

Project Title: Ending Plastic Pollution Innovation Challenge - EPPIC

Start Date: January 2020

End Date: June 2022

Brief Description

If current trends continue, it is estimated that by 2050 there will be more plastic than fish in the ocean. Still, worldwide plastic consumption is expected to quadruple during this time. Besides, plastics have become the fastest-growing source of industrial greenhouse gases emissions. Plastic pollution has numerous adverse economic, social, and environmental impacts. In particular, marine plastic pollution costs up to \$2.5 billion per year in lost marine ecosystem services. Tackling plastic pollution will require multi-stakeholder collaboration and engagement.

The objective of this project is to contribute to the reduction of plastic pollution in coastal areas in four ASEAN target countries, contributing to the achievement of SDG 14: Life Below Water and SDG 12: Responsible Production and Consumption. EPPIC is a competition that will source innovative ideas from ASEAN countries for tackling local plastic challenges to contribute to widespread system-level change across the entire region.

The project intends to bring together citizens, local governments, and the private sector to identify pressing issues and collaborate in implementing effective solutions, in four countries - including Viet Nam, Thailand, Indonesia and The Philippines.

EPPIC will be implemented over 2.5 years with the following expected outcomes:

- **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).
- **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

I. DEVELOPMENT CHALLENGE

Plastic use is expected to reach unprecedented levels in the coming decades, doubling within 15 years and more than quadruple by 2050. Estimations suggest that around 80 percent of plastics found in the ocean originates from land-based sources, and 8 million tons of plastic enter the sea every year. Plastic waste poses high risks to aquatic life, with serious consequences for the ocean ecosystem and the sustainability of fisheries.

Plastics are key drivers of climate change. The petrochemical industry's demand for oil is expected to accelerate and reach over half of global oil consumption growth by 2050 (which is superior to combined sectors of aviation, shipping and trucks). Emissions from plastic in 2015 amount for 1.8 billion metrics tons of CO₂ and these will reach 17% of the global carbon budget by 2050. These emissions come from all stages of the plastics value chain: from extraction, transportation and refining of raw material (coal, oil) to manufacturing, waste collection, recycling, incineration (Shen, 2019). Plastic packaging makes up for 40% of global plastics, and the production of plastic packaging is expected to quintuple between 2015 and 2050! The incineration of plastic packaging generated 16 million tons of CO₂-eq/year in 2015 and is expected to reach 84 million and 309 million tons of CO₂-eq/year in 2020 and 2050, respectively.

Globally, only 14% of plastic is recycled or 'decycled', as plastics are mostly transformed in low-value materials a few times before eventually being discarded in landfills or the environment. Less than 2% of used plastics are actually recycled in a closed circuit, that is to say, recovered to produce a usable material like new plastic and indistinguishable from it.

Four ASEAN member countries (Viet Nam, Indonesia, Thailand, and the Philippines) are responsible, with China, for 60 percent of the plastic discharged into the ocean every year (Ocean Conservancy, 2015). These countries are indeed large plastic producers and importers, but they also possess limited waste management systems, leading to leakage of plastics into the environment. Constraints to effective implementation of such waste systems include rapid urbanisation, population growth, and increase in per capita income leading to increased consumption; alongside lack of environmental awareness. However, the topic of plastic pollution is gaining momentum, and ASEAN member countries have endorsed in June 2019 the *Bangkok Declaration on Combating Marine Debris in the ASEAN region*.

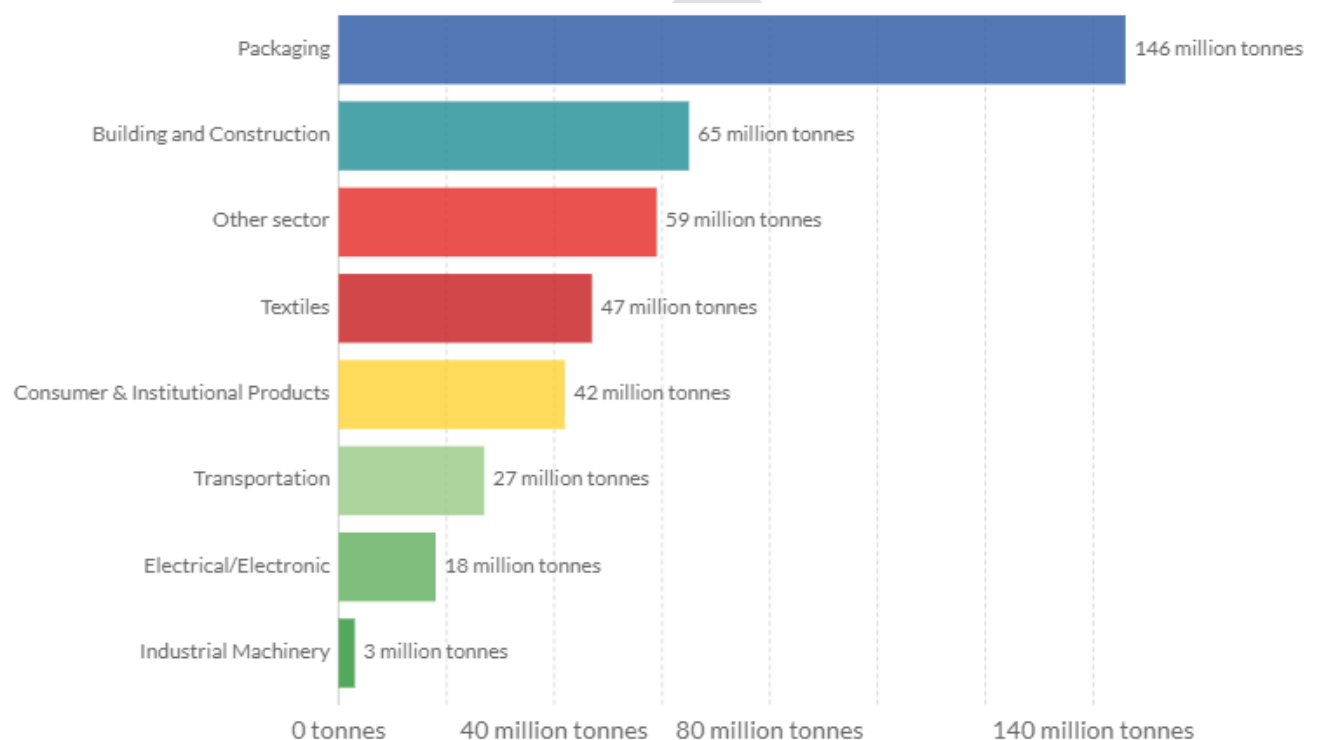
At the global level, many countries have undertaken concrete actions to address plastic pollution, such as bans on single-use plastics, promotion of recycling standards, and Extended Producer Responsibility systems. In the ASEAN region, programmes to reduce plastic waste are just getting started. It is therefore critical to support ASEAN countries in preventing plastic pollution, communicating the risks associated with it, engaging the public and the business in the co-creation of solutions, and scaling-up innovative solutions to tackle plastic pollution. In recent years, local waste and plastic pollution across the entire ASEAN region has systematically brought negative impacts to the environment and quality of life of the regional population. There is increasing evidence from ASEAN countries that local start-ups, communities and youth are successfully undertaking new initiatives to address the challenge. Their efforts need technical, financial and policy support to systematically reduce plastic waste.

In Viet Nam, the plastic problem is twofold: firstly the country has been identified as a significant producer, secondly, plastic consumption has increased exponentially over the past decades (from 3.8kg per capita in 1990 to 41 kg annually in 2015). Recent estimates from MONRE (2019) indicated that Viet Nam produces 1.8 million tons of plastic waste annually, while Hanoi and Ho Chi Minh City alone generate 80 tons of plastic bags daily. Furthermore, Vietnamese households use, on average, 223 plastic bags a month (Nguyen, 2018). Early 2020, the country approved the National Action Plan for management on Marine Plastic Litter (Decision 1746/QĐ-TTg) demonstrating a high commitment to tackle the wicked problem of

plastic pollution. Further, Viet Nam currently chairs the ASEAN network in addition to sitting as a non-permanent member of the UN Security Council. This international visibility presents a tremendous opportunity to start engaging the country and its partners in a paradigm shift on the way plastic is produced, consumed, recycled and disposed.

Tackling plastic pollution entails developing strategies for a range of sectors: packaging, construction, but also textiles and consumer products. Although the current awareness campaigns have mostly shed light on the over-use of single-use plastic by the food and beverage industry, this is only the tip of the iceberg and less commonly identified sectors deserve equal attention.

Figure 1: Plastic production by industrial sector, 2015 (Geyer et al, 2017).



Numerous solutions to reduce plastic pollution exist all over the world, from highly technical new materials to reusable packaging services and effective behavioral campaigns, the critical question this project proposes to address now is **‘how to identify these solutions and help to scale them up’**? How to encourage people-powered innovation to address plastic challenges in their region? How can we support participating countries overwhelmed with the dramatic increase of plastics, to address the issue with locally developed innovative solutions?

Some preliminary studies have highlighted the challenges impeding many innovations, and specifically social innovations, to grow. These include:

- Financial barriers (high level of innovativeness rendering them risky for investors and longer payback periods)
- Technical barriers (lack of business skills such as sales, marketing, market analysis)
- Policy barriers (lack of fiscal incentives, procurement delays, risk-averse policymakers)

- Fragmented ecosystem (lack of coordination across various actors from the private, nonprofit, and public sector).
- Capacity gap (lack of necessary skills to finetune ideas to be scalable or profitable, and limited functional and technical expertise to thrive working in complex ecosystems).

These barriers emphasize the importance of an enabling environment for innovation as well as a robust networked approach to foster the ecosystem. The proposed project supports the inclusive innovation approach of engaging communities and different ecosystem players from investors to government officials across the countries to address the issue of plastic pollution. It also focuses on the importance of skills development and training as part of the scaling up.

In Viet Nam, women play a critical role in every stage of the plastics value chain. They make up the majority of waste collectors and scavengers working in landfills, and the collection points and small recycling depots are often own and run by women. Although limited empiric information exists in Viet Nam, a recent study highlighted the challenges and stigma these women are currently facing as well as their potential contributions in transforming the plastic value chain, with the correct technical and financial support in place (CECR, 2019). The Women's Unions and other mass organization advocate for continuous targeted policy support to strengthen the role of women in environmental protection while contributing to poverty reduction.

II. STRATEGY

Innovators, including government, businesses and citizens, are all needed to tackle the ever-growing plastic crisis, by developing and implementing together practical solutions which prevent the consumption of plastic in the first place. The project depicts the paradigm shift at UNDP from project-based work to a portfolio approach in order to create systemic impact¹. EPPIC challenge will illustrate this approach by building on locally developed solutions around the region to address the pressing problem of plastic pollution. Governments and the private sector will play a pivotal role in scaling up these solutions in which UNDP will function as the convener and facilitator, providing necessary capacity development support and connections.

Plastic pollution can only be reduced by a system-level shift towards a circular economy², including both bottom-up and top-down approaches. Consequently, there is a need to identify and leverage existing solutions aimed at preventing the generation of plastic waste and improving local waste management systems.

To do so, this project intends to deliver two outcomes:

¹ In 2019, UNDP established 60 Accelerator Labs around the world to create portfolios of experiments to tackle complex development challenges. This is a result of UNDP witnessing a widening gap between the solutions that we are delivering, and the complexity of the challenges faced by the countries in which we operate.

² Looking beyond the current take-make-waste extractive industrial model, a circular economy aims to redefine growth, focusing on positive society-wide benefits. It entails gradually decoupling economic activity from the consumption of finite resources and designing waste out of the system. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital. It is based on three principles: Design out waste and pollution, Keep products and materials in use, Regenerate natural systems.

- **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).
- **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

OUTCOME 1: A PORTFOLIO OF SOLUTIONS IS SELECTED, SUPPORTED AND SCALED-UP THROUGH THE EPPIC IN VIET NAM, THAILAND, INDONESIA, AND THE PHILIPPINES

To ensure the success and sustainability of the EPPIC, multiple preliminary and follow-up activities will be implemented. Before the actual launching of the challenge, local stakeholders in project sites will be consulted to identify the priority issue to be addressed through the EPPIC. This will be done through consultations with governmental, non-governmental and private institutions in each locality (2 countries and 2 sites each year). The aim is to ensure the full ownership, buy-in and interest of the stakeholders from the participating countries in solving the issues with innovative solutions. This is an essential design feature of the project and should hopefully trigger transformative change.

The project will set-up a high profile, impartial and multidisciplinary and gender parity selection panel to ensure that the selected solutions are indeed the ones with the highest probability of sustainability and replicability as they will address the most important priorities in the ASEAN with regards to plastic pollution.

After the EPPIC Pitch Competition, incubation and tutoring will be carried out in cooperation with training entities with outstanding records on business incubation supported by international experts on the several technical aspects related to the prevention, reuse, recycle and disposal of plastic. In parallel of the incubation period, the project will provide technical support to targeted institutions to support them in the adoption and uptake of the winning solutions. EPPIC selects and supports a cluster of applications in order to de-risk the process of finding the best solutions by granting and rewarding those who most excel throughout the incubation period.

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

Under Outcome 2, the intended outputs aim to build the capacity of key stakeholders in Viet Nam and ensure that EPPIC helps to lay the foundation for disruption of current pollutive practices. As such, the project will support the Vietnamese government at ministerial level, while simultaneously improving the capacity of the provincial authorities to address this complex challenge by enhancing their technical knowledge (local plastic assessment), soft skills (such as collective intelligence methods), and stakeholders' collaboration to drive innovation. Specifically, the project will support the establishment of the ASEAN Research Center on Marine Debris and the implementation of the National Plan on Marine Plastic, which is the backbone on the current efforts to address plastic.

Further, the project will utilize Viet Nam's chairmanship of the ASEAN network to fast track the learning curve in the region under the ASEAN working groups on Coastal and Marine Environment and through cross-country learnings via different platforms, social media and network. It will not only collect and disseminate lessons learned and results but also gather the key learning process throughout the project implementation. At the end of the project, scalable solutions will have accumulated all around the ASEAN region, providing a wealth of knowledge on what works and what doesn't in addressing the complex challenge of plastic pollution.

EPPIC is part of a bigger portfolio of projects at UNDP in the field of Circular Economy, waste management and plastics, and will be channeled through the Accelerator Lab network which will further strengthen the impact of the project. Besides, the project will collaborate with other activities carried out by different partners such as the World Bank, World Economic Forum, WWF, and the EU-Rethink Plastic who are now working closely with the Government for fighting plastic in the country and the region.

Training and awareness-raising campaigns tailored for key stakeholders (local government, citizens, private sector) to improve their knowledge, and encourage cooperation practices in addressing plastic waste locally and in the region, will be delivered. The awareness-raising campaigns will include both traditional and social media targeting the plastic challenge from both upstream and downstream perspectives, with a significant focus on waste prevention.

Criteria used for the selection of the project sites in each country

The challenge will target the coastal countries, which are together (with China) responsible for over 60% of the marine plastic pollution: Indonesia, Philippines, Viet Nam and Thailand (Ocean Conservancy, 2015). The selection of sites will be conducted during the inception phase of the project, in close discussion with the project Steering Committee. Five strategic criteria have been defined to guide the site selection for the competition.

No.	Criteria	Justification
1	Nearby coastal and sea area	The selected site should be located near the coastal area and sea area.
2	Political leadership and interest	The project will assess if the candidate site is identified as a priority location by the national government. It will target sites where there are a strong will and leadership to transform the system, based on the CO's knowledge and experience in operating in the country.
3	Local regulations in place	The project will appraise current and upcoming regulations on waste and plastic management and Circular Economy. It will assess the extent to which EPPIC responds to identified needs and is supported by evidence of local demand. Potential policies that could impede the uptake of the winning solutions will be analyzed and risk mitigation measures proposed.

4	Availability of data	The project will investigate if there is adequate availability of information and knowledge of the candidate site. This includes any scientific data available for decision-making and planning with respect to the type of plastic, usage and sources and ownerships of such information.
5	On-going programmes/projects	The existence of previous or ongoing programmes or projects on the site covering waste/plastic management is a favourable condition for the selection. These should be mapped, and synergies can be explored.

The strategy of this project is aligned with the **ONE UN Strategic Plan 2017-2021**, in particular with:

Climate Resilience and Environmental Sustainability: Outcome 2.2: Sustainable management of natural resources and the environment. The project intends to contribute to reducing the amount of plastic generated, consumed and discarded while encouraging the transition to a circular economy which promotes more efficient use of scarce resources.

This proposed project has benefited from a robust cross-unit collaboration within the Country Office working on the topic of circular economy, waste and plastic management; and in particular with the Governance and Participation Unit whose previous experience in designing and running innovation challenges is invaluable to the project, as well as the Accelerator Lab through their ethnographic study and field visits in Da Nang.

Project Description

Impact Aim Viet Nam is an accelerator that aims to help Viet Nam in achieving Sustainable Development Goals by 2030 by amplifying the positive impact of local start-ups.

UNDP first piloted the Impact Aim model in Armenia. Currently, UNDP impact accelerators have been launched and operated in Serbia, Philippines, Indonesia, Turkey and Moldova and Bosnia Herzegovina, while new ones are being built in India, Singapore and Thailand. Similar initiatives are planned for Ukraine, China and several countries in the Balkans, Latin America and the Caribbean and Middle East and North Africa regions in 2020.

By joining Impact Aim, start-ups can gain access to business acceleration support, impact measurement methodologies, dedicated and customized mentorship and connection to networks of investors and scale-up partners.

In the first phase, Impact Aim Viet Nam will collaborate with the EPPIC-Ending Plastic Pollution Innovation Challenge - which is funded by the Government of Norway, to design and implement the 12-month incubation program for the winning teams of the Challenge. Each of the 2 to 4 winning teams will also receive 17,000 USD of equity-free seed funding.



Duration

Pilot: 2020 - 2021 (1 year)



Location

Viet Nam



Project Budget

Total budget 2020-2021: USD 155,000



Project Partner

Implementing Partners:

UNDP

Private-sector accelerators/
incubators in Viet Nam

Other Related Stakeholders:

Quang Ninh Provincial People Committee

Development Partners:

Government of Norway



Thematic Area

Innovation and Entrepreneurship,
Circular Economy



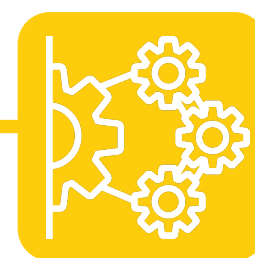
Objectives

Impact Aim is designed to provide systemic assistance to seed, early growth, growth of the Series A stage ventures to develop and exponentially scale-up their businesses, generating a positive impact through alignment with and targeting the SDGs.



Expected Results

- 12-15 startups/innovative solutions are supported in the first 3 months
- 2-4 startups/innovative solutions are supported in the 9-month intensive incubation and product testing program, and receive 17,000 USD each as equity-free seed funding
- At least 2 of the teams receive investment/work with scale-up partners



Key Features of Approach

- Public-private partnership
- Outreach and inclusion
- Systematic approach
- Regional and global knowledge and networks

Main Activities (Tentative)

JUNE 2020

Selection of the top 12-15 teams to join the 3-month incubation program

JUNE 2020 - SEPTEMBER 2020

3-month incubation program including site visit, mentoring and pitching for the next stage

OCTOBER 2020 - JUNE 2021

9-month incubation program for the 2-4 best teams, including seed-funding

JULY 2021

Demo Day, introduction with scale-up partners and completion of Impact Aim in Viet Nam

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