

# SURFACING INNOVATIVE SOLUTIONS

## FOR REDUCING MARINE PLASTIC POLLUTION

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A landscape analysis of Indonesia,  
the Philippines, Thailand and Vietnam



# EXECUTIVE SUMMARY

Over 8 million metric tonnes (MMT) of plastic leaks into the oceans every year. Approximately 80 percent of this comes from land-based sources such as beach litter and sewage effluent, including waste entering through rivers. About 60 percent of land-based plastic waste leakage originates in five countries, all of which are in Asia: China, Indonesia, the Philippines, Thailand and Vietnam. In a business-as-usual scenario, these countries are likely to more than double their plastic waste by 2025.<sup>2</sup>

Currently the plastic industry is based on an extractive industrial linear model of 'take, make, use and dispose'. About 40 percent of plastic waste that is ineffectively managed (i.e. openly dumped, littered, channeled to uncontrolled landfills etc.) leaks into the oceans from within the region.<sup>3</sup> This can largely be attributed to a lack of infrastructure and financing, poor public awareness, lack of or poor execution of recycling policies, illegal dumping as well as unplanned industrial development, tourism and aquaculture. Only 9 percent of the 6300 MMT of plastic produced globally from 1968 to 2015 was recycled.<sup>4</sup> However, in recent years some organisations have started transitioning to alternative models, including creating a circular economy.

This study evaluates solutions available to reduce marine plastic pollution in Indonesia, the Philippines, Thailand and Vietnam. The insights cited in this report are based on desk-based reviews and semi-structured interviews conducted with AVPN members and a range of social purpose organisations (SPOs), including nonprofits and social enterprises. While the scope is not exhaustive, it will:

- Provide desk-based landscape analysis of the current situation in these countries;

- Highlight the interventions applied so far;
- Identify challenges and opportunities for future social investment.

## Landscape of Indonesia, the Philippines, Thailand and Vietnam

Indonesia, the Philippines, Thailand and Vietnam are fast growing emerging markets in Southeast Asia, with production and consumption of plastics increasing in lockstep. However, waste management ecosystems are largely nascent and waste collection is a logistically heavy and often poorly managed operation.

Although national policies, strategies, as well as downstream programmes and projects are in place in most of our focus countries, the execution and enforcement of these policies are largely inadequate across the board. Some challenges faced include the lack of execution coordination, knowledge of policies and overlapping responsibilities within the stakeholders and institutions downstream. In most cases, source segregation tends to be poorly implemented, with the exception of the Philippines and some parts of Thailand, meaning that industrial and household waste is mostly collected by the same agencies and stored or dumped in the same landfill. Lack of sorting and a largely informal supply chain, mainly managed by waste-pickers, means that industries setting up recycling facilities struggle to establish a constant supply stream.

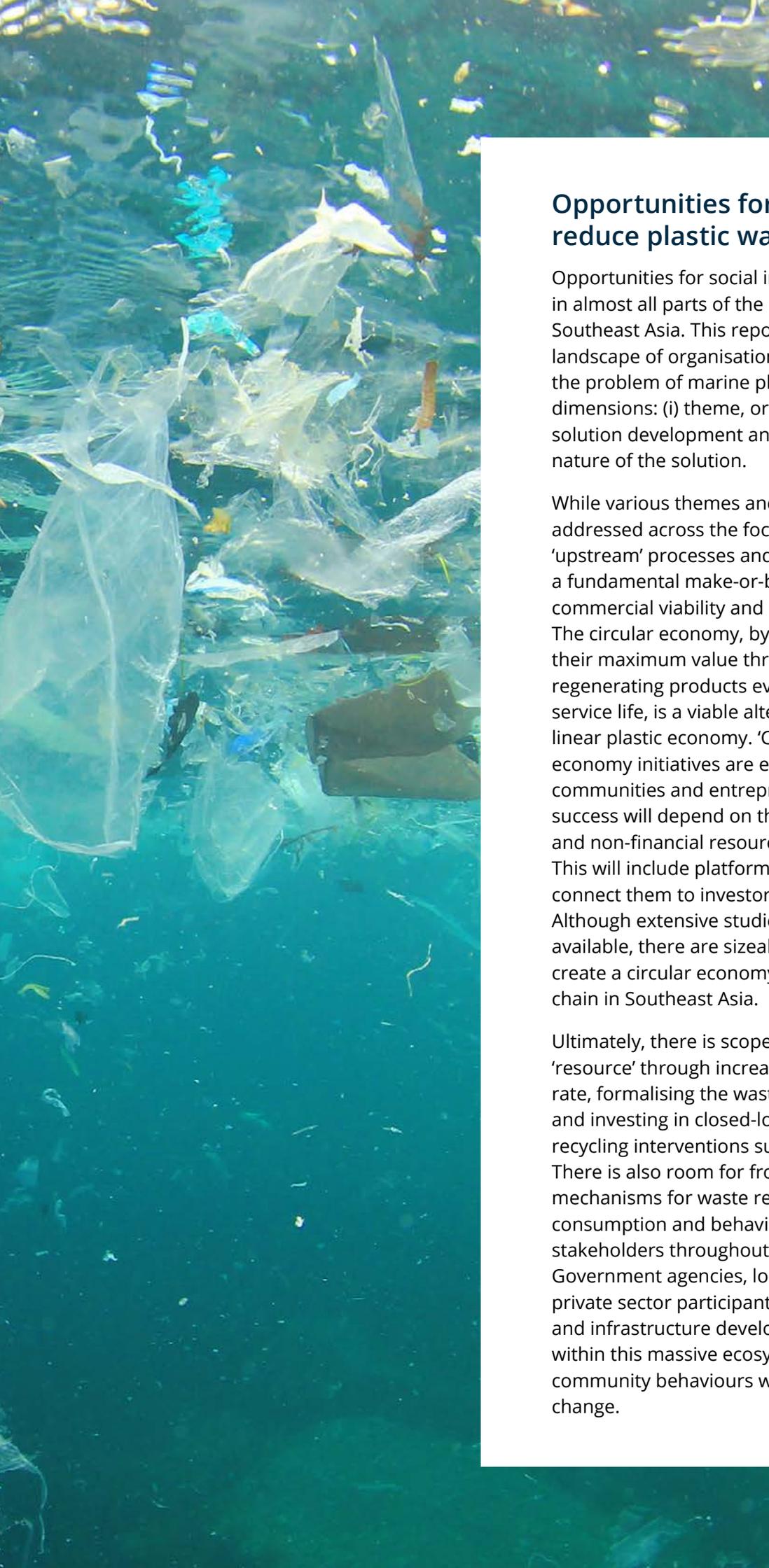
Most of these countries have limited data and information on waste inventory, particularly for industrial and hazardous waste. There are some resources, such as the Pollution Control Department's annual report in Thailand, which provides local disaggregated data on the waste situation. However, such data are not comparable across countries or across urban-rural contexts. To our knowledge, cross-country data is not yet publicly available for analysis.

2. Jambeck et al. 2015. Plastic waste inputs from land into the ocean

3. Ibid

4. Geyer, R., Jambeck, J. R., and Lavender Law, Kara. 2017. Production, use, and fate of all plastics ever made





## Opportunities for investment to reduce plastic waste

Opportunities for social impact investment exist in almost all parts of the plastics value chain in Southeast Asia. This report organises the broad landscape of organisations and actions targeting the problem of marine plastic pollution into two dimensions: (i) theme, or the primary point of solution development and (ii) application, or the nature of the solution.

While various themes and applications are being addressed across the focus countries, addressing 'upstream' processes and infrastructure will be a fundamental make-or-break element in the commercial viability and scaling of any venture. The circular economy, by using plastics to their maximum value through recovering and regenerating products even after the end of their service life, is a viable alternative to the current linear plastic economy. 'Closed-loop' circular economy initiatives are emerging amongst local communities and entrepreneurs, and their success will depend on the availability of financial and non-financial resources to scale effectively. This will include platforms and mechanisms that connect them to investors and practitioners. Although extensive studies and data are not yet available, there are sizeable opportunities to create a circular economy within the plastics value chain in Southeast Asia.

Ultimately, there is scope to change 'waste' to 'resource' through increasing the waste recycling rate, formalising the waste management sector and investing in closed-loop technological recycling interventions such as waste-to-fuel. There is also room for front-end solutions i.e. mechanisms for waste reduction, sustainable consumption and behavioural change of stakeholders throughout the value chain. Government agencies, local communities and private sector participants need to be engaged and infrastructure developed to track data within this massive ecosystem. Finally, a shift in community behaviours will be required for lasting change.



ECCA Family Trust is recently established and focuses its philanthropic work on realising human potential, protecting and preserving the environment, with particular emphasis on marine-related projects, and promoting sustainability and circular economy. The means vary across the continuum of capital.

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AVPN is a unique Pan-Asian funders' network catalysing the movement toward a more strategic and collaborative approach to social investment to address key social challenges facing Asia today and in the future.

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