

INDONESIA

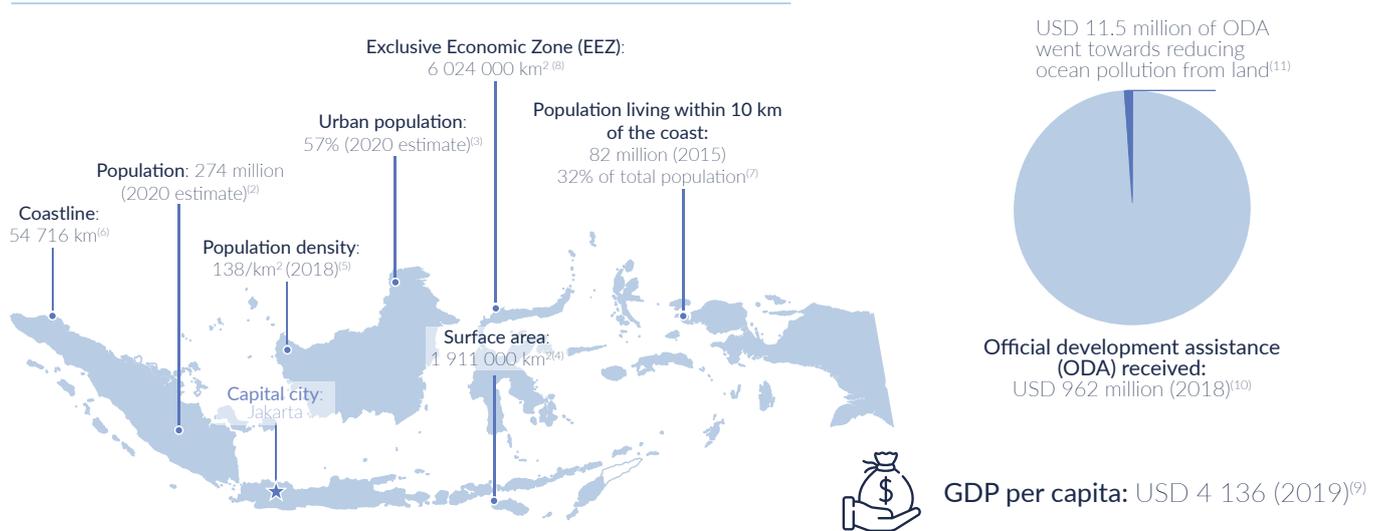
Indonesia aims to reduce marine plastic litter by 70% relative to business as usual by 2025.

Millions of tonnes of plastics enter the ocean every year, with tremendous environmental, economic and social costs. These environmental and social costs are difficult to quantify, but recent estimates suggest that Indonesia faces roughly USD 459 million in direct costs to its fishing/aquaculture, shipping and tourism industries due to marine debris (including non-plastic debris, although plastic products make up the majority of marine debris).⁽¹⁾

The marine plastics pollution problem cannot be solved just by cleaning up the ocean. Most marine plastics are not discarded directly into the sea but derive from land-based sources. They end up in the sea due to a multitude of reasons, such as inadequate filtering of wastewater, improper or illegal disposal, and unexpected natural disasters. Land-based initiatives are therefore essential to addressing marine plastics pollution.

The OECD stands ready to help develop policy advice and financing strategies to address marine plastics pollution in Southeast Asia, a region where this problem is particularly acute.

Figure 1. Indonesia: Key demographic, geographic and economic indicators



In Indonesia, there are several government ministries and agencies involved in addressing marine plastics pollution:

- **At the national level**, the Ministry of Environment and Forestry is responsible for development of regulations on waste management (including pollution control). The Ministry of Maritime Affairs and Fisheries is responsible for management of local marine conservation areas, construction of waste

1. McIlgorm, A., K. Raubenheimer and D. McIlgorm (2020), *Update of 2009 APEC Report on Economic Costs of Marine Debris to APEC Economies*, <https://www.apec.org/Publications/2020/03/Update-of-2009-APEC-Report-on-Economic-Costs-of-Marine-Debris-to-APEC-Economies>.
 2. United Nations Population Division (2019), *World Population Prospects 2019*.
 3. United Nations Population Division (2018), *World Urbanization Prospects: 2018 Revision*.
 4. United Nations Statistics Division (2019), *Demographic Yearbook 2018*.
 5. United Nations Statistics Division (2019), *Demographic Yearbook 2018*.
 6. CIA (2020), *The World Factbook*.
 7. OECD (2020), OECD Statistics (OECD calculations based on Florczyk et al, 2019), <http://dx.doi.org/10.2760/062975>.
 8. OECD (2020), OECD Statistics (OECD calculations based on Florczyk et al, 2019), <http://dx.doi.org/10.2760/062975>.
 9. Flanders Marine Institute (2019), *Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM)*, version 11., <https://doi.org/10.14284/386>.
 10. World Bank (2020), *World Development Indicators Database*.
 11. OECD (2020), "Detailed aid statistics: Official and private flows", *OECD International Development Statistics (database)*, <https://doi.org/10.1787/data-00072-en>.

facilities at fishing ports, and organisation of sea and beach clean-up efforts. The Ministry of Public Works and Housing is involved in development of large-scale solid waste facilities (e.g. landfills) and river waste collection infrastructure. These three ministries are co-ordinated by the Coordinating Ministry for Maritime Affairs and Investments, which is responsible for the development, implementation and synchronisation of maritime policies. The Ministry of Industry is involved in the development of the recycling industry and the production of degradable plastics.

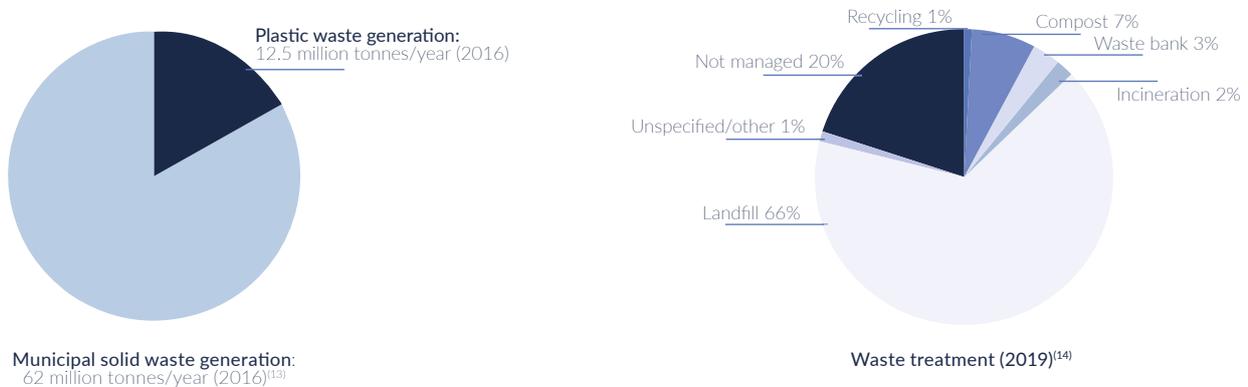
- **At the subnational level**, municipal planning agencies and cleansing services are responsible for the implementation of municipal solid waste management, including financing and monitoring. River catchment authorities are responsible for filtering plastic waste out of river water.

Government Policies

Indonesia’s **National Plan of Action on Marine Plastic Debris 2017–2025** involves 16 ministries and institutions with 59 activities. It aims to prevent both land-based and ocean-based leakage of plastics, with **a 70% reduction of marine plastic relative to business as usual by 2025**. Land-based efforts include the production of biodegradable plastics, the reuse of plastic waste (e.g., in plastic asphalt roads), and charges for plastic bags; while ocean-based efforts include reception facilities at ports, the collection of waste from marine and coastal areas, and plastic waste management in tourism.

The government provides a framework for the involvement of the private sector in addressing waste through Presidential Decree No. 38/2015 on the Cooperation between Government and Business Entities in Procurement of Infrastructure. The **National Plastic Action Partnership** was launched in 2019 by the Coordinating Ministry for Maritime Affairs and Investments as a platform for public-private collaboration and includes over 150 member organisations and businesses.⁽¹²⁾

Figure 2. Indonesia: Waste and plastic waste statistics at the national level



Waste collection and disposal

Informal collection of waste is legal in Indonesia, with **roughly 50% collected informally**,⁽¹⁵⁾ and waste pickers are considered to be the last link in the waste management chain. Separation at source is limited in Indonesia. However, as of 2018, there were

7 488 waste banks throughout the country, where waste is separated into recyclables, organics (to be composted) and residue (to be landfilled).⁽¹⁶⁾⁽¹⁷⁾

These waste banks are generally set up in neighbourhoods to serve roughly 1 000 residents, who receive money for their waste.⁽¹⁸⁾ Over 200 000 Indonesians were served

12. Sustainable Ocean for All Initiative based on OECD/DAC Creditor Reporting System database.
 13. OECD (2019), *OECD Green Growth Policy Review of Indonesia 2019*, <https://doi.org/10.1787/1eee39bc-en>.
 14. OECD (2019), *OECD Green Growth Policy Review of Indonesia 2019*, <https://doi.org/10.1787/1eee39bc-en>.
 15. Jain, A. (2017), *Waste Management in ASEAN Countries: Summary Report*, <https://environment.asean.org/wp-content/uploads/2020/03/Summary-Report-Waste-Management-in-ASEAN-Countries-UNEP.pdf>.
 16. cyclos (2019), *Legal Framework Study of Extended Producer Responsibility*, https://d2ouvy59p0dg6k.cloudfront.net/downloads/framework_study_epr_cyclos__final.pdf.
 17. Ministry of Environment and Forestry (2019), *Ninth Regional 3R Forum in Asia and the Pacific*.
 18. SEA Circular (2020), *Country Profile: Indonesia*, https://www.sea-circular.org/wp-content/uploads/2020/05/SEA-circular-Country-Profile_INDONESIA.pdf.
 19. KDM Green Project Jakarta (2000), <https://globalplasticaction.org/countries/indonesia/>

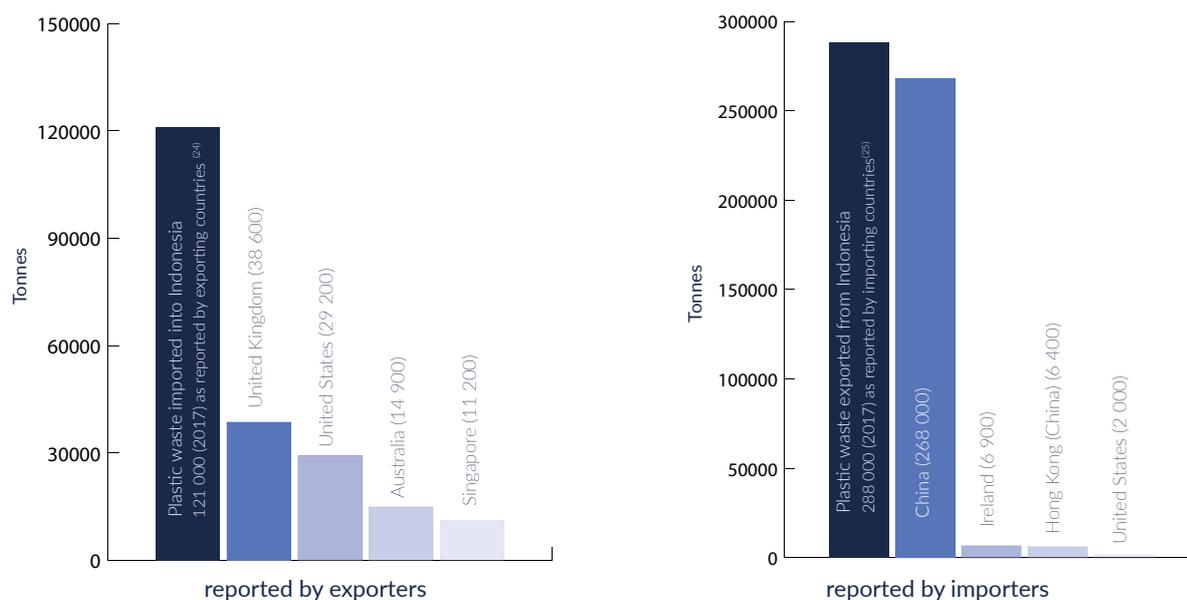
by a waste bank in 2018. Numerous projects, such as the Jakarta Green Project and XS Project,⁽¹⁹⁾⁽²⁰⁾ also collect recyclable trash and sell it to support livelihoods and/or raise funds for other programmes.

In addition to waste banks, there are 521 final

disposal sites in Indonesia, including 24 sanitary/engineered landfills and 52 controlled dumpsites.⁽²¹⁾ Between 2015 and 2017, there were controlled landfills in 188 cities and open-dump landfills in 167 cities across Indonesia.⁽²²⁾ Indonesia has at least 22 plastic recycling companies.⁽²³⁾

Figure 3. Indonesia: Plastic waste trade statistics

Major exporters and importers of plastic waste*



* The data is from 2017. China has since banned the importation of consumer plastics into its borders, which has been in effect from 2018 onwards

Source: Recycling Today (2017), Two dozen types of scrap imports banned by China in 2018, <https://www.recyclingtoday.com/article/plastic-scrap-china-import-ban-2018-mixed-paper>.

Measures to address marine plastic waste

Taxes and bans on single-use plastic have been introduced across Indonesia. Indonesia trialled a tax of IDR 200 per bag (~USD 0.01 per bag) for three months in 2016 across 23 cities.⁽²⁶⁾ More recently, the House of Representatives approved an excise tax, equivalent to a fee of IDR 450-500 per bag (~USD 0.02 per bag), in 2020.⁽²⁷⁾ Some cities have gone further and banned plastic bags. Jakarta banned single-use plastic bags (in particular,

transparent bags made from various plastics, including polyethylene and thermoplastics) as of July 2020,⁽²⁸⁾ while Bali already banned single-use plastic bags as of June 2019. Bogor City, which banned disposable plastic bags in shopping centres in 2018 and in traditional markets in 2019, managed to reduce the circulation of plastic bags by 41 tonnes per month,⁽²⁹⁾ while the first plastic bag ban in Indonesia, in the city of Banjarmasin, reduced circulation by 80%.⁽³⁰⁾ Balikpapan and Denpasar have also enacted plastic bag bans.

20. XS Project (2021), <https://globalplasticaction.org/countries/indonesia/>

21. SEA Circular (2020), *Country Profile: Indonesia*, https://www.sea-circular.org/wp-content/uploads/2020/05/SEA-circular-Country-Profile_INDONESIA.pdf.

22. OECD (2019), *OECD Green Growth Policy Review of Indonesia 2019*, <https://doi.org/10.1787/1eee39bc-en>.

23. Plastic Recycling Plants in Indonesia, *Plastic Recycling Plants In Indonesia - ENF Recycling Directory*

24. UN Comtrade (n.d.), *International Trade Statistics Database*, <https://comtrade.un.org/> (accessed on 24 March 2021).

25. UN Comtrade (n.d.), *International Trade Statistics Database*, <https://comtrade.un.org/> (accessed on 24 March 2021).

26. Akenji, L. et al. (2019), *Circular Economy and Plastics: A Gap-Analysis in ASEAN Member States*, https://www.iges.or.jp/en/publication_documents/pub/policyreport/en/10382/FINAL_CE+and+Plastics++A+gap+analysis+in+ASEAN+Member+States_1004.pdf.

27. Akhla, A. (2020), *Indonesia revives excise plan on plastics, dirty vehicles and sweet drinks*, <https://www.thejakartapost.com/news/2020/02/19/indonesia-revives-excise-plan-on-plastics-dirty-vehicles-and-sweet-drinks.html>.

28. Kahfi, K. (2020), *Jakarta to ban single-use plastics by June*, <https://www.thejakartapost.com/news/2020/01/07/jakarta-to-ban-single-use-plastic-bags-by-june.html>.

29. Nugraha, R. and P. Bhwana (2019), *Bogor City Plastic Bag Ban Sued, Refuses to Back Down*, <https://en.tempo.co/read/1200541/bogor-city-plastic-bag-ban-sued-refuses-to-back-down>.

30. Kahfi, K. (2020), *Jakarta to ban single-use plastics by June*, <https://www.thejakartapost.com/news/2020/01/07/jakarta-to-ban-single-use-plastic-bags-by-june.html>.

There are **numerous clean-up efforts underway in Indonesia**. An extensive clean-up of the Citarum River in Java involving both military and civilian volunteer efforts was initiated through the Citarum Harum campaign, launched in 2018.⁽³¹⁾ This campaign also includes law enforcement, education, waste processing, and river basin rehabilitation efforts. The World Bank and the Government of Indonesia are also investing USD 326 million to halve the daily amount of waste dumped into the river by 2025.⁽³²⁾ More generally around Indonesia, however, only 13 cities have a centralised wastewater treatment system and only 14% of wastewater is treated.⁽³³⁾⁽³⁴⁾ Other clean-up efforts target marine litter. For example, 57 000 people gathered 155 tonnes of plastic through the One Island, One Voice programme in Bali between 2017 and 2020.⁽³⁵⁾ Another event, Face the Sea, mobilised 20 000 Indonesians across 76 locations to gather plastics from coasts in just one day in August 2018.⁽³⁶⁾

Awareness remains a key barrier to addressing marine plastics pollution. There remains only a low level of awareness that waste is transported through waterways to oceans.⁽³⁷⁾ One organisation that seeks

to rectify this is PRAISE,⁽³⁸⁾ the Plastic and Recycling Association for Indonesia Sustainable Environment. Founded by six large food companies, PRAISE conducts various awareness and public education activities.⁽³⁹⁾ The National Plan also seeks to increase understanding and awareness of marine plastics pollution through efforts such as the education of youth through school curricula; training in sorting waste; and awards and campaigns.

Indonesia is also **deploying research and innovation to solve marine plastics pollution**. The National Plan mandates the development of biodegradable plastics from cassava, seaweed and palm oil; innovation to stimulate the circular economy; waste-to-energy solutions; and a science- and technology-based management system to control plastic debris.⁽⁴⁰⁾ Research into marine plastics is also carried out at universities and the Indonesian Institute of Sciences. Such research has quantified micro- and macroplastics in various areas (including the coast, the water surface and the deep sea); quantified microplastics in aquatic organisms; identified reasons for the loss and abandonment of fishing gear; and modelled plastics leakage and flow.⁽⁴¹⁾

31. Hendiarti, N. (2018), *Combating Marine Plastic Debris in Indonesia*, http://www.unesco.or.id/publication/SC_Retreat/4_MarineDebrisIndonesia.pdf.

32. World Bank (2020), *Stemming the Plastics Tide in Indonesia: Policy, Investments, and Research*, <https://www.worldbank.org/en/news/feature/2020/10/06/stemming-the-plastics-tide-in-indonesia>.

33. OECD (2019), *OECD Green Growth Policy Review of Indonesia 2019*, <https://doi.org/10.1787/1eee39bc-en>.

34. ADB (2012), *Wastewater Management and Sanitation in Asia*, <https://www.adb.org/features/wastewater-management-and-sanitation-numbers>

35. One Island One Voice (2021), <https://www.oneislandonevoice.org/>

36. Mongabay (2018), *Indonesia, a top plastic polluter, mobilizes 20 000 citizens to clean up the mess*, <https://news.mongabay.com/2018/09/indonesia-a-top-plastic-polluter-mobilizes-20000-citizens-to-clean-it-up/>.

37. World Bank (2020), *Stemming the Plastics Tide in Indonesia: Policy, Investments, and Research*, <https://www.worldbank.org/en/news/feature/2020/10/06/stemming-the-plastics-tide-in-indonesia>.

38. PRAISE, <https://praiseindonesia.com/> (accesses May 2021)

39. Akenji, L. et al. (2019), *Circular Economy and Plastics: A Gap-Analysis in ASEAN Member States*, https://www.iges.or.jp/en/publication_documents/pub/policyreport/en/10382/FINAL_CE+and+Plastics++A+gap+analysis+in+ASEAN+Member+States_1004.pdf.

40. SEA Circular (2020), *Country Profile: Indonesia*, https://www.sea-circular.org/wp-content/uploads/2020/05/SEA-circular-Country-Profile_INDONESIA.pdf.

41. Lyons, Y., T. Su and M. Neo (2019), *A review of research on marine plastics in Southeast Asia: Who does what?*, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/813009/A_review_of_research_on_marine_plastics_in_Southeast_Asia_-_Who_does_what.pdf.