

2. ORGANISED AND SUSTAINED INTERNATIONAL CLEAN-UP EFFORTS – CIVIL SOCIETY

This section focuses on the most visible regional initiatives or global initiatives with particular focus on marine plastics in the region.

2.1 Fauna and Flora International (FFI): Marine Plastics Programme

Summary of role: *Fauna and Flora International (FFI) was established in 1903 in the UK to conserve threatened species and ecosystems worldwide.*

Summary of work: *In 2012, FFI officially launched FFI Marine Plastics Programme to raise awareness of marine microplastics and its threats and stop the direct source of microbeads and pre-production pellets.*

Keywords/research fields: *Fauna and Flora International (FFI); FFI Marine Plastics Programme; Ridge to reef conservation in Tanintharyi, Myanmar; plastic pollution; mismanaged plastic waste; Cambodia's Marine and Coastal Programme; coastline plastic debris; No Time to Waste report*

2.1.1 Background and aim

The Society for the Preservation of the Wild Fauna of the Empire (later to become FFI) was first established in 1903 in the UK. While FFI focuses on biodiversity protection in all terrestrial and marine habitat types, it has since 2009 identified marine microplastics as a direct risk to marine life. In 2012, it officially launched the FFI Marine Plastics Programme. It aims to raise awareness of marine microplastics and its threats, and to stop the direct source of microbeads and pre-production pellets. Available: https://api.fauna-flora.org/wp-content/uploads/2018/02/FFI_2018_-Marine-Plastics-Informed-solutions-to-an-ocean-emergency.pdf.

2.1.2 Activities and projects

Several projects of FFI have focused on the marine environment in several ASEAN+3 member states including Myanmar, Cambodia and Indonesia. The projects range from the conducting of surveys to reveal prevalence and sources of marine microplastics, the reviewing of local context on the legislation on plastic use, and the suggesting of site-specific solutions to the marine microplastic issue. Concerns of pollution from marine plastics along the coast are also considered in the context of impact on marine turtle populations that use these beaches as nesting habitat.

FFI's ridge to reef conservation in Tanintharyi, Myanmar

FFI runs a project in Tanintharyi, a small town that borders the Andaman Sea. The project uses a landscape- and seascape-level approach to conservation and identifies high conservation value areas in the most-urgent need of protection.

According to a study undertaken by FFI and Thant Myanmar in July 2019, the delta of the Irrawaddy River transports 119 tons of plastic pollution every day. The majority of the plastic found in the River is likely to be mismanaged plastic waste. The most commonly encountered items were made of hard plastics, mainly comprising bottle caps, a threat to, among others, new-born turtles on their way out to sea. Available: <https://www.fauna-flora.org/news/plastic-pollution-piles-pressure-myanmars-troubled-turtles>.

FFI's Cambodia Marine and Coastal Programme

FFI has worked in Cambodia over the last 20 years and has developed an ongoing project on tackling plastic pollution for communities and coral reefs in coastal Cambodia. Teaming up with local researchers from the Royal University of Phnom Penh, Prek Leap National College of Agriculture and Kuda Divers, marine plastic research was conducted through a beach debris survey, waste sorting survey and household interviews.

Preliminary work revealed that plastics account for 80% of coastline pollution debris on mainland islands, where single-use plastic bags and bottles are a major component of the plastic entering Cambodian waters. Other components include food packaging, disposable cutlery, straws and fishing gear. Available: <https://www.fauna-flora.org/news/tackling-plastic-pollution-communities-coral-reefs-coastal-cambodia>.

2.1.3 Reports

A report published on 14 May 2019 by FFI, Tearfund, WasteAid and the Institute of Development Studies found that 400,000 to one million people in the developing world are dying every year as a result of mismanaged waste including plastic. At the upper end of this estimate, that's one person every 30 seconds. Available: <https://www.fauna-flora.org/news/plastic-pollution-crisis-new-report-highlights-health-impacts-worlds-poorest> and https://assets.fauna-flora.org/wp-content/uploads/2019/05/2019_No-time-to-waste-report.pdf.

2.2 Ocean Conservancy (OC)

Summary of role: *Ocean Conservancy is an NGO established in 1972 to protect the ocean, its wildlife and dependent communities.*

Summary of recommendations and work status: *Ocean Conservancy has initiated a number of global initiatives and participated in other UN initiatives to combat marine plastics such as the International Coastal Cleanup and Trash Free Sea Alliance.*

Keywords/research fields: *Ocean Conservancy; International Coastal Cleanup (ICC); ICC report; Trash Free Seas Alliance; stemming the tide report; the next wave; role of gender in waste management report; plastic policy playbook*

2.2.1 Background and aim

Ocean Conservancy is an NGO established in 1972 which initially focused on whales, seals and sea turtles. However, its scope has since expanded to embrace all the global challenges faced by oceans. It has been an early mover on marine plastic debris and marine plastics and has been at the origin of several global initiatives. It is involved in a number of UN initiatives to combat marine plastics under the leadership of UNEP.

2.2.1 Activities and projects

The International Coastal Cleanup (ICC)

The ICC is one of the first effort of its type as it started 30 years ago. It now operates throughout the world through coastal clean-up operations that rely on volunteers but include a qualitative and quantitative assessment for a selection of items. Data are published on an annual basis. They focus on specific stretches of coasts.

According to the ICC's 2019 Report, among the top 25 participating locations in the initiative, seven are in Southeast Asia: the Philippines, Hong Kong, Taiwan, China, Thailand, Indonesia and Malaysia. Available: <https://oceanconservancy.org/trash-free-seas/international-coastal-cleanup/> and <https://oceanconservancy.org/wp-content/uploads/2019/09/Final-2019-ICC-Report.pdf>.

The Trash Free Seas Alliance (Alliance)

The Alliance was launched in 2012. It includes a number of private companies, academics, public and civil society partners. This Alliance includes members such as large corporations and industry bodies of industries which produce plastic and/or use large quantities of it in packaging (e.g. The Coca-Cola Company, Dow Chemical, DANONE, Pepsi-Co, P&G and the American Chemistry Council), the financial industry as well as NGOs (e.g. WWF). The Alliance operates as a dialogue forum and

opportunity for joint efforts and projects. Available: <https://oceanconservancy.org/trash-free-seas/plastics-in-the-ocean/trash-free-seas-alliance/>.

In this context, members of the Alliance and Ocean Conservancy, with further support from the McKinsey Centre for Business and Environment, led a study in 2015 on ‘Stemming the Tide: Land-based strategies for a plastic-free ocean’. This report identifies land-based sources, suggests solutions to reduce leakages and lists the requirements for global action to reduce leakage. Available: <https://oceanconservancy.org/wp-content/uploads/2017/04/full-report-stemming-the.pdf>.

2.2.3 Reports

Apart from the ICC and Alliance reports, in 2017, Ocean Conservancy also released a report titled ‘The Next Wave: Investment Strategies for Plastic Free Seas’ which lists participants from a number of countries including two ASEAN member states as shown in Table 1.6.2.1 below. Available: <https://oceanconservancy.org/wp-content/uploads/2017/05/the-next-wave.pdf>.

Table 1.6.2.1. Participants involved in “The Next Wave: Investment Strategies for Plastic Free Seas” report.

Country	Participants
Indonesia	In-country partner: Sustainable Waste Indonesia Organisations consulted: <ul style="list-style-type: none"> - Bank Sampah Bina Mandiri, Bali Focus; Cita Bina Insania Foundation; City Cleansing Department – Jakarta Capital City; CV.Peduli Bali, Bali Recycling; DANONE; EnviroPallets; Green School, Bali; PT Hatfield Indonesia; Indonesia Solid Waste Association (InSWA); International Waste Platform; Eco Flores Organisation; PT Irditech Ecojos Plastindo; Role Foundation; PT Sarana Multi Infrastruktur (Persero) (SMI); Unilever Foundation; Yayasan Pengembangan Biosains dan Bioteknologi (YPBB) - Ministry of Energy and Mineral Resources of the Republic of Indonesia; Ministry of Environment and Forestry of the Republic of Indonesia; Ministry of Environment and Forestry of the Republic of Indonesia - Directorate of Coastal and Marine Pollution and Degradation Control)
Philippines	<ul style="list-style-type: none"> - Asian Development Bank; BENRO; Dragon King Plastic Grinding; Environment Management Bureau (Q.C. DENR); GAIA; Greenergy Solutions, Inc., Mother Earth Foundation; Philippines Plastic Industry Association, Manila; Siliman University; SURE; Waste Picker Cooperative; and various junk shops and recyclers/pelletizers - City Environment Natural Resources Officer (CENRO);
Singapore	<ul style="list-style-type: none"> - Morgan Stanley Alternative Investment Partners; Olympus Capital
Vietnam	<ul style="list-style-type: none"> - Da Nang College of Technology; Da Nang River Watch NGO; Dragon Capital; ENDA-Project Office in Vietnam NGO; Ho Chi Minh City Technical University and DONRE; PHAP Viet Environmental Technology JSC; Urban Environmental Company (URENCO), Danang City; The University of Danang; Vietnam Environment Corporation; Vietnam Waste Solutions (VWS), HCMC; Vietstar Joint Stock Company, HCMC - Department of Natural Resources and Environment (DONRE), Ho Chi Minh City (HCMC); Environment Protection Agency, DONRE, Danang;
China	<ul style="list-style-type: none"> - Goldman Sachs

In June 2019, Ocean Conservancy released a report on the ‘Role of Gender in Waste Management’, which explores the role of women in waste management in Indonesia, Philippines and Vietnam. (see [Part 1, Section 6.4.1.3](#)). Available: <https://oceanconservancy.org/trash-free-seas/take-deep-dive/role-gender-waste-management/>.

In October 2019, Ocean Conservancy launched a ‘Plastic Policy Playbook’ to provide a framework for public and private sector measures to improve the economics of the collection of waste. The research

focused on five Asian countries: China, Indonesia, Philippines, Thailand and Vietnam. Available: <https://oceanconservancy.org/wp-content/uploads/2019/10/Plastics-Policy-Playbook-10.17.19.pdf>.

2.3 Trash Hero (TH)

Summary of role: *Trash Hero is a global volunteer movement with the mission to bring the communities together to clean and reduce waste.*

Summary of recommendations and work status: *Trash Hero's activities consist of cleaning trash, educating children, creating long-term programmes that help communities to reduce and better manage waste, and helping companies to reduce waste through Trash Hero @Work.*

Keywords/research fields: *Trash Hero; Trash Hero World; weekly clean-up programme; Trash Hero @ Work; annual reports*

2.3.1 Background and aim

Trash Hero is a global volunteer movement led by Trash Hero World, a non-profit association established in Switzerland. Trash Hero started in Southeast Asia in 2013 with weekly clean-ups in Thailand. It now extends (in the region) to Indonesia, Myanmar, Malaysia, Singapore and China. This network involves civil societies and businesses in clean-up activities, and provides education and outreach.

Trash Hero's mission is to bring communities together to clean and reduce waste. They do it through the following ways:

- Organising weekly clean-up programmes;
- Providing stainless steel water bottles to local business at cost price;
- Providing materials to engage children and motivating them to complete a series of challenges to clean and reduce waste in their everyday lives;
- Providing garbage receptacles and volunteer-driven waste pick-ups in rural and small communities that currently do not have publicly-provided waste management services; and
- Encouraging companies to reduce office waste.

Available: <https://trashhero.org/>.

2.3.2 Reports

Trash Hero releases annual reports to give an overview for the organisation's growth and how it has been accommodated each year. It shares highlights from its core programmes (Action & Awareness, Bottles & Bags, Kids & Education), as well as its financial activity over the course of the year.

The 2018 report is available at: <https://trashhero.org/wp-content/uploads/2019/03/Trash-Hero-World-Annual-Report-2018.pdf> and the 2017 report is available at: <https://trashhero.org/wp-content/uploads/2018/08/Trash-Hero-World-Annual-Report-2017.pdf>.

2.4 The Ocean Cleanup (TOC)

Summary of role: *The Ocean Cleanup is a non-profit legal entity founded in 2014 in the Netherlands with the overall objective of removing marine plastics*

Summary of work: *In October 2019, the Ocean Cleanup announced an oceanic clean-up attempt using a modified and refined engineering system to capture marine debris. Another objective of the Ocean Cleanup is to create a value chain on the basis of the collected plastic debris. In prevention of new wastes from entering the ocean, the Ocean Cleanup designed a different clean-up system, “The Interceptor”, to trap plastics from rivers.*

Keywords/research fields: *The Ocean Cleanup; marine debris; cleanup system; floating arrays; floating boom system; The Interceptor*

2.4.1 Background and aim

The Ocean Cleanup is a non-profit legal entity founded in 2014 in the Netherlands. The idea of its mission was first presented in a 2012 TEDex conference with a vision that still stands: “to rid the world’s oceans of plastic waste”.

The Ocean Cleanup has three main objectives as follows:

- (i) *Removing existing ocean plastic waste.* Existing oceanic plastic waste, such as those in large accumulation areas in the Great Pacific Garbage Patch, are targeted. An initial plan of a passive, static and very long clean-up system has evolved to smaller floating boom systems that are still under review and development. In October 2019, the Ocean Cleanup announced an oceanic clean-up attempt using a modified and refined engineering system to capture marine debris with ranges from macro- to micro-debris and even ghost nets and fishing gear. Available: <https://news.mongabay.com/2019/10/the-ocean-cleanup-successfully-collects-ocean-plastic-aims-to-scale-design/>.
- (ii) *Creating a value chain on collected plastic debris, with the aim of funding clean-up operations.* The first products made fully using plastic debris collected from the Great Pacific Garbage Patch have been announced for launch in September 2020. Available: <https://theoceancleanup.com/updates/mission-one-completed-the-plans-to-make-products-from-the-plastic-catch/>.

- (iii) *Better understand the root issue of ocean plastic pollution through research collaborations.* Research collaborations are done between the Ocean Cleanup's in-house research team and external scientific institutions. Their findings are published on their webpage. Available: <https://theoceancleanup.com/scientific-publications/>.

2.4.2 Activities and projects

In the prevention of new waste from entering the oceans, the Ocean Cleanup has designed a different clean-up system, 'The Interceptor', to be deployed in rivers to trap, direct and convey plastic for collection and management.

An Interceptor is operationally active in Jakarta, Indonesia and in Klang, Malaysia. In Southeast Asia, plans are also being developed for the deployment of an Interceptor in the Mekong Delta, Vietnam and in Bangkok, Thailand. The Ocean Cleanup aims to tackle the 1,000 most polluting rivers before the end of 2025. These rivers are believed to contribute around 80% of ocean plastic pollution.

2.5 4ocean (4O)

Summary of role: *4ocean is a private profit-driven business founded in the United States, which provide donations to ocean-related non-profits.*

Summary of work: *Merchandise sales provide donations to the works of marine and coastal clean-up effort.*

Keywords/research fields: *4ocean; plastic crisis; purpose-driven business model*

2.5.1 Background and aim

4ocean is a private profit-driven business founded in 2017 in Boca Raton, Florida, which aims to end the ocean plastic crisis. Its purpose-driven business model centres around the works of marine and coastal clean-up effort from the funding of its merchandise sales. Buyers are promised that "for every product you purchase, we'll pull another pound of trash from the ocean and coastlines". Merchandise sales provide donations to other ocean-related non-profits (e.g. 1% for the Planet, Project Seahorse, Monterey Bay Aquarium Sea Otter Program, and Guy Harvey Ocean Foundation) and are used in building an organisational infrastructure to support future growth of 4ocean.

2.5.2 Work status

Since 2017, a total of 7 million pounds of ocean plastic debris and other harmful debris have been recovered from its clean-up sites across Florida (USA), Bali (Indonesia) and Haiti.

2.6 Project AWARE (PAware)

Summary of role: Project AWARE is a registered non-profit organisation which advances policies on plastic debris and sharks and rays.

Summary of recommendations and work status: Project AWARE flagship science-citizen programme is Dive Against Debris, which has scuba divers remove marine debris from the ocean and report data on the types, quantities and locations of materials collected.

Keywords/research fields: Project AWARE; dive against debris; adopt a dive site

2.6.1 Background and Aim

Project AWARE is a registered non-profit organisation which advances policies on plastic debris, sharks and rays. With respect to plastic debris, Project AWARE works to reduce the underwater impacts of debris and prevent trash from entering the ocean.

2.6.2 Activities and projects

Dive Against Debris

Project AWARE's flagship science-citizen programme 'Dive Against Debris' launched in 2011. It is a concerted effort among SCUBA divers to remove marine debris from the ocean. It reports the collected data (i.e. on types, quantities and locations of materials collected) on a single digital map on 'Dive Against Debris Map'. Since its launch to date, more than 50,000 SCUBA divers have participated in the programme in 114 countries worldwide (including in Southeast Asia). It has also reported removing over one million pieces of trash. Project AWARE aims to have two million items of debris removed and reported by 2020. Available: <https://www.projectaware.org/diveagainstdebrismap>.

Adopt a Dive Site

Under this project, participants make a commitment to carry out monthly 'Dive Against Debris' surveys, while reporting types and quantities of marine debris found each month from the same location.

Available: <https://www.projectaware.org/adoptadivesite>.

Participant in Global Partnerships

Project AWARE is also part of several global partnerships against marine plastic pollution such as the GPML, Global Ghost Gear Initiative (GGGI), Seas at Risk and Trash Free Sea Alliance.

2.6.3 Reports

Annual impact reports are also released, which highlight the key events of the year and the yearly data report from 'Dive Against Debris' surveys.

The 2019 Impact Report reported that in 2019, 269,397 items of debris have been removed from the seafloor and reported on the global database, and a total of 533 Dive Sites were adopted around the world. See: <https://www.projectaware.org/news/2019-clamshell> and <https://www.projectaware.org/news/2019-impact-infographic>.

The 2018 Impact Report announced the top three countries that had reported data from the 'Dive Against Debris' surveys for the year. Two of these countries were from ASEAN: Thailand was at the second position with 180 surveys (or 7.6% of all global surveys), while Indonesia was at the third position, with 156 surveys (or 6.6% of all global surveys). Plastic accounted for 65% of all debris items collected in 2018 and of this, the top three debris items were plastic fishing lines (18.6%), plastic fragments (10.84%) and fishing gears (i.e. sinkers/lures/hooks) (5.29%).

Available: https://issuu.com/projectaware/docs/2018_impact_report?fr=xGAEoATABPf-cYAA.