce, reuse, recycle) bins, were implemented on tourist boats, promoting responsible waste management practices among tourists and operators. A major awareness event, "EPPIC Week in Ha Long," engaged approximately 5,000 people.



In October 2022, UNDP launched a new podcast showcasing the voices from women at the frontline of the climate crisis. Each episode showcases the journey of women from all backgrounds, sharing their experiences in mobilizing their communities and acting in the fields of agriculture, disaster risk reduction, circular economy etc; to adapt and mitigate climate change. This innovative media tool aimed to change the narrative around women who are often considered solely as ‘vulnerable groups’ in environmental protection, low carbon and circular economy, and climate change. The podcast is funded from different projects, including the EPPIC under this Output. The third Episode features Ms. Trinh Thi Hong (former informal waste worker), a CE pioneer living in Da Nang City, where she developed a technology to recycle organic waste into soaps. The podcast targets a young audience, with the aim of inspiring a generation of women to lead the change. The upcoming episodes in 2023 will also feature EPPIC’s Finalist and emphasize the critical roles of women in science, technology, and innovation. The podcast is available on [Spotify](#) and [Google Podcast](#) in Vietnamese and English languages.

Assessing Awareness and Identifying Gaps To inform communication strategies, a Knowledge, Attitude, and Practice (KAP) survey was conducted in collaboration with WWF Viet Nam and MAE. Results from this survey revealed that over 90% of people surveyed were aware of the plastic issue, yet 70% reported still using single-use plastics daily in the day prior to the survey. This highlights a persistent gap between awareness and consistent behavioral change. In the framework of the EPPIC project, a KAP survey on single-use plastics has been conducted in 2020 and 2025 by the Centre for Natural Resources and Environment Communication (an agency under MAE). In general, the results showed that the ratio of awareness of the waste hierarchy increased from 64% of 725 respondents in 2020 to 78% of 3,151 respondents in 2025. The annual PAPI (Provincial Governance and Public Administration Index) survey in 2019 also indicated strong public support for a ban on single-use plastics, with 84.2% nationwide and 84.1% in Quang Ninh Province.

Knowledge Dissemination and Capacity Building for Broader Understanding EPPIC actively disseminated knowledge and built capacity to enhance understanding of circular economy for plastics. The project consistently produced and shared knowledge briefs (e.g., "[15 lessons learned from running an Innovation Competition](#)"), blogs (e.g., "[Not Another Challenge](#)"), and op-eds (e.g., "[3Vs for gender-inclusive circular era](#)"), documenting lessons learned and promoting circular economy concepts. EPPIC's approach and lessons were presented at numerous national and regional workshops and events, including the Sea of Solutions Event and ASEANO workshops, fostering synergies and experience sharing.

Output 2.2: Renewal capacity of key stakeholders in Viet Nam developed to address plastic pollution

This Output aimed to enhance the capabilities of key stakeholders in Vietnam to tackle plastic pollution effectively. This output was initially designed to develop and support the establishment of an ASEAN Centre on Combating Marine Debris in Vietnam.

A significant shift occurred when the establishment of the ASEAN Centre on Combating Marine Debris became unfeasible due to new government policies and VASI's restructuring. Consequently, the project pivoted its technical advisory activities to support the Vietnamese Government in preparing for and advocating for a global treaty on marine plastic waste. This included supporting the development of Prime Minister's Decision 1407/QĐ-TTg on Vietnam's active participation in formulating a global treaty on marine plastic pollution, marking the first step for the country in international negotiations. A draft methodology to estimate plastic leakage from land to sea was piloted in Binh Province.

The project contributed to the Ministry of Agriculture and Rural Development's Action Plan on Marine Plastic Waste Management in the fisheries sector, leading to the issuance of the Decision 687/QĐ-BNN-TCTS in 2021 by the Minister of Agriculture and Rural Development.

The project also contributed to the design and operationalisation of the Viet Nam Circular Economy Hub, that was launched in close collaboration with MAE. The CE Hub was developed to enhance dialogue, generate know-how, and mobilise collective action towards the transition to a circular economy in Viet Nam. As the first government-led platform on CE, included in Decree 08/2022/ND-CP guiding the LEP (Art. 139), the portal of the CE Hub (available in Vietnamese and English), raises awareness and builds capacity of all stakeholders (public authorities, businesses, civil society, and academia), to adopt CE principles, creates synergies and integrates financial and technical resources.



The National Action Plan on CE is being formulated to promote the management and efficient use of natural resources and reduce environmental pollution, following the Law on Environment Protection 2020. The Project provided technical support to ISPAE during the formulation process, including: (i) hiring a team of one international expert and four national experts to provide constant support; (ii) 2-day Writeshop organized for experts to discuss in-depth about the draft NAP on CE, and (iii) contribution to organization of the National Circular Economy Forum in 2023 and 2024.

For circular economy advocacy at local province, a number of consultation workshops and meetings were organized for a metabolic study in Thua Thien Hue Province to inform its Circular Economy Roadmap, focusing on waste and plastic reduction in tourism and agriculture, leading to the approval of the circular economy action plan for Hue City dated 5th February 2025.

In terms of capacity building, the project significantly exceeded its targets for training and workshops. While the initial target for 2022 was 15 training courses, about 60 training courses were organized by December 2022, including over 50 as part of incubation programs for EPPIC finalists and winners. These

sessions covered various topics, including waste management, circular economy, and business readiness.

Output 2.3: Relevant plastic prevention initiatives supported by EPPIC widely shared with ASEAN countries

The Output 2.3 was designed to enhance knowledge, cooperation, and networking among ASEAN countries for the prevention and reduction of plastic waste in nature. The initial target for this output was to disseminate 5 lessons learned and best practices by 2020, increasing to 10 by 2021, and 15 by 2022. The project significantly overachieved these targets, demonstrating a strong commitment to broad dissemination of its efforts and learnings.

Throughout the project's implementation, various platforms and events were leveraged to share plastic prevention initiatives. In 2020, despite initial delays due to COVID-19, the project successfully disseminated information on two occasions: through the Sea of Solutions Event in Viet Nam (December 2020) and by broadcasting the 14 innovative solutions of the EPPIC Final (January 2021) to a wide ASEAN audience, including 1,200 viewers. By the end of 2021, the project had met and even exceeded its annual target by producing and disseminating several key knowledge products and participating in significant events. This included a knowledge brief titled "15 lessons learned from running an Innovation Competition" co-authored by EPPIC focal points in Vietnam and Thailand, and a blog post "Not Another Challenge" published on the UNDP Regional Innovation Centre Asia-Pacific's Medium account. Additionally, EPPIC's approaches and lessons were shared during ASEANO "Local Stakeholder Workshop on Reducing Plastic Pollution" and the "ASEANO Plastic Waste and Circular Economy Workshop". The EPPIC Final Pitching Competition for Indonesia and the Philippines in December 2021 and a High-level UNDP Meeting on Circular Economy in ASEAN also served as crucial avenues for dissemination. Lessons from EPPIC innovations were also showcased through the Viet Nam Circular Economy Hub, and finalists and winners actively presented their solutions at over 16 events in Vietnam during 2021.

By 2022, the project's dissemination efforts continued to expand, reporting on over 24 actions, solutions, and initiatives disseminated across ASEAN countries, far surpassing the final target of 15. Key activities included:

- The Project provided partial support to the organization of the International Conference on Sustainable Ocean Economy and Climate Change Adaptation was held from May 12-14, 2022, in Viet Nam. This event included an EPPIC Sharing of Experiences & Lessons Learned component, featuring a four-day trip with Indonesian and Philippine government partners



during their visit to Viet Nam. The conference and its associated events provided a platform for EPPIC teams to share their innovative solutions for plastic and waste management. EPPIC winners, including those from the Philippines, also participated in this national forum to present their solutions and highlight their milestones and learnings to a broader audience. The conference contributed to fostering knowledge and cooperation, aligning with Outcome 2 of the project, which aims to increase knowledge, cooperation, and networking in ASEAN countries for plastic waste prevention and reduction.

- EPPIC winners participated in national forums like “Circularity in the City” in the Philippines, sharing their solutions and learnings.
- A Cambodian delegation visited the EPPIC shop in Ha Long City in October 2022 to exchange on innovation and Extended Producer Responsibility (EPR) policies.
- New knowledge products included a booklet introducing the 17 innovations from Indonesia and the Philippines, and a report on "11 Lessons Learned from EPPIC 2021: Leveraging Sustainable Business Ecosystem in Marine Waste Management in Indonesia".
- Videos featuring EPPIC winners were released on the EPPIC website, and an op-ed titled "3Vs for gender-inclusive circular era" was published.

OUTCOME 3: Plastic Ecosystem (legal, financial, technical) in Viet Nam and ASEAN, to ensure long-term sustainability, stimulated.

The EPPIC project significantly impacted Vietnam and ASEAN's plastic ecosystem by fostering long-term sustainability through legal, financial, and technical advancements. A key added impact was strengthening Vietnam's capacity for international plastic pollution negotiations. The project provided crucial technical advisory to the Vietnamese Government (ICD and VASI within MAE), aiding in Prime Minister's Decision 1407/QĐ-TTg development. This included supporting reports and position papers for INC meetings and facilitating workshops like "Business toward global treaty on plastic." It also assessed Vietnam's suitability for joining the High Ambition Coalition to End Plastic Pollution. Domestically, the project profoundly influenced Vietnam's inclusive EPR framework (effective 2022, fully implemented by January 2024), particularly for informal waste workers (IWWs). A socio-economic assessment of IWWs proposed "freelance waste workers" for better recognition and support, and the project also improved VEPF transparency for EPR fund disbursement.

Output 3.1: Renewal capacity of key stakeholders in Viet Nam and Philippines to negotiate the international agreement on marine plastic waste, developed

The EPPIC project significantly contributed to strengthening Viet Nam's capacity for international plastic pollution negotiations. A major achievement under Output 3.1 was the direct support provided to the Vietnamese Government in preparing for and advocating for a global treaty on marine plastic waste. The decision 1407/QĐ-TTg, also established an Inter-Ministerial, Sectoral, and Local Working Group to prepare for negotiations.

The project provided consistent technical advisory to key agencies within MAE, specifically the International Cooperation Department (ICD) and Viet Nam Administration of Seas and Islands (VASI), to enhance their capacity for these international negotiations. This support includes:

- Preparation of crucial reports, baseline scenarios, and position papers ahead of Intergovernmental Negotiating Committee (INC) meetings. For instance, four technical discussions were facilitated at VASI and ICD for preparing Viet Nam's position on the Zero Draft of the Treaty.
- Organization of national workshops in collaboration with the National Plastic Action Partnership (NPAP), such as "Business toward global treaty on plastic" and "Highlights of INC-2 and Vietnam's preparation for next INCs," to enhance the understanding and engagement of policymakers and stakeholders.
- Develop a paper Chemicals of Concern for Plastics, as a basis for better understanding of the negotiation team on this field.
- Hiring international and national experts to directly support MAE's agencies and Viet Nam's Negotiation Committee in preparing negotiation options for INC-2 and INC-3.
- Supporting the active participation of the Vietnamese delegation in INC-3 in Nairobi and continuing this support up to INC-5 in Busan, where a UNDP representative assisted the delegation. UNDP also joined a side event hosted by the Norwegian Embassy to Korea and the Korean Ministry of Environment. At the event, innovative approaches and local solutions have been shared between countries and regions, to promote collaboration and exchange in address plastic pollution.
- Support the participation of 01 senior member from the Legal Department, to participate in the INC5.2 in Geneva.



A significant output was the development of an assessment report on Viet Nam's suitability for joining the High Ambition Coalition (HAC) to End Plastic Pollution. This report concluded that it would be feasible for Viet Nam to participate in HAC, reinforcing the country's commitment and leadership in global efforts. The project also extended its influence regionally by co-organizing a workshop on Regional Cooperation toward the Global Treaty on Plastic Pollution with VASI, bringing together 45 participants from 11 countries in the Asia-Pacific region to discuss collaborative actions and share outcomes of EPPIC's efforts.

In the Philippines, the project supported the formulation and endorsement of their position paper for the UN Plastic Treaty after a consultation workshop with their delegation and key partners, ensuring a participatory process for their stance at INC-3. Following a consultation workshop organized by the project, the position paper of the Philippines for the UN Plastic Treaty was formulated and endorsed by the Department of Environment and Natural Resources and the Philippines Delegation to the INC-3 Meeting on the Zero Draft of the International Legally-Binding Instrument on Plastic Pollution. The Department of Environment and Natural Resources (DENR) convened the Philippine Delegation and relevant stakeholders to discuss the Zero draft, agree on a country position or negotiating points, and package country-level agreements. The participatory process ensured that concerns and points of view of various stakeholders were considered thereby safeguarding the country's interests and alignment with sustainable development goals while joining the rest of the international community to forge an agreement to reduce plastic pollution. Based on the consultation results and feedback from the Philippine Delegation, the project supported the drafting of [the country's position paper](#), which was presented and submitted during the INC-3 meeting.

At regional level, on 26 July 2023 and together with Viet Nam Agency of Seas and Islands (VASI) the project organized a [workshop](#) on Regional Cooperation toward the Global Treaty on Plastic Pollution on 26 July 2023. The workshop, attended by 45 participants from 11 countries in the Asia-Pacific region,

provided valuable feedback from PEMSEA partner countries on how to promote collaborative actions to secure the objectives of the UNEA resolution, as well as share the outcomes of EPPIC's efforts in six countries and exchange information on scaling up innovations in other countries. The following priorities were highlighted as key takeaways from the workshop (i) Addressing the needs of informal waste workers, is one of key aspects of ending plastic pollution through enabling a circular economy; (ii) Mobilizing financial flows from developed countries to developing countries will be critical to effective implementation of the global treaty. See more details at the workshop [proceeding](#).



Output 3.2: Inclusive Extended Producer Responsibility (EPR) that delivers benefits for the informal sector developed, promoted, and disseminated within the ASEAN region

Output 3.2, focused on Inclusive EPR that delivers benefits for the informal sector developed, promoted, has been instrumental in shaping both the legal and social landscape of plastic waste management, particularly in Viet Nam. A significant impact of the EPPIC project under this output was its direct technical advisory and support for Viet Nam's EPR framework. While the EPR policy became effective in 2022 and was fully implemented with recycling responsibility



coming into force by January 2024, a crucial initial challenge was the absence of clear guidelines on how its benefits would extend to the informal waste sector. To address this gap, the project initiated a comprehensive socio-economic assessment of informal waste workers (IWWs) within the evolving EPR and waste management policy landscape. This assessment is designed to inform recommendations and develop guidelines for an inclusive EPR roll-out, specifically focusing on how funds from the Viet Nam Environment Protection Fund (VEPF) can be somehow to support the informal sector and how Producer Responsibility Organizations (PROs) can effectively engage IWWs in their operations.

As the advocacy result, two PRO models have been transformed into inclusive PROs, including:

- [PRO Vietnam](#) is a coalition of leading companies having high prestige from consumer goods, packaging, retail, and import industries (31 members) and especially a common responsibility: make Vietnam Green, Clean, and Beautiful by promoting a circular economic model through more accessible and sustainable packaging collection and recycling process. PRO Vietnam also supports its members in fulfilling their EPR obligations by providing information, consulting, and

developing a packaging collection and recycling ecosystem, connecting stakeholders such as manufacturers, recyclers, and informal waste collectors.

- EGreen Alliance is a new company operating in the area of waste collection and sorting. With support from the EPPIC Project, the company has been developed to provide sustainable solutions for the collection and sorting of e-waste and plastic waste, delivering benefits to the informal sector. While mapping the informal sector's presence in the e-waste and plastic waste value chain, EGreen Alliance aims to become a PRO model that is centered on the informal sector, thereby increasing the human rights and improving the livelihoods of these freelance scrap workers.

A notable suggestion emerging from this work is the proposal to redefine the term to "freelance waste workers," aiming to better acknowledge their professional role and facilitate future support mechanisms. The project also actively advocated enhanced transparency and effective management of the VEPF, stressing the importance of public dissemination of information regarding fund distribution, which is vital for the proper disbursement of EPR funds. Following the advocacy of the Project, MAE planned to revise the EPR policy, by formulating a new Decree on EPR, expected to submit for approval by September 2025.

					
WEEEs	Batteries rechargeable	Lubricant	Tires, tubes	ELVs	packaging
All	All	All	All	All	commercial packaging
1/1/2025	1/1/2024	1/1/2024	1/1/2024	1/1/2027	1/1/2024

Beyond policy formulation, the project actively engaged in promoting and disseminating inclusive EPR principles across the region. It organized workshops specifically on the role of PROs in EPR implementation in collaboration with the Viet Nam Circular Economy Hub, drawing significant participation, with around 180 attendees. These engagements were pivotal in deepening policymakers' understanding of EPR, advocating for the importance of PROs over government-based payment systems, a perspective anticipated to be reflected in the upcoming EPR decree. Regionally, the project facilitated experience sharing and exchange among ASEAN countries, exemplified by an official mission from Cambodia, which is developing its own EPR scheme, to Viet Nam to learn from its experiences.



OUTCOME 4: A Portfolio of innovative solutions is selected, supported and scaled up through the EPPIC competition in 2 additional ASEAN countries (Cambodia and Lao PDR).

Output 4.1: A portfolio of innovative solutions to combat ocean plastic pollution is selected and designed

Output 4.1, centered on identifying and developing innovative solutions to combat ocean plastic pollution, significantly expanded its reach to Lao PDR (Kaysone Phomvihane City/Savannakhet) and Cambodia (Sihanoukville) in Phase 3 of innovation challenge (2023-2024). This strategic expansion underscored the project's commitment to addressing regional plastic pollution challenges and built upon lessons learned from earlier phases. The process began with thorough baseline assessments in both Kaysone Phomvihane City and Sihanoukville. These assessments were crucial in understanding the unique waste management landscapes, pinpointing specific challenges, and identifying opportunities for intervention in each location. In close consultation with the respective Ministries of Natural Resources and Environment in Laos and Cambodia, the project ensured that the selected sites and interventions were aligned with national priorities and had strong local government buy-in.



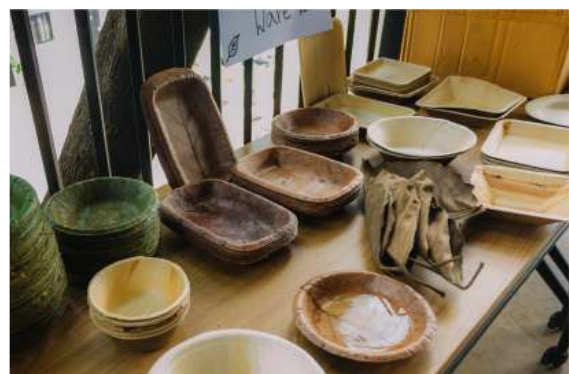
The innovation challenge for Phase 3 garnered considerable interest, receiving 50 applications from 6 ASEAN countries, despite the comparatively nascent innovation ecosystems in Laos and Cambodia. From this pool, 16 innovative teams were selected as finalists, embarking on an intensive two-month incubation program. A key feature of this program was the inclusion of critical field trips to Sihanoukville and Savannakhet, which allowed innovators to immerse themselves in the local context. These direct engagements with local stakeholders and on-the-ground data collection were invaluable for refining their proposed solutions and ensuring their business models were culturally and economically appropriate. The project also maintained its commitment to gender inclusivity, with three women-led teams among the finalists in Cambodia and three in Laos. Following the incubation, final pitching competitions were held in December 2023 for Cambodia and January 2024 for Lao PDR. Four winning teams (two from each country) were awarded USD 18,000 in equity-free seed funding, marking the beginning of a nine-month impact acceleration program designed to further develop and scale their promising initiatives. After EPPIC, the finalists of the Challenge successfully attracted additional external investment for the solutions totaling 232,700 USD by 2024. In particular:

- (1) Nature Ware received 3,000 USD from USAID - BIZ 2023 project between National University of Laos and USAID, 40,000 USD from UNDP Indonesia (ASEAN Blue Innovation challenge)

- (2) We Lab - ITC received 68,000 USD from (ISF) Impact Seed Funding, (MTT) Mekong Thought Leadership and Think Tanks Network, and Stockholm Environment Institute and WaterAid (SEI)
- (3) TONTOTON received 120,000 USD from partners, supporter (fundraising)
- (4) Eco Machine received from 1,000 USD from Ministry of SMEs and Startup South Korea - Ecothon 2023
- (5) Recycle Art received 700 USD from ASEAN-India Grassroots innovation Forum - Promising Award AIGIF 2023.

The impacts and results generated by these innovations in Laos and Cambodia are noteworthy:

- WeLab ICT (Cambodia): Focused on leveraging ICT for Water and Wastewater Treatment Technology. They designed and successfully tested a solar-powered air bubble screening device intended for installation in wastewater canals in Sihanoukville. This device demonstrated its capability to reduce both macro- and microplastic pollution before it enters the sea, undergoing multiple design iterations and three successful field tests.
- TONTOTON (Cambodia): Received significant support, including an EPPIC grant to acquire a new palletizing system. This system greatly enhanced their capacity to process hard-to-recycle plastics such as PP, LDPE, and HDPE. Cumulatively, TONTOTON collected 3,000 tons of hard-to-recycle plastics, striving to increase the proportion allocated for upcycling. They successfully expanded their collector network to 59 new local households, providing income generation and directly contributing to source-level plastic leakage prevention. TONTOTON also diversified its product line to include items like tables, chairs, and keychains, establishing sales channels at local businesses and Phnom Penh International Airport, and launched a visitor center in Sihanoukville.
- Nature Ware (Lao PDR): Pioneers in eco-friendly products crafted from natural materials designed for rapid decomposition into nutrient-rich compost. Their efforts are aimed at fostering environmental consciousness in public and tourist areas. Nature Ware successfully signed a local production and distribution agreement and received the prestigious ASEAN Award from the ASEAN India Start-Up Festival in November 2024, also participating in significant local expos.



- Savanir Team (Lao PDR): A women-driven community transformation initiative focused on upcycling. This team directly combats plastic pollution by transforming discarded plastic bottles into fibers, which are then provided to women in rural areas to weave into marketable bags. This approach not only mitigates plastic waste but also significantly contributes to sustainable livelihoods and poverty reduction within communities. Savanir also actively engaged in waste

sorting workshops and successfully collected 69 kg of plastic waste along the Mekong riverside during a field trip.



Collectively, these pioneering initiatives have made tangible contributions to plastic waste management: as of 2024, more than 33 tons of plastic waste were treated by solutions in Laos, and more than 3,007 tons were prevented by innovations in Cambodia. The project actively addressed the risk of lower participation from these smaller innovation ecosystems by leveraging UNDP's country office experience and fostering strong regional collaboration and outreach, ensuring that impactful solutions continued to be sourced, supported, and scaled across the region. Lao PDR participants and winners further amplified their reach by presenting their innovations at the Southeast Asian Marine Plastic Regional Platform for Innovation, demonstrating the value of cross-country knowledge sharing and highlighting the critical role of regional collaboration in tackling plastic pollution.

Nature Ware received the ASEAN Award from the ASEAN India Start-Up Festival in November 2024, participated in the Lao Handmade 3.0 in November 2024, Participated in the Lao Agri Expo in December 2024. In addition, Lao's participants and winners had the honor to present their innovation during the Southeast Asian Marine Plastic Regional Platform for Innovation and Investments Networking event in June 2024, organized by the ASEAN Secretariat and World Bank.



With support from the Project, the 2-day conference “ASEAN Conference on Combatting Plastic Pollution – 28-29 October 2024” hosted by the Ministry of Natural Resources and Environment (MONRE) of Lao PDR, in partnership with the Economic Research Institute for ASEAN and East Asia (ERIA) and the

United Nations Development Programme (UNDP) Lao PDR, provided a platform to share knowledge, identify synergies for regional cooperation, and align policies for tackling plastic pollution. H.E. Mr. Phouvong Luangxaysana, Vice-Minister of Natural Resources and Environment of Lao PDR, gave opening remarks and highlighted the significance of regional collaboration. Ms Kari Synnøve Johansen, Senior Adviser, Section for Oceans, Department for Climate, Nature and Private Sector, Norad, gave the honor to give special remark as the conference features 10 EPPIC winners from 6 ASEAN countries who presented their innovations, services and products.

Output 4.2: Innovations to Close the Loop by collecting and processing plastic waste downstream sourced and deployed in ASEAN

Output 4.2 of the EPPIC project, titled "Innovations to Close the Loop by collecting and processing plastic waste downstream, sourced and deployed in ASEAN," focuses on implementing and scaling selected innovative solutions for collecting and processing plastic waste. This initiative builds on the project's broader commitment to fostering a circular economy for plastics across the ASEAN region. Key activities under this output have primarily concentrated on Viet Nam and the Philippines, with significant progress in both areas, including tangible results in plastic waste treatment and the development of enabling infrastructure and policies.

In Vietnam, a key intervention under Output 4.2 involves collaborating with the OPTOCE Project (led by SINTEF) to promote the co-processing of non-recyclable plastic waste in cement kilns. This environmentally friendly method offers a sustainable alternative to landfilling and incineration, aiming to reduce greenhouse gas emissions by utilizing plastic waste as a resource in cement manufacturing. A significant pilot saw 100 tons of plastic waste from Minh Khai Village co-processed at the QNC Cement Plant in Quang Ninh Province. Minh Khai, a plastic recycling craft village in Hung Yen province, grapples with severe plastic pollution, accumulating an estimated 100,000 tons of waste across two primary areas: an access road and a centralized dumpsite. This 100-ton pilot served as a crucial foundation for designing a comprehensive remediation plan for the entire Minh Khai Village plastic hotspot, a plan currently awaiting approval from Hung Yen province to secure state budget for future clean-up efforts. Beyond direct treatment, the project actively advocates for enhanced co-processing policies and improved waste management strategies within MAE, aiming to incentivize co-processing and discourage waste-to-energy approaches.



Building on this, UNDP and Norway held a consultation workshop in June 2025 to discuss the remediation plan for Minh Khai plastic craft village. This critical meeting addressed the severe environmental and health issues stemming from the decades-old, 100,000-ton mixed waste dumpsite. The workshop convened key stakeholders, including local government officials (such as the Deputy Director General of Hung Yen Department of Agriculture and Environment), representatives from the Environment Agency, scientists, environmentalists, and Ambassador Hilde from Norway, a prominent advocate for co-processing solutions. Discussions centered on a remediation plan, drafted with support from international firm TAUW and a local company, which proposes co-processing as the primary solution. This approach notably diverges from the government's traditional, often very costly, "clean everything back to zero" method. This collaborative effort underscores UNDP and Norway's commitment to finding practical and cost-effective solutions for the site, effectively tackling plastic waste at its source and mitigating significant environmental risks.

Under the project's support, the Vietnam Environment Agency (VEA) has successfully drafted and finalized a new Technical Regulation on co-processing. This regulation, identified as Technical Regulation 41:2025/BNMT, was officially issued under Circular 46/2025/TT-BNNMT. It is expected to make a significant contribution to waste management by advocating for increased co-processing as a viable solution.

In the Philippines, Output 4.2 has focused on enhancing solid waste management through digital innovation and community engagement, particularly in Samal Island. The project supported the development and pilot testing of a mobile-based application for collecting data on marine litter, primarily targeting local government units in collaboration with the Department of Environment and Natural Resources (DENR). This downstream solution emphasizes community engagement, partnerships, and information dissemination to raise awareness. Future plans include expanding the initiative to Davao City as an adjacent area for waste sourcing and product markets, while maintaining processing and fabrication activities in Samal Island. To bolster these efforts, a plastic shredder is slated for deployment in Samal Island to increase waste diversion operations, and a technical expert was hired in early 2024 to strengthen product development and quality standards for circular economy alignment.

Overall, these initiatives contribute to the project's ambitious goals for plastic waste management. As of December 2024, the results across all EPPIC finalists, including those under Output 4.2, show 3,345.5 tons of plastic waste prevented and 115.94 tons treated. The focus on downstream innovations, particularly in countries with evolving waste management landscapes like Viet Nam and the Philippines, demonstrates a practical approach to addressing existing plastic pollution while simultaneously building capacity and advocating for supportive policy frameworks for a more circular economy.

Output 4.3: Investment Ecosystem for Plastic Circularity in Viet Nam, nurtured and stimulated

Output 4.3 of the project is strategically designed for long-term sustainability, aiming to foster a resilient investment ecosystem for plastic circularity in Vietnam. Its core approach involves building the capacity of and providing support to key intermediaries, such as universities and government officials, ensuring the innovation ecosystem can thrive beyond the project's direct involvement.

The impacts of Output 4.3 have been significant, particularly in strengthening governance and empowering academic institutions:

- **Government Capacity Building:** Three distinct series of innovation capacity-building trainings were successfully delivered to 120 local government officials across provinces, including Quang Ninh, Hue – Da Nang and Ho Chi Minh City. These sessions, in a collaborative effort with the National Agency for Technology Entrepreneurship & Commercialization Development (NATEC) and UNDP's Accelerator Lab, leveraged both governmental and in-house expertise on innovation tools and practice. A tangible outcome is the co-development of the Innovation [Playbook](#) for Public Sector, launched in December 2024, which equips government authorities with practical knowledge and essential tools to more effectively address emerging issues like plastic pollution within their jurisdictions. This direct engagement helps ensure local governance is better prepared to foster and support circular economy initiatives.
- **Empowering Universities and Fostering Grassroots Innovations:** The "University Challenge" actively engaged academic institutions in cultivating solutions for plastic circularity. Four universities in Vietnam were strategically chosen for this initiative: Tay Bac University, the University of Da Nang, Nha Trang University, and Quy Nhon University. The Centre for Entrepreneurship and Innovation (CEI) of Fulbright University Vietnam played a pivotal role by designing and delivering hands-on training on innovation and the circular economy through a "Train the Trainer" approach. Over a five-month period from March to July 2024, the challenge successfully engaged over 550 participants, including students, lecturers, and university specialists, generating 141 innovative ideas across the entire waste value chain. Participants shared key improvements: 87.0% gained new knowledge on plastic pollution, 84.1% enhanced their problem-solving skills, and 85.9% developed a more pronounced innovation mindset. This led to the selection of winning teams who advanced to a Demo Day and participated in matchmaking sessions with Social Impact Businesses (SIBs). This initiative also facilitated crucial alignment with other related efforts, such as a waste-sorting pilot program at Quy Nhon University linked to a Material Recovery Facility (MRF) in Binh Dinh province.



The sustainability of this Output is firmly rooted in its foundational strategies, designed to ensure lasting impact beyond the project's direct involvement. A core approach involves the institutionalization of learning through a "Train the Trainer" model adopted at universities. This model is crucial for building sustainable educational support, ensuring that knowledge and capacity in innovation and the circular economy are deeply embedded within these academic institutions. This supports universities to

continue fostering and nurturing solutions independently, even after the EPPIC project concludes its direct engagement.

Furthermore, the program is committed to the development of a future-ready workforce. By actively involving students and providing them with significant technical knowledge and practical experience in research, innovation, and entrepreneurship, the program aims to strengthen Vietnam's ecosystem of innovators for the long term. These acquired skills are considered invaluable for their overall career development, effectively preparing a future workforce that is well-equipped to drive sustainable change. Another key strategy is the integration with local context and policy. The program deliberately emphasized tailoring activities to address real, on-the-ground challenges, thereby ensuring that the developed innovations and capacities are relevant and can be seamlessly integrated into existing and future waste management strategies, which significantly increases their longevity. The co-development of the "Innovation Playbook" is a tangible example, aiming to embed innovation frameworks directly within governmental structures for sustained use. Recommendations also advocate for expanding and integrating innovation capacity-building initiatives with current educational programs to "institutionalize these methods" within universities' academic frameworks. And importantly, boosting innovation begins not only with entrepreneurship or start-up activities, but also at the research and development stage within universities.

These concerted efforts are designed to stimulate the overall plastic ecosystem and policy landscape to become more sustainable across Vietnam. The project's success in cultivating this robust investment ecosystem for plastic circularity is integral to its overarching mission.



The winner, Green Show's team, introducing their project which uses natural materials to create plant pots, baskets, and other items for cafes and offices (Quy Nhon University)



22 initiatives from 10 intermediaries and 4 universities' innovation hubs/clubs were attending the [Final Showcase](#) Event In Ho Chi Minh City - July 2024.

5. RESULTS FRAMEWORK AND ACHIEVEMENT

The EPPIC project has demonstrated significant results across its impact, outcome, and output levels, contributing substantially to reducing plastic waste entering the ocean. At the impact level, EPPIC project has significantly contributed to the overarching impact of reducing plastic waste entering the ocean, achieving this through direct solution deployed on the field, together with policy enhancement, and ecosystem development. Cumulatively, the efforts of all EPPIC finalists have tentatively prevented and treated nearly 3,500 tons of plastic, which might otherwise enter the environment and the ocean.

At the outcome level, the project successfully strengthened the circular economy of plastic products in target areas by sourcing over 350 innovative solutions from nine ASEAN countries, with 31 finalist teams participating in incubation programs and 12 winning teams receiving seed funding. These efforts have attracted additional external investments totaling over \$700,000 for innovators, showcasing the solutions' financial viability. The project also significantly enhanced the plastic ecosystem by supporting Viet Nam's proactive participation in formulating a global treaty on marine plastic pollution and contributing to the formulation and implementation of EPR policy. Furthermore, it increased knowledge, cooperation, and networking in ASEAN countries, expanding its reach to Lao PDR and Cambodia in its later phases, and implementing specific downstream solutions like co-processing non-recyclable plastic waste in cement kilns in Viet Nam and mobile-based data collection for marine litter in the Philippines.

Supporting these outcomes, numerous outputs were achieved, often exceeding initial targets, with a few indicators partially achieving the target and only 02 are not applicable due to the context change. Detailed result framework and achievement in the table below.

Table 1 - Project Outputs, Indicators and Results Achieved

EXPECTED RESULTS	INDICATORS	Targets	Results	Assessment
OUTCOME 1: Circular Economy of plastic products in four target areas in ASEAN strengthened (Viet Nam, Thailand, The Philippines, Indonesia)	▪ Estimated amount of plastic waste (tons) prevented by the selected innovative solutions	▪ [None]	▪ 383.1 tons of plastic waste (tons) prevented	Meet the target
	▪ Estimated amount of plastic waste (tons) treated by the selected innovative solutions	▪ [None]	▪ 115.2 tons of plastic waste (tons) treated	Meet the target
	▪ # selected innovative solutions financed by investors ▪ Interim process indicator: # of innovative solutions financed by other investors	▪ 04	▪ 08 selected innovative solutions financed by investors as winners of the EPPIC ▪ 04 winners of Phase 1 have received additional investment beyond EPPIC seed funds.	Exceed the target
Output 1.1:	▪ # of plastic baseline assessments conducted in project sites	▪ 04	04 baseline assessments in Viet Nam, Thailand, Indonesia and the Philippines (locations for the challenges).	Meet the target

A portfolio of innovative solutions to combat ocean plastic pollution is selected and designed	▪ # of consultations conducted with local stakeholders to define the main challenge to be tackled (including with the private sector) by the solutions to be identified/selected	▪ 04	30 consultations conducted include: 10 consultations and dialogues in Samal City; 05 consultations to refine and map the problem space in Indonesia; 10 online and in-person consultations and dialogues in Thailand; 05 online and in-person consultations for Ha Long Bay.	Exceed the target
	▪ # of press/online publications about EPPIC	▪ 40	▪ 188 media clippings in all countries (TV, press, etc.)	Exceed the target
	▪ # of applications to the (EPPIC) challenge	▪ 140	▪ 298 applications received for Phase 1 and 2.	Exceed the target
	▪ # of EPPIC solutions which have been identified and shortlisted for the 3-month incubation stage	▪ 30	31 EPPIC Finalists were selected including: ▪ 14 teams from Viet Nam and Thailand ▪ 17 teams from Indonesia and the Philippines.	Exceed the target
	▪ # of women-led solutions identified & shortlisted	▪ 15	▪ 16 women-led solutions	Exceed the target
Output 1.2: Tailored support to grow and scaleup provided to the identified solutions	▪ # of solutions selected as EPPIC winners for incubation training/impact acceleration	▪ 08	▪ 08 EPPIC winners selected during the Final for incubation training/impact acceleration Booklets of all Finalists are available here .	Meet the target
	▪ Satisfaction results from a survey of the contestants' experience regarding the support given	▪ 90%	The results from the survey on the satisfaction of the programme are: ▪ 85% of respondents from Viet Nam and Thailand rated the overall programme as 'good' and 'excellent'. ▪ 60% respondents from Indonesia and The Philippines rated the program was very good to excellent.	Partially meet the target
Output 1.3: Dissemination and replication strategies designed and delivered – From ideas to impact	▪ Availability of technical support to localities for implementation and dissemination of the solutions	▪ 04	07 local meetings organised for the dissemination of the solutions include: 02 in Viet Nam, 03 in Thailand, 02 in Indonesia and 01 in the Philippines.	Exceed the target
	▪ # studies on the replication potential of the solutions to other localities	▪ 02	02 studies on replication potential include: ▪ 01 replication analysis was conducted in Thailand in 2022. ▪ 01 policy review and recommendations for supporting innovation ecosystem (VASI report). In Viet Nam, the EPPIC shop launched in Ha Long serves as the operational replication of solutions.	Meet the target

OUTCOME 2: Knowledge, cooperation, and networking in ASEAN-countries for the prevention and reduction of plastic waste in nature increased	▪ # of partners that collaborate with the ASEAN Centre on Combating Marine Debris in Viet Nam and ASEAN	▪ 10	▪ Centre not established	N/A
	▪ # of implemented actions, solutions, or initiatives for marine plastic management disseminated among ASEAN countries	▪ 15	Over 24 actions, solutions, and initiatives disseminated among ASEAN countries. 16 activities were conducted in Viet Nam and the other 8 in other ASEAN countries.	Exceed the target
	▪ % of citizens who support a ban on plastic single-use items in Viet Nam	▪ 90%	More than 90% citizens support a ban on single-use plastic in Viet Nam: ▪ <u>Citizens and Ban on SUP in Viet Nam: Decree 08/2022/ND-CP: Single-use plastic will be banned in 2030.</u>	Exceed the target
Output 2.1: Increased awareness of plastic pollution and circular economy for plastics in Viet Nam	▪ Ratio of increased awareness of the waste hierarchy in key target group (citizens)	▪ 30%	▪ 14% of respondents in key target group increased awareness of the waste hierarchy.	Partially meet the target
	▪ Ratio of increased awareness of the CE for plastics among surveyed businesses	▪ 35%	▪ No survey for business conducted, but the general awareness on CE has been improved via plastic innovation challenges and CE training for business under the Viet Nam Circular Economy Hub.	Partially meet the target
	▪ # of global and national communication campaigns on plastic reduction and plastic pollution	▪ 02	05 campaigns in Viet Nam include: ▪ 01 national communication campaign " From the Mountains to the Sea - Beat Plastic Pollution ", (Jan 2022) ▪ Launched 01 mobile app "Trash Hunt" to map plastic waste hotspots (Jan, 2022) ▪ The ASEAN Photo Contest , Jul 2022 ▪ 02 Press Awards organised in 2021 and 2022. Indonesia: 06 campaigns were conducted on Facebook. The Philippines: 06 written and published press releases and stories; 04 Podcast episodes focused on highlighting sustainable issues.	Exceed the target
Output 2.2: Renewal capacity of key stakeholders in Viet Nam developed to	▪ Standard Operational Procedures (SOP) developed for the establishment of the ASEAN Centre on Combating Marine Debris in Viet Nam	▪ 01 SOP	▪ 0 SOP	N/A

address plastic pollution	# of trainings/ meetings/ workshops on reducing plastic pollution organised	15	30 trainings on reducing plastic pollution organised: 10 trainings in each Viet Nam and Thailand 20 Trainings in each Indonesia and The Philippines Additionally: 01 Draft methodology to estimate plastic leakage from the land to the sea, piloted in Binh Province (2022) 01 inception workshop organised to kickstart the metabolic Study in Hue (2022).	Exceed the target
	% of women participating in the above training	50%	> 50% of women attended in the above training	Exceed the target
Output 2.3: Relevant plastic prevention initiatives supported by EPPIC widely shared with ASEAN countries	# of lessons learned and best practices disseminated from the EPPIC project within ASEAN countries	15	15 events, workshops, conferences, and training organised in collaboration across the 04 target countries. Highlights include: 01 Knowledge brief by EPPIC Focal Points in Viet Nam and Thailand; 01 Blog published on UNDP Regional Innovation Centre Asia-Pacific; and Stories of EPPIC Winners: Galaxy Biotech, Green Joy, Refill Day. - ASEANO "Local Stakeholder Workshop on Reducing Plastic Pollution" organised by VASI and the Norwegian Institute for Water EPPIC Final Pitching Competition 02 regional workshop and 02 field trip on EPPIC Sharing of experiences and lessons learned within ASEAN countries.	Meet the target
OUTCOME 3: Plastic Ecosystem (legal, financial, technical) in Viet Nam and ASEAN, to ensure long-term sustainability, stimulated	# of Producer Responsibility Organisations (PRO) models that mobilize and engage the informal sector supported	04	02 PRO model that mobilize and engage the informal sector supported	Partially meet the target
	# of capacity-building programmes of government/city-led- innovations hubs supporting grassroots plastic innovations established (under the framework of the CE Hub)	04	07 capacity-building programmes of government/ city-led- innovations hubs supporting grassroots plastic innovations established	Exceed the target

OUTPUT 3.1: Renewal capacity of key stakeholders in Viet Nam and the Philippines to negotiate the international agreement on marine plastic waste	# of training/ meetings/ workshops on capacity building for the international plastic agreement organised	10	10 workshops, including: Viet Nam: 02 national workshops organised in collaboration with NPAP: (i) Business toward global treaty on plastic, (ii) Highlights of INC-2 and Vietnam's preparation for next INCs; 06 meetings at VASI and ICD for preparation of the Zero Draft of the Treaty. Philippines: 01 consultation workshop with the Philippines Delegation and key partners to discuss on the Zero Draft of the UN Plastic Treat. 01 Regional workshop.	Meet the target
	# availability of the country's impact assessment report on politics, economics, and society when Viet Nam participates and implements the International Agreement	01	01 country's assessment report on Vietnam's participation in the High Ambition Coalition: The HAC country assessment report also indicates that it is suitable for Viet Nam to participate in the High Ambition Coalition, in terms of the country's commitment and further opportunities for Viet Nam to tackle plastic pollution.	Meet the target
Output 3.2: Inclusive Extended Producer Responsibility (EPR) that delivers benefits for the informal sector developed, promoted, and disseminated within the ASEAN region	availability of circular developed for the management and operation of the EPR Fund	01	02 draft of circular developed for the management and operation of the EPR Fund: - The draft circular for management and operation of the EPR Fund has been started. - Draft of EPR Decree.	Exceed the target
	# of implemented actions, solutions, or initiatives on 'inclusive-EPR' disseminated from/to the EPPIC project with ASEAN countries	06	08 implemented actions, solutions, or initiatives include: Study on Inclusive EPR, advocacy work on the role of PRO in EPR implementation; EPR sharing and learning session in Bangkok and at regional workshop in Laos; as well as other EPR implementation guiding workshop organized by the Ministry of Agriculture and Environment.	Exceed the target
OUTCOME 4: A Portfolio of innovative solutions is selected, supported and scaled up through	Estimated amount of plastic waste (tons) prevented by the selected innovative solutions	4,000	3,345.5 tons of plastic waste prevented	Partially meet the target
	Estimated amount of plastic waste (tons) treated by the selected innovative solutions	400	115.94 tons of plastic waste treated	Partially meet the target

the EPPIC competition in 2 additional ASEAN countries (Cambodia and Lao PDR)	# selected innovative solutions financed by investors	02	05 selected innovative solutions financed by investors include: 3/4 winners and 02 innovators from the finalist have received additional investment from investors.	Exceed the target
Output 4.1: A portfolio of innovative solutions to combat ocean plastic pollution is selected and designed Lao and Cambodia	# of plastic baseline assessments conducted in project sites	02	02 plastic baseline assessments conducted for Kaysone Phomvihane City (Lao PDR) and Sihanoukville (Cambodia)	Meet the target
	# of applications to the challenge	100	50 applications to the challenge	Partially meet the target
	# of EPPIC selected as EPPIC winners for incubation training/impact acceleration	04	04 EPPIC teams selected as EPPIC winners for incubation training/impact acceleration	Meet the target
	# studies on the replication potential of the solutions to other localities	02	#1: TONTOTON received support from UNDP Cambodia to conduct study themselves on the replication potential	Partially meet the target
Output 4.2: Innovations to Close the Loop by collecting and processing plastic waste downstream, sourced and deployed in ASEAN	# of innovative downstream solutions implemented in two project sites in ASEAN	04	04 innovative downstream solutions include: 01 of innovative downstream solution is implemented in the Samal Island (Philippines) 02 in Viet Nam: Co-processing and Trash Hunt Mobile App implemented. 01 in Cambodia: TONTOTON promoted.	Meet the target
	# of technical support available to localities for implementation and dissemination of the solutions	02	02 technical supports available to localities include: 01 downstream solution started in Quang Ninh and Hung Yen (Activity on co-processing/ remediation of plastic hotspot has been prepared by UNDP in collaboration with SINTEF under EPPIC and OPTOCE project) in Viet Nam. 01 support to TONTOTON in Cambodia.	Meet the target
Output 4.3: Investment Ecosystem for Plastic Circularity in Viet Nam, nurtured and stimulated	# of organisations (intermediaries and impact investors) that attended capacity building and training to increase CE supporting ecosystem (Viet Nam).	10	25 organisations that attended capacity building and training to increase CE supporting ecosystem (Viet Nam).	Exceed the target

6. SUSTAINABILITY AND IMPACTS

6.1. The project's sustainability

To ensure the sustainability of the project and the long terms impacts of the activities undertaken over the last three years, UNDP together with its partners, has conducted the following strategies:

6.1.1 Changes in Institutionalization and Policy Integration (Enabling Environment)

The Ending Plastic Pollution Innovation Challenge (EPPIC) project has contributed to project sustainability by fostering and adapting to changes in local and national policy frameworks across Viet Nam and other ASEAN countries. This strategic engagement with policy development ensures that innovations are not isolated efforts but are deeply integrated into the broader environmental governance landscape.

In Viet Nam, EPPIC has aligned with and supported national policies aimed at combating plastic pollution and transitioning to a circular economy as follows:

- The country has taken a leading role in ASEAN by setting targets such as reducing marine plastic litter by 50% by 2025 and 75% in 2023 as set in the National Action Plan on Marine Plastic Litter at the Decision 1746/QĐ-TTg of the Prime Minister
- The project also supports Directive 33/CT-TTg, which strengthens policies on plastic waste management, reuse, recycling, and reduction.
- A major legislative advancement supported by EPPIC is the Law on Environmental Protection (LEP) 2020, which for the first time explicitly defined "Circular Economy" and introduced provisions for waste management, plastic waste reduction, and EPR for packaging.
- A key area of EPPIC's policy influence in Viet Nam is its support for the country's active participation in formulating a global treaty on marine plastic pollution, specifically through the Prime Minister's Decision 1407/QĐ-TTg. EPPIC has provided technical advisory, helped prepare negotiation positions, and supported workshops to build the capacity of the Vietnamese negotiating team.
- EPPIC played a role in the formulation of the Ministry of Agriculture and Rural Development's Action Plan on Marine Plastic Waste Management in the fisheries sector at the Decision 687/QĐ-BNN-TCTS in February 2021.
- The Project also provided technical assistance for the drafting and formulation of a National Action Plan on Circular Economy, which was approved by the Prime Minister at the Decision 222/QĐ-TTg in January 2025.
- The project has also been instrumental in the design and roll-out of the Viet Nam Circular Economy Hub, the country's first government-led platform for circular economy initiatives, which aims to enhance dialogue and mobilize collective action.
- At the local level, EPPIC supported the formulation of a Circular Economy Action Plan for Thua Thien Hue province, including a metabolic analysis to inform evidence-based policymaking.
- EPPIC is leading a comprehensive study on inclusive EPR to ensure that informal waste workers (IWWs) benefit from new policies, even proposing to rename them "freelance waste workers" to better reflect their role.
- EPPIC has also actively advocated for co-processing non-recyclable plastic waste in cement kilns as a sustainable disposal method, influencing policy discussions and leading to the drafting of a new Technical Regulation 45:2025/BNNMT on co-processing by the Viet Nam Environment Agency (VEA).

Beyond Viet Nam, EPPIC has extended its policy influence on other ASEAN countries, in specific:

- During the 2020–2021 period, the EPPIC project in Thailand demonstrated the potential of localized, small-scale innovations to address major urban development and infrastructure gaps in municipal waste management, particularly on tourist islands like Koh Samui. This

targeted approach bridged the gap between national low-carbon policies and grassroots execution, culminating in the deployment of seed funding and acceleration support for high-impact technologies, such as the thermal upcycling of low-value, multi-layered plastic packaging into durable eco-construction materials. This has indirectly contributed to the promulgation of the Action Plan on Plastic Waste Management Phase I (2020–2022) was approved by the Cabinet of Thailand on February 15, 2021. This phase focused on driving public-private partnerships to reduce single-use plastics and established a strict regulatory milestone to recycle 50% of targeted plastic resins, such as PET bottles, plastic bags, and food trays by 2022 using a circular economy approach.

- In Indonesia, an initial assessment of circular economy potential, supported by UNDP and the Ministry of National Development Planning, informed the selection of EPPIC winners and helped align their solutions with national priorities. Together with support from other international organizations, this work contributed to the development of Indonesia's first Circular Economy Roadmap. The roadmap incorporated the 9R Framework, including Refuse, Rethink, Reduce, Reuse, and related principles, and set measurable sub-targets for plastic input and recycling rates. UNDP also aligned its environmental portfolio to support 18 government ministries in implementing the targets set out in Presidential Regulation No. 83/2018 on Marine Waste Management.
- In the Philippines, EPPIC supported the development and endorsement of the country's position paper for the UN Plastic Treaty, ensuring a participatory process that reflects national interests and sustainable development goals. The project's success in Samal Island, Philippines, has even leveraged additional resources for a larger \$23 million EU-funded Green Economy Programme, demonstrating how localized interventions can scale up to influence broader policy and funding initiatives.
- In Cambodia, the EPPIC implementation has contributed to a significant milestone in the country's transition toward a circular economy, driven by robust policy formulation and structural legal frameworks. Through strategic technical assistance, the Project has supported the establishment and operationalization of key legislative instruments, including the sweeping Environment and Natural Resources Code enacted in June 2023, and the highly anticipated National Plastic Action Roadmap launched in early 2026. These achievements have successfully shifted the country from legacy voluntary models to formal regulatory enforcement mechanisms, laying out explicit, measurable national targets to reduce mismanaged plastic waste by 74% and scale up plastic circularity to 52% by 2040. By systematically embedding the Polluter Pays Principle and advancing the legislative text for a mandatory EPR scheme, this project has effectively institutionalized lifecycle product accountability across Cambodia's commercial and industrial sectors.
- In Lao PDR, following the baseline studies and engaging with their respective Ministries of Environment to align solutions with nascent national plastic action plans and regulatory frameworks, the Project has contributed to the National Plastics Action Plan for the Lao PDR 2024–2030, promulgated in August 2024. This is the most critical and comprehensive policy blueprint established for plastic regulation in Laos. Integrated into national work plans, the Project contributed to drafting regulatory instruments aimed at the strict reduction of single-use plastics, with a particular focus on market restrictions and the promotion of sustainable alternatives. This included support for the formulation of standard operational guidelines to restrict specific single-use plastic bags, anchored in measurable reduction baselines aligned with international standards.

6.1.2 A momentum for plastic innovation has been created

The Project successfully established a dynamic momentum for circular economy innovation by directly supporting the private sector and early-stage startups. By sourcing 350 innovative solutions from nine ASEAN countries, the project proved that there is a robust pipeline of private sector ingenuity ready to tackle localized plastic pollution issues. EPPIC acted as a vital catalyst for the investment ecosystem by providing \$18,000 in equity-free seed funding to each of the winning teams. This critical early-stage support de-risked their business models, demonstrated business viability, and empowered these

private entities to secure nearly \$700,000 in additional external investments from impact investors, venture capitalists, and other funding networks.

In Viet Nam, beyond direct financial support, EPPIC fostered a broader innovation ecosystem that encouraged the continued organization of new challenges to source fresh ideas. By building the capacity of local incubators and university hubs, EPPIC enabled these institutions to organize their own localized plastic innovation challenges, which successfully engaged over 550 participants and generated 141 new grassroots solutions across the waste value chain. On innovation capacity, EPPIC has strengthened the capacity of the public sector at the local government level to support the implementation of relevant policies and national action plans. Notably, several innovation hubs and centers across Viet Nam have been equipped with innovation frameworks and tools to foster grassroots initiatives from communities and local areas. These initiatives can contribute to the development of practical guidelines and implementation schemes aligned with government regulations and priorities. Additionally, EPPIC has also supported the government by providing an overview of the plastic innovation landscape over the past five years (2020–2025) with a comprehensive dataset on plastic innovation and key drivers that enable the development of plastic innovation ecosystems in the current context. These insights aim to inform future policies, particularly those focused on unlocking financing for scaling up plastic-related solutions, such as Material Recovery Facilities (MRFs), Inclusive Extended Producer Responsibility (EPR) models, and Public - Private Partnership (PPP) mechanisms.

This momentum has profoundly transformed the regional innovation landscape by proving that structured competitions are a highly effective mechanism for solving environmental crises. As a direct legacy of the project's efforts to stimulate the plastic ecosystem and support private sector scaling, at least five national innovation challenges in Viet Nam and up to ten challenges in EPPIC ASEAN countries, have been replicated across the region over the past few years from 2022 to 2025. This sustained momentum ensures that further innovation challenges will continue to be organized, mobilizing both the private sector and grassroots innovators to boost circular economy solutions well beyond the project's lifespan.

6.1.3 Knowledge management and experience sharing

Project sustainability, particularly for initiatives like the Ending Plastic Pollution Innovation Challenge (EPPIC), heavily relies on robust knowledge management and effective experience sharing. This ensures that the insights gained and solutions developed are not isolated but are disseminated, adapted, and scaled for broader, long-term impact.

The Viet Nam Circular Economy Hub, launched in 2021 in close collaboration with MAE, stands as the country's first government-led platform dedicated to enhancing dialogue, generating know-how, and mobilizing collective action towards a circular economy. This hub features sections dedicated to plastic, showcasing lessons from EPPIC innovations.

Regionally, EPPIC has supported and participated in significant events such as the "Sea of Solutions Event" and "ASEANO Plastic Waste and Circular Economy Workshops," where the project's approaches and lessons were presented to a wide audience, promoting synergies and experience exchange among ASEAN countries.

High-level meetings, like the "International Conference on Sustainable Ocean Economy and Climate Change Adaptation" held in 2022, also served as platforms for EPPIC teams to share their innovative solutions and highlight their achievements.

Beyond events, EPPIC has actively produced and disseminated a range of knowledge products and digital tools to ensure accessibility and wider reach of its learnings. These include knowledge briefs, such as "15 lessons learned from running an Innovation Competition to tackle plastic pollution in the region", and informative blogs like "Not Another Challenge". Op-eds, such as "3Vs for gender-inclusive circular era," have also been published to propose strategies for a gender-inclusive circular economy.

The project maintains a dedicated EPPIC website in multiple languages, serving as a central point for information, challenge details, and showcasing winning innovations. Furthermore, to reach and inspire

new audiences, EPPIC has utilized podcasts, exemplified by "The Descendants of Hai Ba Trung," which highlights women's roles in climate action and circular economy initiatives.

The "Trash Hunt" mobile application, downloaded by over 7,000 people, further demonstrates the use of digital tools for public awareness and data collection on plastic waste hotspots.

Crucially, EPPIC's sustainability strategy focuses on capacity building and replication to embed innovative practices and knowledge within local and national structures. The project has developed a "Training of the Trainers" approach to build the capacity of incubators in ASEAN, ensuring that the skills to design and deliver comprehensive programs on the circular economy for plastics are widely available. Technical advisory and training have been provided to government entities like Viet Nam Administration of Seas and Islands (VASI) and the International Cooperation Department (ICD) of MAE, enhancing their ability to formulate and implement policies, including Viet Nam's active participation in global plastic treaty negotiations. The EPPIC also commissions studies to assess the replication potential of successful solutions in other localities and countries, ensuring that proven innovations can scale up and contribute to widespread change. This multi-faceted approach to knowledge management and experience sharing ensures that the impact of the EPPIC project extends far beyond its direct implementation, fostering a self-sustaining ecosystem of innovation and action against plastic pollution.

6.2. Gender equality, environment, and climate change

Implementation		
1	Whether this project directly, or indirectly resulted / would result in the promotion of gender equality, such as promoting women's advancement, strengthening women's decision-making role, assisting women with caring responsibilities in taking care of her families etc.?	Yes, the Project has directly and indirectly contributed to the promotion of gender equality, including women's advancement, strengthening their decision-making roles, and assisting with their caring responsibilities. To promote women's advancement, EPPIC included selection criteria for finalists and winners that specifically assessed team diversity and inclusivity, with a 10-15% weighting for including women. As the result, in Phase 1, 7 out of 14 finalist teams were led by women, and 12 out of 14 teams included at least one woman. In Phase 2, 9 out of 17 finalist teams were women-led, and 50% of these teams had more than half female members. In the most recent phase for Lao PDR and Cambodia, 18 out of 50 entrants were women-led (36%), and all 15 finalists included at least one female core member. Furthermore, during incubation programs, the project ensured that at least 50% of invited speakers, mentors, and coaches were women, providing crucial access to female experts for finalists to build sustainable networks. Collaborations with organizations like the Women's Union in Viet Nam have been instrumental, including organizing workshops for female informal waste workers to improve livelihoods and safety. A female manager was hired for the EPPIC Shop in Ha Long City, showcasing local women's involvement in project operations.
2	Whether part of the resources has been allocated in a manner that intentionally, or unintentionally addressed/ would address the identified needs of women and men?	Yes, resources within the Project were intentionally allocated to address the identified needs of women and men. The project is rated "Gen2" by UNDP, signifying that gender equality is a significant objective embedded from the project's design and throughout its activities. This intentional allocation is evident in several key areas: • Selection Criteria and Representation: EPPIC's selection criteria for finalists and winners explicitly assessed team diversity and inclusivity, with a 10-15% weighting for including women and other under-represented groups. • Decision-Making and Expertise: The project deliberately ensured strong female representation among judges (4 out of 7 in Phase 1, 5 out of 8 in Phase 2) to increase diversity of voices and acknowledge women's expertise in science, impact finance, and development. • Support for Vulnerable Livelihoods: Resources were specifically directed to protect and empower informal waste workers, who are predominantly women. • A comprehensive study on inclusive Extended Producer Responsibility (EPR) was commissioned, explicitly aiming to provide recommendations for how EPR funds

		can support the informal sector and proposing the new term "freelance waste workers" to better recognize their professional role. • Institutional Strengthening: EPPIC contributed to enhancing the Gender and Social Inclusion Strategy (GESI) and establishing a taskforce for the National Plastic Action Partnership (NPAP), ensuring that gender considerations are integrated into broader policy frameworks. Therefore, the EPPIC project demonstrably allocated resources in an intentional manner to address the needs of both women and men, with a specific focus on empowering women through various strategic interventions.
3	Have women and men been equally involved in programme/project activities? Please indicate the representation rate of women in each activity of the programme /projects; and also briefly explain if the project is taking measures to increase women participation.	Yes, women and men have been significantly, and often equally, involved in the project activities, with measures taken to increase women's participation. The representation rate of women in various activities is consistently highlighted: • Finalists and Winners Selection: Gender equality and diversity were a key selection criterion, accounting for 10-15% of the total scoring. This led to strong female representation: • Training and Workshops: The project specifically engaged at least 50% women during trainings and workshops. • Women are also prominently represented in EPPIC's communication products and booklets. The Savanir Team in Lao PDR, a women-driven initiative, directly provides materials to rural women to weave bags from plastic waste, contributing to their livelihoods and poverty reduction. These comprehensive efforts demonstrate the project's consistent commitment to fostering gender equality and ensuring meaningful participation and advancement for women across all its activities and outcomes.
Human Resources		
4	Has gender expertise/knowledge been included in TORs for projects' consultancies, reviews, procurements, consultancy teams, etc.?	Yes, gender expertise/knowledge has been included in Terms of Reference (TORs) for project consultancies and other activities. In almost all project TORs, having a gender balance is a criterion that gives higher score for selection via competitive process.
5	Have all project staff (incl. project manager) responsible for the different stages of work (design, implementation, monitoring and evaluation) been briefed or given training on gender issues?	Yes, all project staff, including the project manager, responsible for the different stages of work (design, implementation, monitoring, and evaluation) have been briefed or given training on gender issues, as per UNDP regulation. The project specifically mobilized two UNDP gender experts who have demonstrated expertise in gender mainstreaming and women's empowerment to ensure this, especially: - Ms. Morgane Rivoal, gender focal point at the Climate Change and Environment Unit at UNDP - Ms. Nguyen Thi Nhat Hoai, Gender and Inclusivity Expert under the NPAP, providing support for the Study on Inclusive EPR. In the EPPIC Project team in Viet Nam, only Mr. Hoang Thanh Vinh, the Project Manager is male, all project staffs are female including Ms. Morgane, Ms. Hai Yen, Ms. Thu Thuy, Ms. Lam Giang, Ms. Phuong Thao, Ms. Huong Giang.
Monitoring & Evaluation		
6	Have gender-disaggregated data and indicators (qualitative or quantitative) been collected or compiled to monitor	Yes, gender-disaggregated data and indicators (qualitative or quantitative) have been collected and compiled to monitor the process and outcome of the Project. This includes gender data on the participation of women in the competitions and all training/workshops/events.

	the process and outcome of this project?	Furthermore, disaggregated gender data was also collected throughout the survey conducted under the Extended Producer Responsibility (EPR) study and KAP survey for plastics, conducted in 2020 and 2025.
7	Have relevant gender issues been raised at project meetings, ensuring discussion of the impact of the project on gender equality in the country?	Yes, relevant gender issues have been raised at project board meetings, ensuring discussion of the impact of the project on gender equality in the country.
Communication		
8	Are both women and men represented and visible in the communication products? Are gender stereotypes avoided (avoid portraying childbearing as the sole responsibilities of mother), and women's needs are reflected, and voice supported?	Yes, both women and men are represented and visible in the communication products, and the project actively works to avoid gender stereotypes while reflecting and supporting women's needs and voices. This commitment is evident across its communication efforts: • Representation and Visibility: Women are explicitly represented and visible in EPPIC communication materials, including booklets. The project consistently highlights female participation and leadership: • Avoiding Stereotypes and Supporting Women's Needs/Voices: The project actively challenges conventional narratives and supports women's roles: ○ UNDP launched a bilingual podcast, "The Descendants of Hai Ba Trung,". The podcast intends to inspire a new generation of women leaders. ○ An op-ed titled "3Vs for gender-inclusive circular era" was published, proposing a strategy to empower women and foster a green, inclusive economic rebound. ○ The project explicitly works to ensure that innovations do not negatively affect the livelihoods of informal waste workers, who are predominantly women, but rather increase their economic opportunities. ○ Communication efforts intentionally reached out to women's organizations like the Women's Union to ensure broad participation.

6.3. Environment, and climate change

The Project has delivered substantial and diverse positive impacts on the environment and climate change across 06 ASEAN countries, and especially in Viet Nam. Its holistic approach, integrating policy, innovation, and community engagement, directly reduces plastic pollution, advances the circular economy, and contributes to climate mitigation efforts.

Significant Plastic Waste Reduction and Management The project has achieved concrete results in preventing and treating plastic waste.

- By January 2025, the combined efforts of the initial eight EPPIC winners prevented an estimated 382.1 tons of plastic from entering the environment, with over 182.8 tons from Viet Nam and 199.3 tons from Thailand, Indonesia and the Philippines.
- As of January 2025, all EPPIC finalists cumulatively prevented 3,345.5 tons of plastic waste and treated 115.94 tons.

Accelerating the Transition to a Circular Economy EPPIC systematically promotes a circular economy for plastics by:

- Strengthening an impact ecosystem that includes universities, financial institutions, non-governmental organizations, civil society organizations, and local governments.
- Building the capacity of incubators and innovators on circular economy principles, business readiness, and impact measurement, enabling them to design and deliver new programs.

- Supporting the design and operation of the Viet Nam Circular Economy Hub, a government-led platform that facilitates dialogue, generates knowledge, and mobilizes collective action towards a circular economy.

Strengthening Waste Management Infrastructure and Practices EPPIC's initiatives are deeply embedded in local contexts, fostering practical improvements:

- The EPPIC Shop in Ha Long Bay serves as a retail outlet for innovative products, a hub for synergistic innovations, and a local center for raising awareness and encouraging behavioral change among local communities and the tourism sector to reduce single-use plastics.
- In Viet Nam, the project collaborated on piloting the co-processing of 100 tons of non-recyclable plastic waste in cement kilns in Minh Khai Village, promoting this method as a sustainable alternative to landfilling and incineration.
- In the Philippines, the project supports the development of a mobile-based application for marine litter data collection and enhanced solid waste management systems, including the deployment of a plastic shredder in Samal Island to boost waste diversion operations.
- The project prioritizes avoiding disruption to the livelihoods of informal waste workers and actively seeks to increase their economic opportunities through inclusive solutions.

Knowledge Sharing and Capacity Building EPPIC broadly disseminates knowledge and best practices:

- It has produced and shared numerous knowledge briefs, blogs, and op-eds on topics such as "15 lessons learned from running an Innovation Competition" and "3Vs for gender-inclusive circular era."
- The project consistently engaged in national and regional workshops and events to foster synergies and experience sharing among ASEAN countries.
- Through its "Train the Trainer" approach, EPPIC enhanced the capacity of university innovation hubs, engaging over 550 participants and generating 141 innovative ideas for addressing plastic pollution across the waste value chain.

In summary, the EPPIC project has served as a powerful catalyst for environmental protection and climate action, not only through direct plastic waste reduction but also by building a robust ecosystem of innovators, policies, and collaborative efforts committed to a sustainable, circular economy for plastics.

6.4. Partnership and synergy with other projects in Viet Nam

6.4.1 Viet Nam National Plastic Action Partnership (NPAP)

In 2019, Vietnam became one of the first countries in the world to join the Global Plastic Action Partnership (GPAP), an initiative hosted by the World Economic Forum. Following this, the country established a National Plastic Action Partnership (NPAP), which was led by the MAE and previously hosted by WWF Vietnam.

Building on its long-standing partnership with MAE and its extensive portfolio on circular economy and plastics, UNDP was approached to support the hosting of the NPAP Viet Nam Secretariat. This illustrates the prominent and trusted role UNDP has taken in this field within Vietnam. As UNDP becomes the new host organization, a number of synergies and entry points have been identified to deliver impactful results and accelerate action, particularly in two key areas:

- Promoting plastic innovation, through the [NPAP's Task Force on Innovation and Financing](#).
- Promoting gender and inclusion, under the NPAP's Task Force on Gender and Inclusivity.

Under Outcome 3, the project supported the government with the preparation and negotiation for the plastic Global Treaty. In collaboration with NPAP, the project organized several workshops and events

to disseminate information and provide crucial insights on upcoming sessions. These activities also focused on preparing various negotiation scenarios for the INC team in Vietnam.

6.4.2 WWF implemented projects on plastics

The EPPIC Project has fostered a synergistic partnership with WWF-implemented projects, primarily through collaborative efforts in research, awareness, and leveraging networks to combat plastic pollution in Vietnam and the broader ASEAN region.

This synergy is seen in the joint organization of workshops to support the Vietnamese INC team in preparing for plastic treaty negotiations.

EPPIC has also maintained regular contact with WWF initiatives, such as the WWF Panda Labs Plastic Waste Reduction Initiative, and actively shared opportunities from the EPPIC challenge with applicants from WWF's competitions, which facilitated the broader engagement of innovators.

Furthermore, building on their shared support to the government, UNDP and WWF collaborated to organize two Press Contests on Mitigating Marine Plastic Waste, demonstrating their combined efforts to raise public awareness and encourage action against plastic pollution.

The WWF team also visited the EPPIC shop in Quang Ninh for learning and to consider its potential application in Hue City as part of the Norway-funded "Plastic Smart City" project.

6.4.3 USAID funded projects on plastics

In the period of 2020 – 2025, there are several USAID funded projects on plastic reduction, such as:

- The Clean Cities, Blue Ocean (CCBO) project is designed to combat ocean plastic pollution by targeting rapidly urbanizing areas that are major sources of plastic leakage. In Vietnam, the program has been implemented in cities like Da Nang, Bien Hoa, Phu Quoc and Hue, in the period 2020 – 2024.
- The Vietnam Action Against Plastic Pollution (VNAAPP) project is an initiative aimed at reducing plastic pollution at its source, designed for the period 2024 – 2028.
- Local Solutions for Plastic Pollution (LSPP) Project: This three-year project ran from August 2020 to July 2023, funded by USAID and implemented by GreenHub and other partners.
- The Reducing Pollution Project, a five-year initiative implemented by Winrock International, was launched in November 2022 to reduce environmental pollution in Viet Nam, aimed to tackle various forms of pollution, including plastic waste, through a collective impact approach.

Unfortunately, due to a change in USAID's priorities, all of these projects have been suspended. Some were halted during the implementation phase, while others were stopped at the design stage.

During this period, the UNDP team maintained close collaboration with different USAID project teams, such as those from Winrock, Chemonics, and GreenHub, to ensure synergy and complementarity between our respective initiatives.

6.4.4 The World Bank initiatives on plastics

There are few projects and initiatives led by the World Bank to address plastic pollution in Viet Nam in the period 2020 – 2025 as follow:

- Within the framework of the PROBLUE program funded by the World Bank, the Institute of Water Resources Planning in collaboration with the German Research Center for Artificial Intelligence (Germany) and University of Natural Resources and Life Sciences (Austria) are implementing the project "Plastic monitoring in Vietnam" during 2020 - 2021.
- The World Bank also led several impactful studies such as: Vietnam Plastic Pollution Diagnostics, Towards a national single use plastics roadmap in Vietnam, Market Study for Vietnam: Plastics Circularity Opportunities.

Data and information from World Bank studies have served as a good source, as a baseline for the EPPIC Project to inform its planning and activities. The Project Team also maintains close contact with the World Bank team through the National Plastic Action Partnership (NPAP) to ensure synergy and facilitate joint efforts.

6.4.5 GIZ funded project 3RproMar

The 3RproMar Viet Nam project is a national component of a larger, multi-level ASEAN-German cooperation project, and it has a defined second phase. The project, whose full name is "Reduce, Reuse, Recycle to Protect the Marine Environment and Coral Reefs," is implemented by GIZ in coordination with the ASEAN Secretariat and national partners in four countries: Cambodia, Indonesia, the Philippines, and Vietnam. It began in 2020 and is set to conclude in 2025. In Vietnam, the project supports strategies to reduce marine plastic waste, enhances cooperation with ASEAN, and works with local partners in the Mekong Delta to conduct pilot projects aimed at reducing plastic waste leakage to the marine environment.

Since the focused location of the 3RproMar is different with the EPPIC locations, the two initiatives only maintain information exchange, especially for activities happening at regional level through coordination of the ASEAN Working Group on Seas and Islands, led by VASI.

6.4.6 Norway funded project ASEANO

Funded by the Government of Norway, Project ASEANO 1 is led by the Norwegian Institute for Water Research (NIVA) and the Center for Southeast Asian Studies (CSEAS) Indonesia in close collaboration with the PEMSEA Resource Facility and ASEAN Secretariat under the purview of the endorsing ASEAN sectoral body, the ASEAN Working Group on Coastal and Marine Environment (AWGCME). The objective of the ASEANO 1 is to build capacity to tackle plastic pollution from key sources in the ASEAN region through improved knowledge on sources, releases, transport, plus the ultimate fate of plastic pollution. It focuses on the local level, with the Philippines' Imus River and Indonesia's Citarum River as its two Southeast Asian project sites.

Following the ASEANO 1, the government of Norway and ASEAN have launched phase two of the ASEAN-Norway Cooperation project to reduce maritime plastic pollution in the ASEAN region. The Center for Southeast Asian Studies (CSEAS) and the Norwegian Institute for Water Research (NIVA) will implement the project over four years from 2023 to 2027. Phase two of the so-called ASEANO 2 has begun in Siem Reap in Cambodia in March 2024 and case study sites will be set up in both Cambodia and Vietnam.

The EPPIC Project Team has established a strong connection and rapport with the ASEANO project team, particularly for sharing project results in meetings and events, as well as providing local support for the design of ASEANO 2 and facilitating connections at the local level.

6.4.7 Norway funded project OPTOCE

The Ocean Plastic Turned into an Opportunity in Circular Economy (OPTOCE), implemented by SINTEF is a project funded by the Norwegian Government, aims at reducing plastic waste in the ocean and the industrial use of coal. This project promotes co-processing and has piloted in Vietnam with Lee & Man Paper Plant in Can Tho City and INSEE Cement Plant in Hon Chong, Kien Giang Province.

The EPPIC Project Team has maintained close collaboration with SINTEF on various Norwegian-led initiatives. On EPPIC, the Project supported Hung Yen province in collecting and transporting 100 tons of non-recyclable plastic waste from the Minh Khai dumpsite. This waste was then handed over to the OPTOCE Project for a co-processing pilot at the Lam Thach Cement Plant, demonstrating an effective and synergistic approach between the two projects.

6.4.8 Other plastic projects implemented by UNDP

The EPPIC Project and the Scaling Up a Socialized Model of Domestic Waste and Plastic Management in Five Cities (DWP5C) are two complementary projects funded by Norway and implemented by UNDP Viet Nam, both focusing on waste and plastic management. While DWP5C aims to develop integrated models for domestic waste and plastic management in five Vietnamese cities, EPPIC specifically seeks innovative solutions to reduce plastic pollution in Viet Nam and other ASEAN countries.

Both projects contribute to advancing the Circular Economy in Viet Nam and building the capacity of policymakers. Learnings from EPPIC, for example, feed into the Knowledge Hub of the multi-stakeholder CE platform that UNDP supports ISPAE in developing and operation.

Joint activities, such as the combined launch event in Ha Long on June 8, 2020, and various workshops, exemplify their efforts to maximize synergies and achieve desired outcomes.

Additionally, DWP5C's findings on waste management systems complement EPPIC's baseline surveys, with results informing EPPIC's incubation training. The EPPIC Shop in Ha Long serves as a direct illustration of this collaboration, showcasing EPPIC innovations and conducting awareness activities in partnership with local organizations established under the "5 Cities" project.

6.5. Project lessons learnt

Based on the comprehensive project documentation, specifically the final closing reports and case studies, here are 10 key lessons learned from the EPPIC project.

1. Systemic Impact Requires Local Ecosystem Integration, Not Just Standalone Innovations

The project demonstrated that sourcing innovations through competitions is insufficient if those solutions are not anchored within a supportive local ecosystem. EPPIC found that "developing entrepreneurship and innovation at the university level must align with local provinces' priorities" to enhance practicality. The project shifted its focus toward building the capacity of intermediaries, such as universities, incubators, and government officials to create a resilient investment ecosystem. For instance, the "Train the Trainer" model adopted at universities was crucial for institutionalizing knowledge, ensuring that academic institutions could independently foster grassroots solutions long after the project ended. Furthermore, deep engagement with local stakeholders through field trips to sites like Ha Long Bay and Samal Island allowed innovators to refine their business models based on on-the-ground realities and secure necessary government buy-in.

2. Policy Agility is Critical for Relevance and Scaling

A major lesson was the necessity of aligning project activities with shifting national and international policy landscapes to remain relevant and impactful. When the establishment of the ASEAN Centre on Combating Marine Debris became unfeasible due to governmental restructuring, the project successfully pivoted its technical advisory resources to support Viet Nam's preparation for the Global Plastic Treaty. This flexibility allowed the project to play a pivotal role in high-level negotiations, including the development of Prime Minister's Decision 1407/QD-TTg. Additionally, the project learned that innovation must be supported by regulatory frameworks, such as EPR. By advocating for the inclusion of informal waste workers within the EPR framework and engaging with PROs, the project ensured that policy mechanisms could practically support the scaling of plastic circularity solutions.

3. Inclusivity is a Driver of Effective Waste Management

The project highlighted that sustainable waste management is inextricably linked to social inclusion, particularly regarding women and the informal waste sector. EPPIC learned that formalizing the recognition of IWWs, proposing the term "freelance waste workers", is essential for an inclusive circular economy. The project actively integrated gender equality into its core selection criteria (weighted at 10-15%), which resulted in a high representation of women-led solutions (e.g., 9 out of 17 finalists in Phase 2 were women-led). The lesson learned is that empowering these groups does not just meet social goals but directly enhances the effectiveness of waste collection and processing, as seen with the Savanir team in Laos, which combined plastic reduction with poverty reduction for rural women.

4. Digital Adaptation Can Amplify Reach and Accessibility

While initially viewed as a constraint, the COVID-19 pandemic forced the project to adapt to hybrid and online formats, which ultimately yielded lessons on accessibility and scale. The shift to online incubation programs and livestreams allowed the project to reach a significantly wider audience than traditional in-person events; for example, the launch event attracted over 21,000 viewers, and the project's online channels eventually reached over 3.8 million people. This experience proved that digital tools are effective for broad dissemination and maintaining momentum when physical engagement is restricted, although a hybrid approach remains ideal for technical field assessments.

5. Practical Downstream Solutions are Necessary Complements to Circular Innovation

While promoting upstream circular design is the goal, the project learned that immediate, practical downstream solutions are required to address legacy pollution and non-recyclable materials. The project collaborated on the OPTOCE project to pilot the co-processing of non-recyclable plastic in cement kilns, treating 100 tons of waste from the highly polluted Minh Khai village. This experience highlighted that for specific non-recyclable plastics, co-processing offers a viable, preferable alternative to landfilling or incineration while the broader circular economy infrastructure matures.

6. Cross-Sector Collaboration Fosters Holistic Solutions

EPPIC demonstrated that tackling plastic pollution requires breaking silos between the public sector, private sector, and academia. The establishment of the EPPIC Shop in Ha Long Bay served as a physical manifestation of this lesson, acting as a hub that connected innovators (private), local authorities (public), and mass organizations like the Farmers' Union. Furthermore, the project learned that engaging universities not just as educational bodies but as active innovation hubs allows for the mobilization of the "future workforce" to address local environmental challenges. The successful collaboration with the NPAP further reinforced that leveraging existing multi-stakeholder platforms accelerates knowledge sharing and policy advocacy.

7. Project Team Competency is a Success Factor

The evaluation highlights that a highly competent and resourceful PMU was essential for delivering the project over a 5.5-year period with a relatively conservative budget. The lesson learned is that for complex interventions concerning circularity and plastic waste, it is critical that Country Offices ensure project personnel possess specific problem-solving skills and high competence in these technical roles to navigate challenges effectively.

8. Convergence of Donor and National Timing Creates Momentum

Success was heavily influenced by the "timely developments" of aligning donor priorities with political commitments. The funding from Norad aligned perfectly with the Bangkok Declaration (2019) and Viet Nam's national commitments to address plastic pollution. This synchronization provided necessary political endorsement, enabling the project to engage closely with key stakeholders and provincial authorities than would have been possible if the project were driven solely by donor timelines.

9. The "Market Gap" with the Private Sector Remains a Challenge

A critical lesson identified in the TE is the persistent gap between the start-ups supplying innovative solutions and the corporations or private sector networks that should be purchasing them. Feedback indicated that while innovations were developed, stronger strategic connections with corporations are needed to upscale them. Future projects must focus on bridging this gap to ensure there is a viable market demand for the circular economy products developed by the incubatees.

10. Synergies Amplify Behavioral Change Campaigns

The evaluation found that communication efforts to improve consumer awareness were significantly more effective when leveraged through synergies with similar projects. Complementary efforts with initiatives such as the WWF Panda Labs Waste Reduction Initiative and the Scaling Up a Socialized Model of Domestic Waste and Plastic Management in Five Cities (DWP5C) project helped the team reach a wider audience at the individual and household levels, reinforcing the value of producing targeted communication products in coordination with partners rather than in isolation.

7. FINANCIAL OVERVIEW

PROJECT RESOURCE OVERVIEW – EPPIC project as of 31 DEC 2025

Description	Amount in NOK	Levy in NOK	Programmable amount in NOK	Programmable amount in USD
1. Disbursed from Norad (NOK & USD):				
1st disbursement on 27 Dec 2019	4,837,000.00	-142,000	4,695,000	511,716.62
2nd disbursement on 23 Dec 2020	6,188,870.00		6,188,870	700,343.00
3rd disbursement on 28 Dec 2021	3,230,130.00		3,230,130	356,999.34
4th disbursement on 28 Dec 2022	5,994,385.00	-59,406	5,934,979	608,667.42
5th disbursement on 11 Dec 2023	8,005,615.00	-79,264	7,926,351	740,490.75
Other revenue (exchange rate gain)				
Total received funds	28,256,000.00	(280,670.00)	27,975,330.00	2,918,217.13
2. Utilized amount from 2019 to 2025				
Expenditure-CDR 2020				146,806.25
Expenditure-CDR 2021				454,875.48
Expenditure-CDR 2022				627,270.52
Expenditure-CDR 2023				376,683.14
Expenditure-CDR 2024				873,735.95
Expenditure-CDR 2025				439,691.49
Total Utilized amount				2,919,062.83
3. Fund balance with UNDP as of 31 Dec 2025 (1-2)				(845.70)

8. ANNEX

[Annex 1:](#) Communication and Media Report/ Press Coverage / Social Media Posts

[Annex 2:](#) Knowledge Products

[Annex 3:](#) Main events and workshops