Waste Trade in Southeast Asia

LEGAL JUSTIFICATIONS FOR REGIONAL ACTION

2021 REPORT

IPEN
for a toxics-free future

EcoWaste Coalition

Swedish Society for Nature Conservation

Waste Trade in Southeast Asia: Legal Justifications for Regional Action

JULY 2021

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LIST OF ACRONYMS

ADB	Asian Development Bank
AHEG	Ad Hoc Experts Group
AMS	ASEAN Member States
API-P	Angka Pengenal Importir-Produsen (Production-Importer License, Indonesia)
ASEAN	Association of Southeast Asian Nations
ASSC	ASEAN Socio-Cultural Community
AWGCW	ASEAN Working Group on Chemicals and Waste
CBD	United Nations Convention on Biological Diversity
COP	Conference of Parties
CTT-CFF	Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security
DENR	Department of Environment and Natural Resources, Philippines
EG	Experts Group
GHG	Greenhouse Gas
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
GPSEA	Greenpeace Southeast Asia
IPBES	Inter-governmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPEN	International Pollutants Elimination Network
IUCN	International Union for the Conservation of Nature
JPSPN	Department of National Solid Waste Management, Malaysia
KASA	Ministry of Environment and Water, Malaysia
KPKT	Ministry of Housing and Local Government, Malaysia
MEAs	Multilateral Environmental Agreements
NDCs	Nationally Determined Contributions
OECD	Organisation for Economic Co-operation and Development
POPs	Persistent Organic Pollutants
RA	Republic Act, Philippines
SUPs	Single-use Plastics
TWG	Technical Working Group
UNEA	United Nations Environment Assembly
UN ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNEP	United Nations Environment Programme
USD	US Dollars

EXECUTIVE SUMMARY

The COVID-19 pandemic has already had negative effects on waste management, significantly contributing to increases in medical waste and household waste, and a substantial slowdown in recycling efforts. This upsurge in hazardous waste particularly endangers developing countries that are destinations for waste exports via the global waste trade.

Southeast Asian countries continue to be at risk to the influx of legal and illegal waste from the developed and industrialized world. Current legal and policy responses are not enough to stop the entry of illegal waste, and more importantly, are insufficient to protect the health of both people and the environment. ASEAN countries evidently need a unified and stronger response to waste trade.

This report provides a survey of regional efforts to recognize and address the issues of pollution and waste management, including progress on the ratification and acceptance of the Basel Ban Amendment in ASEAN Member States. National laws and policies on the waste trade are examined, with a particular focus on the Philippines, Indonesia, Thailand and Malaysia. Regional documents, declarations and mechanisms from the ASEAN are also analyzed. Based on these, the report argues that the broad ASEAN and bilateral initiatives, and trends in national action provide ample legal justifications for stronger regional action against the global waste trade.

The report highlights the following points:

Waste Trade is an ASEAN Issue.

Tackling the waste trade in the ASEAN region is important for several reasons:

First, many ASEAN member states are already facing a waste crisis managing large volumes of domestic waste. Second, ASEAN countries already face other environmental issues, as some of the most biodiverse and natural resource-rich regions in the world. Third, the risks brought about by climate change, and the need to meet climate adaptation and mitigation goals, are also related to the issue of waste trade.

Country case studies illustrate how the waste trade exacerbates existing waste management challenges.

The waste trade is a common concern for many ASEAN countries. While national level efforts on waste management include prohibitions against the illegal entry of imported waste, the country case studies also reveal how broader waste management challenges exist alongside waste trade, and how weak implementation of waste trade-related laws opens doors to illegal waste shipment. Despite these shared challenges however, there is still a lack of a common and regional response to the waste trade issue in ASEAN.

An ASEAN Response to the Waste Trade Crisis would help countries strengthen their efforts to protect the region's rich ecosystems and biodiversity for communities and future generations.

Countries in ASEAN have also shown that they are willing to take a stand against waste trade and not make the region the dumping ground of the world. Moreover, there is ample legal justification at the regional and national levels which can serve as a basis to push for regional action. These can be found in the ASEAN Charter and declarations, country constitutions and national laws and policies, general principles of environmental law and other multilateral environmental agreements.

This report proposes **a Roadmap for ASEAN regional action on waste trade**, with four main action points:

1. Revisiting ASEAN Statements, Issuing A Clear Stand on Waste Trade

From its charter to more recent blueprints into the next decade, protecting the environment and natural resources play an important role in achieving prosperity in the region. A clear and concrete ASEAN stand on waste trade can be embodied in a declaration which shall call on ASEAN member states to immediately ratify the Basel Ban Amendment; urging all members to take steps to ban all waste shipments into their countries; establish regional mechanisms on waste trade; and improving enforcement and compliance capacity, including a focus upstream policies that look at reduction of production of sources of pollution such as plastics.

2. Establishing a regional mechanism on waste trade

A regional mechanism that will put into effect the provisions of the said declaration. The implementing entity, whether new or already

existing, must have some permanence and not be merely an ad-hoc and temporary measure. The mechanism can establish a platform for information sharing and exchange, and identify gaps, loopholes, and inconsistencies in ASEAN documents, statements, and declarations, as well as individual country statements or positions, which run counter to the stated goals of curbing and banning waste trade into the region.

3. Create an Experts Group/Technical Working Group

The regional response will need to tap into regional expertise on waste management and waste trade. The creation of an experts group/technical working group (EG/TWG) will help ensure that any position, statement, or action taken by ASEAN countries is based on data, careful analysis, and expert study and opinions. The EG/TWG should have equal representation from all ASEAN countries.

The group should endeavor, as best as possible, to be independent of ASEAN governments and leaders. Its work should be open and transparent, and its outputs and work, including any data sources, should be easily accessible and understandable by all ASEAN citizens.

4. Draft and Approve a Regional Agreement on Waste Trade

To secure and solidify the recommendations given above and the ASEAN position on waste trade, member states can enter into a regional agreement on waste trade. This will then make its position legally binding on the member countries, and can also be made a source of legal rights and remedies for the people of the region. This is not without precedent, as other regional blocs have entered into their own legally binding arrangements to complement, or to strengthen the provisions of international treaties and conventions.

The Philippines is one of the top destinations of waste from developed countries such as South Korea.
© Manny Calonzo/EcoWaste Coalition

I Introduction

A couple in Bangun village in Indonesia make a living by collecting plastic scraps to sell.

BACKGROUND

The world is in a crisis on many fronts. The global community is still in the midst of the COVID-19 pandemic – with cases still rising and subsequent waves being experienced as new variants and strains have emerged. Health systems and frontline workers are pushed to the limit in developing countries like the Philippines and Indonesia, and even in vaccine powerhouses like India. One year on, and the collective efforts of governments and citizens around the world are all focused on COVID-19.

While all these are happening, perhaps an even more pervasive problem continues to linger and fester within our midst – which is the waste crisis. Undoubtedly and as many have argued, the COVID-19 pandemic is a result of our abuse and misuse of the environment and its natural resources.[1] Yet in many places around the world, environmental and climate issues seem to have taken a back seat, even as many experts have called for a "green recovery" post-pandemic.[2]

This has been especially evident in the Association of Southeast Asian Nations (ASEAN) region. An analysis of the current stimulus and recovery packages in three of its largest economies– Singapore, Indonesia, and the Philippines – shows that countries are not doing enough to incorporate climate considerations into their fiscal stimulus responses. [3]

The report by the Climate Policy Initiative shows that the Philippines and Singapore have not made any commitments to green outcomes; while Indonesia only allocated 4 percent for the environment. This shows that money had been channeled into so-called "dirty" stimulus in these countries.[4] There is no doubt that the waste crisis will outlast the pandemic. The pandemic has already had negative effects on waste management, significantly contributing to increases in medical waste and household waste,[5] and potentially leading to further infections due to poor management of infectious waste. A substantial slowdown in recycling efforts was also noted, as well as increased demand for single-use plastic products.[6]

This upsurge in hazardous waste particularly endangers developing countries that are destinations for waste exports via the global waste trade. Through legal and illegal channels, medical and household wastes have routinely entered Southeast Asian countries even before the pandemic, adding to the volumes of domestic trash that localities were ill-equipped to process safely.

Global waste trade has clear ramifications for the ASEAN region. However, despite the existing international and national legal frameworks, Southeast Asian countries continue to be at risk to the influx of legal and illegal waste from the developed and industrialized world. As has been argued in other reports,[7] current legal and policy responses are not enough to stop the entry of illegal waste; and more importantly to protect the health of both people and the environment. ASEAN countries evidently need a unified and stronger response to waste trade.

It is in this context of increasing waste generation and persistent risk of hazardous waste imports that this report is prepared. It provides a survey of regional efforts to recognize and address the issues of pollution and waste management, including progress on the ratification and acceptance of the Basel Ban Amendment in the ASEAN region.

Likewise, it presents comprehensive scanning and analysis of relevant laws and policies on waste trade in the region, with particular focus on the Philippines, Indonesia, Thailand, and Malaysia. These countries are four of the largest economies in the region, and have been destinations for highly-publicized illegal waste shipments in recent years.

This paper argues that the broad ASEAN and bilateral initiatives, and trends in national action provide ample legal justifications for stronger regional action against the global waste trade. Several recommendations, via a road map, are proposed for how ASEAN can stem the tide of waste trade into its shores.

1 *See for example*: https://industryindividual.com/journal/covid-climate-the-environment-and-i-why-it-all-matters

2 *See*: https://www.ilo.org/manila/public/pr/WCMS_775345/lang--en/index.htm
https://www.greenpeace.org/philippines/press/10136/climate-drr-should-drive-ph-covid-recovery/
https://www.pna.gov.ph/articles/1101447; http://documents1.worldbank.org/curated/en/983051607354214738/pdf/Philippines-Economic-Update-Building-a-Resilient-Recovery.pdf.

3 *See* https://www.climatepolicyinitiative.org/press-release/new-study-measures-the-greenness-of-the-covid-19-recovery-packages-and-their-contribution-towards-country-level-climate-objectives-in-five-asian-countries/

4 The report notes that the 3 countries allocated stimulus funds for "dirty" activities as follows: Indonesia – 96%; Singapore – 82%; and the Philippines – 50%.

5 https://www.eria.org/uploads/media/policy-brief/Strengthening-Waste-Management-Policies-to-Mitigate-the-COVID19-Pandemic-.pdf

6 Sinha, R., J. Michelsen, E. Ackura, L. Nije. 2020. COVID-19's Impact on the Waste Sector International Finance Corporation, 3 available online at https://www.ifc.org/wps/wcm/connect/dfbceda0-847d-4c16-9772-15c6afdc8d85/202006-COVID-19-impact-on-waste-sectorpdf?MOD=AJPERES&CVID=na-eKpl (accessed 25 January 2021)

7 *See* https://www.greenpeace.org/philippines/publication/4208/waste-trade-and-the-philippines-how-local-and-global-policy-instruments-can-stop-the-tide-of-foreign-waste-dumping-in-the-country/

OBJECTIVES AND METHODOLOGY

The main objective of this report is to develop an analysis on waste trade laws and policies in ASEAN (with particular focus on Indonesia, Malaysia, the Philippines and Thailand), which will support calls for greater regional action on waste trade and other related issues. It will analyze each of the focus-countries' laws related to waste trade and general waste management.

The report will also look at legal justifications for countries, and the ASEAN bloc, to adopt and ratify the Basel Ban amendment, and other legal mechanisms to tackle waste trade. It will also provide for recommendations and a road map on how ASEAN countries can address and deal with waste trade, taking into account existing statements, actions, and legal frameworks in the region.

This report was informed by a comprehensive desk review of available materials. Experts from Indonesia and Malaysia also contributed to the profiles for each country. Their comprehensive briefs are summarized in the report. The analyses from the Philippines and Thailand were based on previous research and available materials. Regional partners of IPEN, and other affiliate organizations of EcoWaste Coalition also commented and provided input on the report.

A man stands in the middle of a landfill in Indonesia.
© Fulli Handoko/Nexus3

II
Global Trends and Developments

While this report focuses on ASEAN in particular, it is important to situate the issues and developments in the region within the larger global context on waste trade. This underscores the magnitude of the waste problem at hand, and the consequences for ASEAN countries if this is not addressed urgently and equitably.

Likewise, many in-country and regional initiatives draw from progress in international policy-making, and available support from development partners. Given this, major waste issues, and the actions underway to address these are also briefly discussed, to provide further context for the ASEAN situation.

Community in Sungai Petani, Kedah protesting import of plastic waste.
© Mageswari Sangaralingam

GLOBAL WASTE SITUATIONER

This may not come as a surprise to many - the world is on a trajectory where waste generation will drastically outpace population growth by more than double by 2050.[8]

According to the World Bank, without urgent action, global waste will increase by 70 percent from current levels by 2050, amounting to an estimated 3.40 billion tons. This is a global issue - if not properly dealt with, waste poses a threat to public health and the environment that concerns everyone.[9]

Statistics also show that the East Asia and the Pacific region will continue to dominate global waste generation. As of 2016, the region accounts for 23 percent of global waste, at approximately 468 million tons per year. This figure is expected to increase to 714 million tons by 2050, with the region retaining the top spot globally.

The ASEAN region will inevitably have to face the waste crisis in the decades to come. Without urgent action, inequitable and unsustainable practices packaged as quick and easy solutions – such as waste trade and dumping – will be resorted to by higher income countries that have the luxury to do so, to the detriment of developing countries who are already contending with their local waste issues without success.

MAJOR WASTE MANAGEMENT CHALLENGES

WASTE TRADE

The formation of the global waste trade industry began with a very simple economic principle:[10]

"Garbage is produced daily and needs to be discarded. As some types of litter can be recycled and re-sold for income, a waste recycling industry becomes a necessity. Besides economic reasons, recycling helps environmental causes too. Since the costs of recycling can be cheaper in developing countries, litter then gets transported to poorer countries. Rich countries get rid of their garbage from their backyards, and developing countries get money for treating and discarding this garbage for them. Ethical issues aside, global waste trade seems to be the most effective way to allocate resources to manage waste."

While the secondary materials industry has been important since the industrial revolution,[11] the importation of waste to developing

Figure O.2 **Waste Generation by Region**

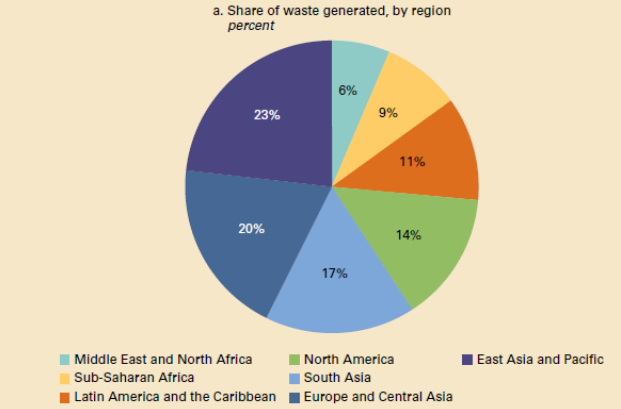
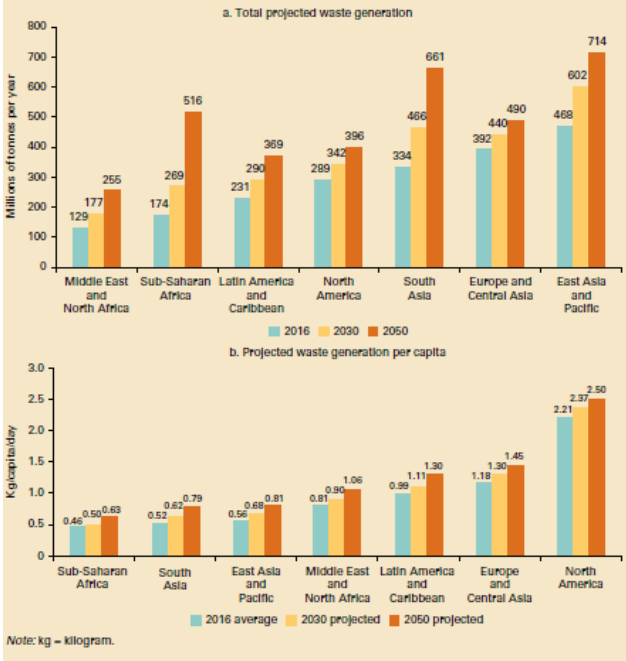
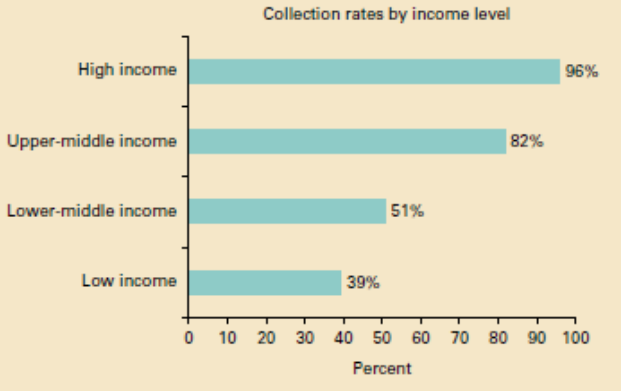


Figure O.3 **Projected Waste Generation by Region**



Note: kg – kilogram.

Figure O.4 **Waste Collection Rates**



Source: World Bank (2018)

8 *See* Kaza, Silpa, Lisa Yao, Perinaz Bhada-Tata, and Frank Van Woerden. 2018. "What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050." Overview booklet. World Bank, Washington, DC. License: Creative Commons Attribution CC BY 3.0 IGO.

9 UNEP, Global Waste Management Outlook, 2015, 2.

10 https://www.think-asia.org/bitstream/handle/11540/10797/NTS-Insight-Global-waste-trade_010719.pdf?sequence=1

11 Global Waste Management Outlook, 2015, 80.

countries took off as a general practice in the '70s. Within a decade, an estimated 30 to 45 million tons of toxic wastes were shipped to non-OECD countries from industrialized nations,[12] in an industry that was largely unregulated until the adoption of the Basel Convention in 1992. Notwithstanding this agreement, the legal and regulated movement of waste is still a multi-billion dollar industry. Data from the United Nations Commodity Trade Database recorded that the world's plastic waste export and import in 2017 was valued at USD 4.5 billion and USD 6.1 billion respectively.[13]

Asia is the destination of choice for waste from the developed world, with China formerly the primary endpoint for global plastics recycling. However, with its Green Fence policy introduced in 2013 and fully implemented at the start of 2018, the country effectively closed its doors to these imports,[14] thereby displacing tons of developed countries' waste to jurisdictions in East Asia and the Pacific with less regulated, ill-prepared and already overburdened waste management systems already unable to deal with local waste in an environmentally sound manner.

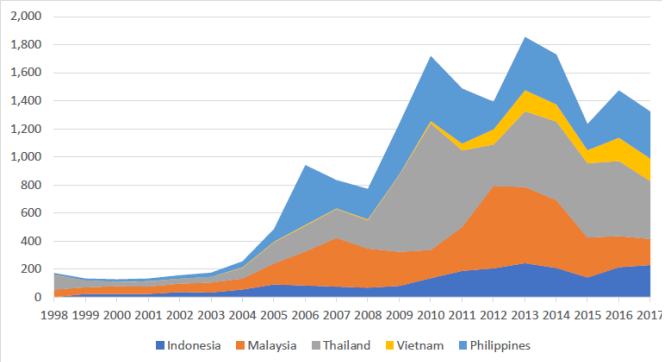
The ASEAN region thus saw an increasing trend in both quantity and industry profit from waste trade. The quantity of plastic waste imports of Indonesia, Malaysia, Thailand, Vietnam, and the Philippines started to expand in 2003, reaching a cumulative price of USD10.76 billion from 1988 to 2017.[15]

MARINE PLASTIC POLLUTION

A report following the recently concluded fifth meeting of the United Nations Environment Assembly (UNEA) has already recognized pollution as the third great environmental crisis of our times, along with climate change and biodiversity loss.[16] By 2017, 8.3 billion metric tons of plastic had been produced worldwide, but only 9 percent of this had been recycled.[17] Current projections estimate that with the ongoing production and waste management trends, roughly 12,000 million tons of plastic waste will be in landfills or the natural environment by 2050.[18] A recent report by the United Nation's International Resource Panel called for a need for systemic changes to address the problem of marine plastic pollution.[19]

Much of this plastic waste ends up in the ocean. The International Union for the Conservation of Nature (IUCN) estimates that at least 8 million tons of plastic make their way into the oceans every year, making up nearly 80 percent of all marine debris from the surface to the deep seas.[20] This poses grave threats to coastal and marine biodiversity and has serious implications on human health, as microplastics make their way through the food chain.

Marine plastic pollution is also closely associated with the waste trade crisis. Between 1988 to 2016, the top ten plastic exporting countries[21] shipped 168 million tons of plastics outside their borders.[22]



Source: United Nations Commodity Trade Database

Not surprisingly, most of this waste was shipped to developing countries, including those in the ASEAN region. 2017 and 2018 data show that Thailand, Indonesia, and Malaysia are top importers of plastic waste from G7 countries,[23] with significant increases between the two years due to China's ban on waste imports. Completing the picture is the 2015 Jambeck, et,al. study which points to five Asian nations—China,

12 Clapp, J. 1994. "The Toxic Waste Trade with Less Industrialized Countries: Economic Linkages and Political Alliances" *Third World Quarterly* 15:3 505-518 https://www.jstor.org/stable/i383015

13 *See* UN Commodity Trade Database, HS code. No. 391510, 391520, 391530, and 391590, https://comtrade.un.org/data/

14 GPSEA (2018) 1 citing R. Geyer et. al., "Production, use and fate of all plastics ever made," Science Advances 2017:3

15 https://www.think-asia.org/bitstream/handle/11540/10797/NTS-Insight-Global-waste-trade_010719.pdf?sequence=1 citing UN Commodity Trade Database, HS code. No. 391510, 391520, 391530, and 391590, https://comtrade.un.org/data/

16 *See*: United Nations Environment Programme. 2021. *Making peace with nature: A scientific blueprint to tackle the climate, biodiversity and pollution emergencies - Key Messages and Executive Summary*. Available online at https://wedocs.unep.org/xmlui/bitstream/handle/20.500.11822/34949/MPN_ESEN.pdf (accessed 12 March 2021)

17 Brooks, A., S. Wang and J. Jambeck. 2017. "The Chinese import ban and its impact on global plastic waste trade," *Science Advances* 2018: 4, 1 citing R. Geyer et. al., "Production, use and fate of all plastics ever made," Science Advances 2017:3

18 Greenpeace Southeast Asia (GPSEA). 2018. *Southeast Asia's Struggle Against the Plastic Waste Trade*, 6 citing R. Geyer et. al., "Production, use and fate of all plastics ever made," Science Advances 2017:3

19 *See* IRP (2021). Policy options to eliminate additional marine plastic litter by 2050 under the G20 Osaka Blue Ocean Vision. Fletcher, S., Roberts, K.P., Shiran, Y., Virdin, J., Brown, C., Buzzi, E., Alcolea, I.C., Henderson, L., Laubinger, F., Milà i Canals, L., Salam, S., Schmuck, S.A., Veiga, J.M., Winton, S., Youngblood, K.M. Report of the International Resource Panel. United Nations Environment Programme. Nairobi, Kenya. Available at https://www.resourcepanel.org/reports/policy-options-eliminate-additional-marine-plastic-litter

20 International Union for the Conservation of Nature (IUCN). 2018. *Issues Brief: Marine Plastics*. Available online https://www.iucn.org/sites/dev/files/marine_plastics_issues_brief_final_0.pdf, (accessed 20 January 2021)

21 These countries are (by rank, 1-10): Hong Kong; United States; Japan; Germany; Mexico; United Kingdom; Netherlands; France; Belgium; Canada.

22 https://ourworldindata.org/plastic-pollution#how-much-of-ocean-plastics-come-from-land-and-marine-sources; https://ourworldindata.org/plastic-pollution#how-much-of-ocean-plastics-come-from-land-and-marine-sources

23 *See* https://live.staticflickr.com/65535/46847458775_1717e54afe_o.jpg

Indonesia, the Philippines, Thailand, and Vietnam—as responsible for more than half of the plastic waste flowing into the oceans every year.[24]

COVID-19 PANDEMIC IMPACTS

The COVID-19 pandemic brought about particular impacts in the areas of (1) redistribution of waste production, and (2) changes in waste treatment activity.[25] With national and local-level lockdowns instituted to stem the virus's transmission and the concomitant slowdown of economic activity, waste production shifted from the industrial and commercial sectors to residential areas. Medical waste also saw a significant increase - a World Bank study estimated a 40 percent increase in the volume of medical waste, as well as an increase in hazardous waste, likely due to higher production from pharmaceutical and medical sectors.[26]

One study noted that the pandemic has had negative effects on waste management, such as increasing both medical waste and household waste.[27] This can potentially lead to further infections due to poor management of infectious waste. A substantial slowdown in recycling efforts was noted, and landfills quickly filled with materials that would otherwise be recyclable. The pandemic also increased demand for single-use plastic products, particularly for Personal Protective Equipment and packaging.[28] The rapid transmission of COVID-19 has had serious impacts, especially in developing countries, including those in ASEAN, where a weak infectious waste management system potentially sped-up the transmission of COVID-19.[29]

Indonesia particularly faces this challenge.[30] As the most populous country in ASEAN, Indonesia is required to make extra efforts in waste management, especially the current explosive amount of medical waste. Moreover, as an archipelagic country, it is vulnerable to medical waste leakage into waterways. Although the amount of waste sent to landfills has shrunk by up to 40 percent due to the decrease in waste generated in offices, restaurants, and industries, the growing amount of medical waste is a pressing issue that must be urgently addressed.

The same is true for most other ASEAN countries. Local governments in particular are feeling the strain of increased medical waste due to the pandemic.[31] The Asian Development Bank (ADB) has reported that

City	Population *(World Population Review)*	Additional Medical Waste	Total Possible Production Over 60 Days
Manila	14 million	280 t/d	16,800 tons
Jakarta	10.6 million	212 t/d	12,750 tons
Kuala Lumpur	7.7 million	154 t/d	9,240 tons
Bangkok	10.5 million	210 t/d	12,600 tons
Ha Noi	8 million	160 t/d	9,600 tons

Source: Asian Development Bank (2020)

few cities can deal with the expected excessive amounts of waste. Looking at China's experience during the start of the pandemic, the ADB predicts that major ASEAN cities will see an increase of between 154 tons to 280 tons per day of additional medical waste.[32]

INTERNATIONAL POLICY FRAMEWORK

BASEL CONVENTION AND BASEL BAN AMENDMENT

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention) was adopted on 22 March 1989 and entered into force on 5 May 1992. It is one of the most widely accepted multilateral environmental agreements - 187 State parties have ratified it to date. Of the ASEAN Member States, only Laos is not a Party to the Convention.

The overarching objective of the Basel Convention is to protect human health and the environment against the adverse effects of hazardous wastes. Its scope of application covers a wide range of wastes, which are classified as "hazardous" based on their origin and/or composition and their characteristics. It also includes two types of wastes defined as "other wastes"—namely, household waste and incinerator ash.[33] Parties to the Convention must ensure that transboundary movements of wastes are reduced to the minimum, consistent with environmentally sound and efficient management.

On the whole, the Basel Convention reflects an approach premised upon the view that wastes should, as far as possible, be disposed of

24 *See* https://www.nationalgeographic.com/environment/article/us-plastic-pollution#:~:text=The%20top%20five%20plastic%20polluters,wealthy%20nation%20on%20the%20list and https://www.nationalgeographic.com/environment/article/us-plastic-pollution#:~:text=The%20top%20five%20plastic%20polluters,wealthy%20nation%20on%20the%20list.

25 Sinha, R., J. Michelsen, E. Ackura, L. Nije. 2020. *COVID-19's Impact on the Waste Sector International Finance Corporation* available online at https://www.ifc.org/wps/wcm/connect/dfbceda0-847d-4c16-9772-15c6afdc8d85/202006-COVID-19-impact-on-waste-sector.pdf?MOD=AJPERES&CVID=na-eKpl (accessed 25 January 2021)

26 Ibid 3

27 *See* https://www.eria.org/uploads/media/policy-brief/Strengthening-Waste-Management-Policies-to-Mitigate-the-COVID19-Pandemic-.pdf

28 Sinha, R., J. Michelsen, E. Ackura, L. Nije. 2020. *COVID-19's Impact on the Waste Sector International Finance Corporation*, 3 available online at https://www.ifc.org/wps/wcm/connect/dfbceda0-847d-4c16-9772-15c6afdc8d85/202006-COVID-19-impact-on-waste-sector.pdf?MOD=AJPERES&CVID=na-eKpl (accessed 25 January 2021)

29 https://www.eria.org/uploads/media/policy-brief/Strengthening-Waste-Management-Policies-to-Mitigate-the-COVID19-Pandemic-.pdf

30 Ibid

31 *See* https://www.rappler.com/environment/philippines-local-governments-juggle-covid-19-response-garbage-problem

32 https://www.adb.org/sites/default/files/publication/578771/managing-medical-waste-covid19.pdf

33 *See*: http://www.basel.int/TheConvention/Overview/tabid/1271/Default.aspx

in the state in which they were generated.[34] Parties may exercise their right to prohibit the importation of hazardous wastes or other wastes for disposal. Parties shall also not permit the export of these wastes without the written consent of the Parties that have prohibited their import.[35] This also allows Parties to unilaterally declare a specific import as hazardous waste even if it is not listed in the Convention annexes as such. In addition, Parties are enjoined to take measures to ensure that its generation of hazardous wastes and other wastes is reduced to a minimum and that adequate disposal facilities for the environmentally sound management of such wastes are available.[36]

Nevertheless, it soon became apparent that the Convention's provisions were insufficient to address the transboundary movement of hazardous wastes. As more global North countries exported large quantities of their waste to the global South, the waste trade began to be rightly seen as an environmental justice issue. Less developed countries could not frequently deal with these wastes safely, and the waste imports that they found themselves saddled with had serious impacts on human health and environmental quality.[37]

Growing concerns around this issue led to the adoption of the Basel Ban Amendment in 1995, which imposed additional obligations on the Parties listed in Annex VII[38] and prohibited the transboundary movements of certain classes of waste to countries not included in the Annex. Simply put, the Amendment prohibits all shipments of hazardous waste (defined broadly under the Convention and including anything hazardous in the exporting or importing country) to non-Annex VII countries. This prohibition extends to a subset of hazardous wastes (defined under Article 1(1)(a) of the Convention), as these can no longer be shipped to non-Annex VII countries for recycling or similar recovery operations.

However, the ban took 25 years to come into force, following its ratification by Croatia in 2019. Of the ASEAN Member States (AMS), only Indonesia and Malaysia have ratified the amendment, while Brunei has accepted it.

While they do not provide a perfect solution to the problem of transboundary movement of hazardous wastes, the Basel Convention and Amendment help address most of the relevant issues in this regard.[39] Moreover, they provide State parties with a venue to consider emerging concerns and to discuss new obligations to tackle these problems. More recently, for example, the Convention has taken on the ubiquitous transboundary movement of plastic wastes and microplastics.

WASTE ISSUES IN OTHER MULTILATERAL ENVIRONMENTAL AGREEMENTS

Apart from the Basel Convention, other Multilateral Environmental Agreements (MEAs) focus on specific waste-related issues.

The Stockholm Convention on Persistent Organic Pollutants, popularly known as POPs, details measures to reduce or eliminate releases from stockpiles of listed chemicals, or wastes contaminated with these chemicals. Under Article 6, Parties commit to take measures to ensure that these products and wastes are not disposed of in such a way that "may lead to the recovery, recycling, reclamation, direct reuse or alternative uses of persistent organic pollutants." Export of these wastes is also regulated, as these may not to be shipped to other countries "without taking into account relevant international rules, standards and guidelines."[40]

Similarly, Article 11 of the Minamata Convention on Mercury regulates Parties in their management of mercury waste. These may only be recovered, recycled, reclaimed or re-used for allowable purposes, or for environmentally-sound disposal. The Convention likewise reiterates the Basel Convention's applicability and prohibits the international transport of these wastes, except for environmentally sound disposal.[41]

Other MEAs have also raised alarm over the growing problem of waste and have linked this to their areas of work. While these do not refer to the waste trade specifically, these studies, measures, guidance, and decisions are undoubtedly concerned over the implications of improper waste disposal, regardless of its source.

The linkages between waste management and actions to address climate change are well recognized. Greenhouse gas emissions from plastic waste alone could total 1.34 gigatons per year by 2030 - equivalent to the emissions from almost 300 large coal-fired power plants.[42] A survey of the first round of countries' Nationally Determined Contributions (NDCs) submitted pursuant to the Paris Agreement showed that many had specified the waste sector under their climate change mitigation

34 Sands (2003) 569

35 Basel Convention, Art. 4(1)

36 Basel Convention, Art. 4(2)

37 Lipman, Z. 2015. "Trade in Hazardous Wastes." *International Environmental Law and the Global South*, S. Alam, S. Atapattu, CG Gonzalez, and J Razzaque, eds. Cambridge: Cambridge University Press, 4

38 Annex VII countries include Parties and other States which are members of the Organization for Economic Cooperation and Development (OECD), the European Community (EC, now the European Union), and Liechtenstein

39 Sands, P. 2003. *Principles of International Environmental Law*. Cambridge: Cambridge University Press, 569

40 *See*: http://www.pops.int/TheConvention/Overview/TextoftheConvention/tabid/2232/Default.aspx

41 *See*: https://www.mercuryconvention.org/Portals/11/documents/Booklets/COP3-version/Minamata-Convention-booklet-Sep2019-EN.pdf

42 Centre for International Environmental Law (CIEL). 2019. P*lastics and Climate: The Hidden Costs of a Plastic Planet* Executive Summary, 1, available at https://www.ciel.org/wp-content/uploads/2019/05/Plastic-and-Climate-Executive-Summary-2019.pdf (accessed 20 January 2021)

measures.[43] Waste management was also found to have implications for climate change adaptation, as uncollected and improperly disposed waste exacerbated flooding, particularly in urban areas.[44]

Likewise, work under the United Nations Convention on Biological Diversity has also focused on waste, especially as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) Global Assessment Report identified pollution as one of the five major drivers of biodiversity loss and ecosystems degradation.[45]

This was also confirmed by the most recent Global Biodiversity Outlook, which also specified plastics pollution in marine ecosystems, pointing out that "actions are taken in many countries to minimize plastic waste have not been sufficient to reduce this source of pollution."[46] Voluntary practical guidance on preventing and mitigating the impacts on marine debris on coastal and marine biodiversity and habitats[47] was adopted at CBD COP13 in 2016, and Decision 14/10 adopted at COP14 urged Parties to increase their efforts to "minimize and mitigate the impacts of marine debris, in particular plastic pollution, on marine and coastal biodiversity and habitats."[48]

Other conventions have also raised concerns over the impacts of waste on the environment. The Global Wetlands Outlook prepared under the Ramsar Convention recognized the impacts of pollution - including plastic debris and other contaminants from various sources on wetlands.[49] Similarly, the Convention on Migratory Species adopted Resolution 12.20 on the Management of Marine Debris. A subsequent Decision on the Impacts of Plastic Pollution on Terrestrial, Marine, and Avian Species directed Parties to continue to submit information on the implementation of the Resolution, as well as further research, cooperation, and mobilization of finance to address this issue.[50]

GLOBAL AGREEMENT ON MARINE PLASTICS

An Ad Hoc Experts Group (AHEG) was established by the United Nations Environment Program (UNEP) in 2017 and was tasked with, among others, analyzing potential response options related to marine litter and microplastics.[51] Pursuant to this mandate, and following extensive scoping and stocktaking, the AHEG identified several options for continued work on the issue.

The list formally introduced the possibility of a new global agreement or instrument to provide a legal framework on marine litter, intending to facilitate national responses especially for those countries with limited resources and capacities. The AHEG outlined several potential elements for this agreement, including global and national pollution reduction targets, design standards, product phase-outs, and methodologies for monitoring.[52]

Already, there has been much support for a new legally binding international agreement on marine litter and microplastics, which "acknowledges differentiated situations and responsibilities, takes into account the lifecycle of plastic and which provides incentives and support where needed through technical assistance, financing and research."[53] At the recently concluded United Nations Environment Assembly, Ecuador, Ghana, and Germany sought to move this forward, as they committed to jointly organize a global ministerial conference on marine litter and plastic pollution, scheduled for late 2021.[54]

This proposed international agreement will be a significant step in helping ASEAN countries improve waste management, and address the added problems brought about by waste trade. Countries that export waste to developing countries in this region would need to consider the impacts of those shipments on marine litter – by looking at the waste management capacities of the receiving state. For its part, ASEAN has initiated regional cooperative efforts on the issue of marine litter, which are described in Section III.

43 Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). 2017. *Briefing Series: Sectoral Implementation of Nationally Determined Contributions*, 1 available online at https://www.transparency-partnership.net/system/files/document/NDC%20Brief%20-%20Circular%20Economy%20and%20Solid%20Waste%20Management.pdf (accessed 13 January 2021)

44 GIZ (2017) 3

45 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). 2019. *The Global Assessment Report on Biodiversity and Ecosystem Services - Summary for Policymakers*. Bonn, Germany: IPBES Secretariat, 12

46 Secretariat of the Convention on Biological Diversity. 2020. *Global Biodiversity Outlook 5*, 14 available online at https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf (accessed 29 December 2020)

47 Annex to Decision 13/10 (10 December 2016)

48 Decision 14/10 (30 November 2018)

49 Ramsar Convention on Wetlands. 2018. *Global Wetland Outlook: State of the World's Wetlands and their Services to People*, 32 available online at https://www.ramsar.org/sites/default/files/documents/library/gwo_e.pdf (accessed 13 January 2021)

50 Convention on the Conservation of Migratory Species of Wild Animals. 2020. *Decisions 13.122 to 13.125 - Impacts of Plastic Pollution on Aquatic, Terrestrial and Avian Species* available online at https://www.cms.int/en/page/decisions-13122-13125-impacts-plastic-pollution-aquatic-terrestrial-and-avian-species (accessed 13 January 2021)

51 Chair's Summary of the Work of the Ad Hoc Open-ended Expert Group on Marine Litter and Microplastics for Consideration by the United Nations Environment Assembly at its Fifth Session https://wedocs.unep.org/bitstream/handle/20.500.11822/34635/K2100061.pdf?sequence=11&isAllowed=y 1

52 Ibid. 6-7

53 Global Partnership on Marine Litter (2020) Outcomes of the Townhall (organized 8 June 2020) https://environmentassembly.unenvironment.org/turning-tide-marine-plastics-how-unea-5-can-be-turning-point-open-meeting

54 *See*: Ghana Ministry of Environment, Science, Technology and Innovation (2021) "Ghana to host international ministerial conference on marine litter and plastic pollution" Available online at https://mesti.gov.gh/ghana-host-international-ministerial-conference-marine-litter-plastic-pollution/ (accessed 12 March 2021)

III ASEAN Policy Landscape

Within the context of global efforts and international agreements discussed above, the ASEAN community has also put in place a legal and policy landscape which can be made applicable to waste trade.

This section will highlight both regional and national level efforts in the AMS.

Incinerators burning plastic waste for fuel choke the residents of Tropodo, Indonesia with a sky full of smoke.

ASEAN DECLARATIONS, POSITIONS AND ACTION PLANS

The ASEAN Community Vision 2025 adopted in 2013 sets out a general undertaking on the promotion of environmental protection "to meet the current and future needs" of the region's peoples.[55] Likewise, the 2015 ASEAN Charter includes a broad commitment to sustainable development.

Two regional declarations have made specific reference to the problems around pollution and waste management.

In 2017, the Member States adopted the **ASEAN Joint Declaration on Hazardous Chemicals and Wastes Management.** This statement called upon the AMS to strengthen their cooperation and coordination towards the establishment of environmentally sound systems for the management of hazardous chemicals and wastes, including through measures in waste prevention, reduction, reuse, recycling, and recovery. It included a call to establish networks between the AMS to improve the supervision of trade in hazardous chemicals and wastes and enhance information exchange to prevent the illegal traffic of such wastes into the ASEAN territory. Notably, this Declaration also encouraged the AMS to ratify the Basel Ban Amendment, and accelerate its implementation.[56]

In 2019, the AMS also adopted the **Bangkok Declaration on Combating Marine Debris in the ASEAN Region**, wherein they committed to strengthening national-level and collaborative actions to prevent and reduce marine debris, particularly from land-based activities. The Framework Action on Marine Debris is comprised of four (4) priority areas namely: (i) Policy Support and Planning; (ii) Research, Innovation, and Capacity Building; (iii) Public Awareness, Education, and Outreach; and (iv) Private Sector Engagement. As a follow-up and to implement the Declaration and Framework, the ASEAN Regional Action Plan for Combating Marine Debris (2021-2025) was adopted in May 2021. The goal of the plan, through its 14 regional actions, is to enhance coordination at the regional and international levels for achieving sustainable management of coastal and marine environments through responding to marine plastic pollution.[57]

To support the implementation of the environment-related provisions of the ASEAN Socio-Cultural Community Blueprint 2025, an ASEAN strategic plan on the environment is currently being developed to translate the blueprint into a more detailed plan of actions which shall serve as a guiding document for ASEAN in promoting ASEAN cooperation on the environment until 2025.[58] Seven strategic priorities have been identified under the strategic plan:

- Nature conservation and biodiversity;
- Coastal and marine environment;
- Water resources management;
- Environmentally sustainable cities;
- Climate change;
- Chemicals and waste; and
- Environmental education and sustainable consumption and production.

In addition to regional calls and statements, AMS have collaborated with neighboring Pacific island States and international organizations on efforts to combat specific waste management issues. In 2009, the Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTT-CFF) brought together the governments of Indonesia, Malaysia, the Philippines, Papua New Guinea, the Solomon Islands, and Timor Leste in a multilateral partnership to collectively address challenges to coastal and marine biodiversity, including through the reduction of marine plastic pollution.[59] More recently in 2020, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), in partnership with the Government of Japan, also launched the "Closing the Loop" project, aimed at reducing plastic waste pollution and leakages in the marine environment from Southeast Asian cities.[60]

55 https://www.asean.org/storage/images/2015/November/aec-page/ASEAN-Community-Vision-2025.pdf

56 https://asean.org/wp-content/uploads/2017/11/Annex-2_Joint-Declaration-HCWM-Adopted-by-AMME.pdf

57 ASEAN Regional Action Plan for Combating Marine Debris in the ASEAN Member States (2021-2025) SUMMARY, 2021 available at https://asean.org/storage/FINAL_210524-ASEAN-RAP-Summary_Ready-to-Publish_v1.pdf

58 *See* https://environment.asean.org/about-asean-cooperation-on-environment/#:~:text=ASEAN%20cooperation%20on%20the%20environment,sustainable%2C%20resilient%2C%20and%20dynamic.

59 Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF). 2016. "Coral Triangle Day Appeals More Attention and Real Action on the Real Threat: Plastic Pollution," available at http://coraltriangleinitiative.org/news/coral-triangle-day-appeals-more-attention-and-real-action-real-threat-plastic-pollution (accessed 25 January 2021)

60 United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). 2020. "New UN Initiative to Reduce Plastic Pollution in ASEAN Cities", available at https://www.unescap.org/news/new-un-initiative-reduce-plastic-pollution-asean-cities (accessed 24 January 2021)

SURVEY OF WASTE MANAGEMENT POLICIES AND MEASURES IN ASEAN

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam
National law and/or policy on waste/waste management	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
National action plan/strategy on waste/waste management	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Single Use Plastic (SUP) bans or phase-outs	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Taxes or levies on SUPs or other waste products	✗	✓	✓	✗	✓	✓	✓	✗	✓	✓
Other law and/or regulation of SUPs, plastic products, etc.	✓	✓	✓	✓	✗	✗	✓	✗	✗	✓
National law and/or policy on recycling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
National policies/regulations on waste trade	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Repatriation of illegally imported waste	✗	✓	✓	✗	✓	✗	✓	✗	✓	✓
Signed and ratified the Basel Convention	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ratified the Basel Ban Amendment	✓	✗	✓	✗	✓	✗	✗	✗	✗	✗

LEGEND ✓ National ✓ Voluntary ✓ Localized ✓ Partial

NATIONAL-LEVEL EFFORTS

All AMS have passed regulations on waste management - covering solid waste, and hazardous and/or toxic waste. Countries such as Cambodia, Malaysia, and the Philippines, have dedicated instruments on this issue, while the other AMS have integrated sections on waste management in their basic environmental acts. Save for Laos, all AMS have also adopted national action plans or strategies on waste management. Most tackle the problem of solid waste generally, although Thailand's national road map references hazardous waste specifically.

In line with these plans, Brunei, Cambodia, Malaysia, Singapore, Thailand, and Vietnam have also instituted partial bans on specific single-use plastic products, such as plastic bags, lids, and straws. Other AMS have similar prohibitions at the local level, including bans on SUP bags, straws, and Styrofoam in major Indonesian and Philippine cities. In addition, Malaysia, Myanmar, Thailand, and Vietnam implement national-level levies on SUP bags, with similar measures on a local scale in Indonesia and the Philippines.

On international waste trade, Cambodia, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam have shipped back illegally imported waste to their countries of origin. Many of these experiences are noted from 2019, following the full implementation of China's Green Fence policy in 2018, and are described further in Section IV.

IV
Waste Trade in ASEAN

Waste management is a critical concern for the ASEAN community. The legal and policy landscape both at the regional and national level reflects the waste challenges faced by AMS. Waste trade adds a new dimension to this issue, as imported waste adds to an already overburdened waste management system.

This section will have a closer look at waste trade in ASEAN and how it has impacted the region and its people.

A man in the Philippines cuts open a bag to reveal trash from a container shipped from Hong Kong.

ASEAN EXPERIENCE WITH WASTE TRADE

China's Green Fence policy, first announced in 2013 and fully implemented in 2018, effective ly closed the country's doors to the importation of waste. As China had been the primary destination of recyclables and other waste from developed countries, the waste displaced by its new measures soon found its way to less regulated jurisdictions in East Asia and the Pacific – and specifically to ASEAN countries.

A study from Greenpeace Southeast Asia (GPSEA) found that the ASEAN region in particular "experienced a 171 percent surge of plastic waste imports from 836,529 tons in 2016 to 2,231,127 tons in 2018." By 2018, the ASEAN region had taken in 27 percent of global plastic waste imports, more than double the 11 percent that it received the year before.[61] While accepting these waste imports may initially seem economically profitable for developing countries, this is not without significant risks. Hazardous materials are often mixed in with recyclable waste, and companies engaged in recycling may be dumping unprocessed or untreated waste.

Mislabeling or misdeclaration of waste is also common, with shippers using "non-hazardous waste codes for hazardous wastes or using product codes for hazardous wastes."[62] However, developing countries often lack resources for monitoring, investigation, and prosecution of these illegal waste imports.[63]

Nevertheless, ASEAN countries have taken strong national positions against the entry of foreign waste. In addition to the repatriation of foreign waste shipments, countries have sought to put measures in place to prevent further imports:

- In 2019, Thailand reduced the quota of plastic waste that could be imported from other countries.[64]
- Vietnam has expressed that it would stop the importation of plastic scrap by 2025,[65] and Malaysia has announced similar plans, which may take effect this year, 2021.[66]
- Indonesia's five-year action plan (2020-2025) for plastic waste reduction also proposes to institute additional regulations on non-hazardous plastic waste and scrap,[67] although this announcement has been met by pushback from industry associations, who claim that the "delay in customs clearance in Indonesian ports has led to waste being exported to Vietnam at a discount."[68]

ASEAN AND GLOBAL WASTE TRADE - WHY IT MATTERS

The discussions in this section show that the global waste trade has ramifications for the ASEAN region. However, despite the existing legal frameworks under the Basel Convention, and even in other MEAs, Southeast Asian countries continue to be at risk to the influx of waste – legal and illegal – from the developed and industrialized world.

Tackling waste trade in ASEAN is important for several reasons.

First, **many ASEAN member states are already facing a waste crisis due to the volume of domestic waste.** Poor implementation and enforcement of laws, coupled with limited resources and poor waste management infrastructure create a deadly mix resulting in this crisis. Thus, if you add the imported waste, ASEAN countries run the risk of their waste management systems being inundated and unable to handle the volume of trash and recyclables even. The result is that garbage is simply dumped and discarded where most convenient – in the open environment; in rivers, streams, and lakes; out on the streets; and into the oceans and seas.

Second, **ASEAN countries already need to deal with other environmental issues as one of the most biodiverse and ecological and natural resource-rich regions in the world.** This reality gives more urgency to the need for a regional response to waste trade. Poor waste management and the impact of waste on fragile ecosystems aggravates an already deteriorating biodiversity in ASEAN. Increasing waste flows from outside the region will only exacerbate the problem and increase the risk of untreated, dangerous, toxic, and hazardous waste ending up in the environment.

Third, **the risks brought about by climate change, and the need to meet climate adaptation and mitigation goals, are also related to the issue of waste trade.** One of the ways of addressing climate change is by dealing with waste – not just how it is handled and disposed of, but also getting to the source of it by looking at our consumption and production patterns. The manufacture, distribution, and use of products as well as management of the resulting waste-all result in greenhouse gas emissions.[69] The production, consumption, and disposal of plastics – basically its life cycle – contributes to climate change.[70]

61 GPSEA (2018) 4

62 Rucevska, I. et. al, (2015) 24

63 Ibid.

64 "Curbs slash imports of plastic, e-waste." 2019. Bangkok Post at https://www.bangkokpost.com/business/1707226/curbs-slash-imports-of-plastic-e-waste (accessed 2 December 2019)

65 Nguyen, D. 2019. "Vietnam to end plastic scrap imports from 2025." *VN Express International* at https://e.vnexpress.net/news/business/economy/vietnam-to-end-plastic-scrap-imports-from-2025-3900351.html (accessed 2 December 2019)

66 "Malaysia to curb imports of plastic waste" 2018. *Reuters* https://www.reuters.com/article/us-malaysia-waste-imports/malaysia-to-curb-imports-of-plastic-waste-minister-idUSKCN1N028P (accessed 12 February 2021)

67 Ministry of Environment and Forestry. 2020. National Plastic Waste Reduction Strategic Actions for Indonesia, 25, available online at https://wedocs.unep.org/bitstream/handle/20.500.11822/32898/NPWRSI.pdf?sequence=1&isAllowed=y (accessed 29 December 2020)

68 The Straits Times, "Plastic waste piles up as Indonesia's import crackdown backfires" The Straits Times (August 2, 2019) https://www.straitstimes.com/asia/se-asia/plastic-waste-piles-up-as-indonesias-import-crackdown-backfires

69 *See* https://archive.epa.gov/wastes/conserve/tools/payt/web/html/factfin.html

70 *See* https://yaleclimateconnections.org/2019/08/how-plastics-contribute-to-climate-change/

Moreover, mismanaged waste contributes to the disastrous effects of climate-induced disasters. In megacities at high risk to climate change such as Manila and Jakarta, clogged drains and chocked rivers due to trash worsens the impact of floods due to more severe weather. Some countries are also considering establishing waste incineration facilities (as a form or waste-to-energy project) to deal with the rising volume of waste. This runs counter to the goal of reducing carbon emissions, in line with a global commitments such as the Paris Agreement.

These are just a few of the reasons why waste trade is a critical issue for ASEAN countries. There is an urgent need for concerted regional efforts for an ASEAN response to the waste trade crisis before it is too late.

WASTE TRADE IN SELECTED ASEAN MEMBER STATES

To deepen the analysis of waste trade in ASEAN, this report will take a deeper look at the issue in the following countries: Indonesia, Malaysia, the Philippines, and Thailand.

INDONESIA

Estimates from 2018 pegged Indonesia's waste generation at 85,000 tons a day, with a projected surge to 150,000 tons a day by 2025. Previous estimates from the Ministry of Environment and Forestry of Indonesia noted 65.8 million tons of waste per year as of 2017. An approximate 40 percent of this total was from households, and this was also expected to increase further as growing urban populations produced additional waste.[71] Indonesia's plastic waste problem is also significant. A 2015 study identified Indonesia as the world's second-largest plastic polluter, dumping a total of 3.22 Mt of plastic waste into the oceans annually.[72] Further data suggests that imports of plastic waste also rose in 2018 by as much as 141 percent, or an additional 283,000 tons, following the announcement of China's Green Fence policy.[73]

There are two main laws governing waste management in Indonesia, namely Law (Undang-Undang) No. 11 of 2020 or The Job Creation Act, which includes the overarching environmental regulation replacing Law No. 32 of 2009 (Environmental Protection and Management Act), and Law No. 18 of 2008 concerning Waste Management (Waste Management Act), which pertains to waste in general. At the national level, waste management generally falls under the jurisdiction of the Ministry of Environment and Forestry, although specific issues are referred to other offices - waste importation, for example, is within the purview of the Ministry of Trade.

As a general rule, the Waste Management Law prohibits the importation of wastes, both household and specific.[74] However, Minister of Trade Regulation No. 84 of 2019 (MoTR 84/2019, as amended by Minister of Trade Regulation No. 83 of 2020) allows for an exception for non-hazardous and non-toxic substances, which are used as industrial raw materials. These waste imports are allowed for holders of a valid Production-Importer License (Angka Pengenal Importir-Produsen/ API-P) that is issued by the Ministry.[75] These waste imports can only be transported to select harbours within the country, also specified in the regulation.[76] In May 2020, a joint decree was issued from Ministry of Trade, Ministry of Environment and Forestry, Ministry of Industry, and the National Police to set 2 percent maximum contamination in plastic and paper waste shipments.

Officials in Indonesia inspect a container van brimming with imported waste.
© M. Adi Septiono/Nexus 3

Nevertheless, the problem of foreign waste imports is recognized, even if not completely prohibited - in 2018, trade officials reportedly formalized a "registry of trash importers, tougher border checks," and "harsher punishments for violators" as a response to the increase in plastic waste imports, especially shipments of mixed and unsorted waste were discovered.[77] Illegal waste shipments have also been repatriated to importers in the United States, Australia, France and Hong Kong,[78] even as the Basel Action Network and Nexus3 has reported that

71 World Bank Group et al (2018) Indonesia Marine Debris Hotspot - Rapid Assessment Synthesis Report. Available online at http://documents1.worldbank.org/curated/en/983771527663689822/pdf/Indonesia-Marine-debris-hotspot-rapid-assessment-synthesis-report.pdf, accessed 21 April 2021

72 Ministry of Environment and Forestry, Republic of Indonesia et al (KLHK) (2020) National Plastic Waste Reduction Strategic Actions for Indonesia. Available online at https://wedocs.unep.org/bitstream/handle/20.500.11822/32898/NPWRSI.pdf?sequence=1&isAllowed=y. accessed 27 December 2020

73 Reuters (2019) "Indonesia plans new rules to curb jump in imports of plastic waste," Reuters Available online at https://www.reuters.com/article/us-indonesia-environment-plastic/indonesia-plans-new-rules-to-curb-jump-in-imports-of-plastic-waste-idINKCN1UL1E4 (accessed 21 April 2021); see also Ismawati, Y, Septiono, Moh. Adi. (2019) Plastic Waste Trade in Indonesia. Page 28, available at https://16edd8c0-c66a-4b78-9ac3-e25b63f72d0f.filesusr.com/ugd/13eb5b_baf87bf54c7d4954ad706d0820ebdf7d.pdf?index=true

74 Art. 29 para (1) b., Art. 39 para (1) & (2) Waste Management Law

75 Art. 4 MoTR 84/2019

76 Art. 12 MoTR 84/2019.

77 Ibid. Reuters (2019)

78 Siregar, K. (2019) "My house is full of garbage: In West Java, imported waste worsens living conditions of villagers," Channel News Asia Available online at https://www.channelnewsasia.com/news/asia/indonesia-imported-waste-foreign-bekasi-burangkeng-west-java-11822250 - :~:text=INDONESIA TACKLING FOREIGN

several containers have found their way to other developing country jurisdictions.[79] The influx of waste imports has also overloaded local landfills, often already saturated with municipal waste, to the detriment of nearby communities.[80]

MALAYSIA

Malaysia's Solid Waste and Public Cleansing Management Act 2007 (Act 672) is the key legislation for the management of controlled solid waste. This law also provided for the establishment and mandate of the Solid Waste and Public Cleansing Management Corporation (SWCorp), under the Ministry of Housing and Local Government (KPKT). The KPKT, which also oversees the federal Department of National Solid Waste Management (JPSPN) and. The KPKT also coordinates with the Ministry of Environment and Water (KASA) and the Department of Environment to ensure that recyclers comply with environmental regulations and waste management schedules, particularly as regards industrial and household e-waste.

The Local Government Act 1976 (Act 171) as amended by Act A1311 (2007) also applies to municipal solid waste management. This is handled by the respective local government authorities and is supervised by the KPKT in Malaysia's the Peninsular States. The Borneo states of Sabah and Sarawak have their own Ministry of Housing and Local Government, although this body also tends to align its policies with those of the federal ministry.

The most recent data estimates Malaysia's plastic waste generation at 0.94 million tons per year,[81] with 0.14 to 0.37 million tons of this total ending up washed into the oceans.[82] The national rate of recycling is also relatively low at 28 percent,[83] and recycling plastic is limited to materials that fall under Categories 1, 2, and 5. In response to this, the country had previously targeted a recycling rate of 30 percent, to be achieved by 2020.[84]

In addition to nationally-generated waste, 2018 data shows that an estimated 658,000 tons of plastic were imported to Malaysia, primarily from Germany, Japan, the United States, and the United Kingdom.[85] In the same year, the former Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC) uncovered the illegal

Plastic waste stored in a factory ground in Sungai Petani, flouting law.
© Mageswari Sangaralingam / Friends of the Earth Malaysia

dumping of plastic wastes that entered the country in shipping containers from developed nations. Illegal dumpsites and burning facilities in several parts of the country were also found, as illegal operators disposed of these imported plastics via open burning, with detrimental effects on the health and welfare of nearby residents.

This discovery led the government to shut down 218 illegal plastic recycling factories that were found to be in contravention of the waste management regulations. These experiences were especially marked in Penang, where many unrecyclable waste imports are disposed of or burned in these illegal recycling facilities. Despite this, Penang boasts of the highest recycling rate in the country, an effective waste segregation-at-source policy, and bans and levies on many single-use plastic products. The illegal waste trade jeopardizes these initiatives, adding a burden to the efforts to reduce locally generated waste.[86]

Throughout 2019 and 2020, the Malaysian government has returned shipping containers of illegal waste imports to exporting countries. With international collaboration, approximately 150 containers holding an estimated 3737 metric tons of illegal plastic wastes were successfully repatriated, with additional shipments for repatriation expected in 2021.

THE PHILIPPINES

The latest data from the Philippines' Department of Environment and Natural Resources (DENR) calculated the annual national waste

WASTE PROBLEM&text=Official data from Indonesia's statistics,last year to 283,000 tonnes. (accessed 21 April 2021)

79 Gokkon, B. (2019) "Indonesia re-exporting illegal waste to other countries, report finds," *Mongabay* Available online at https://news.mongabay.com/2019/11/indonesia-waste-plastic-export-import-illegal/ (accessed 21 April 2021(; see also BAN, Nexus3. (2019). Report on fate of re-exports of seized illegal imports of waste from the USA to Indonesia. Available at http://wiki.ban.org/images/7/7f/Report_USContainer_Re-exports_Indonesia.pdf.

80 Ibid. Siregar (2019); see also Petrlik, J., Ismawati, Y., DiGangi, J., Arisandi, P., Bell, L., & Beeler, B. (2019). Plastic Waste Flooding Indonesia Leads To Toxic Chemical Contamination Of The Food Chain. Retrieved from Jakarta, Surabaya, Prague, San Francisco. Available at https://ipen.org/news/plastic-waste-poisons-indonesia%E2%80%99s-food-chain.

81 Chen, HL, et. al. (2021) "The plastic waste problem in Malaysia: management, recycling and disposal of local and global plastic waste" *SN Applied Sciences* 3 https://doi.org/10.1007/s42452-021-04234-y

82 Jambeck, JR. Geyer, R. & Wilcox, C. et al. (2015). "Plastic waste inputs from land into the ocean". *Science*. 347 (6223):768- 71.

83 Wong, E.K. & Alyssa, F.H (2019). Plastic: An Undegradable Problem. Kuala Lumpur: Khazanah Research Institute. License: Creative Commons Attribution CC BY 3.0. Available online at http://www.krinstitute.org/Views-@-Plastic-;_An_Undegradable_Problem.aspx

84 Ibid.

85 Buchholz, K. (2019). "Malaysia new hub for plastic waste as China exits market". Statista. Available online at https://www.statista.com/chart/18451/trade-flows-of-major-exporters-of-plastic-waste/.

86 Zero-Waste Europe (2021) European waste trade impacts on Malaysia's zero waste future - Case study. Available online at https://zerowasteeurope.eu/wp-content/uploads/2021/01/zwe_case-study_european-waste-trade-impacts-on-malaysias-zero-waste-future_en.pdf.

generation rate for 2019 at 21,016,523 tons. The urban areas of Metro Manila contributed 3,406,662 tons of waste to this total, with approximately 9,286 tons of waste produced per day.[87] Early projections estimate a national waste generation of 77,776 tons per day, or close to 28.39 million tons per year by 2025,[88] though this may already have increased significantly.

Republic Act 9003 (RA 9003) or the Ecological Solid Waste Management Act of 2000 is the country's primary policy on solid waste avoidance, reduction, treatment, and reduction. Notably, this law devolves its implementation to Local Government Units (LGUs), with waste segregation and collection of biodegradable, compostable, and reusable wastes delegated to the barangay (village) level, and municipalities and cities have been given responsibility for the collection of non-recyclable materials and special wastes in their areas of jurisdiction.[89] At the national level, a National Solid Waste Management Commission under the Office of the President coordinates these local efforts and provides technical assistance for the preparation, modification, and implementation of plans and programs.[90]

However, the effective implementation of this law has long been hampered by many operational challenges. Waste segregation and collection rates vary widely among localities, often due to the lack of necessary and appropriate equipment, shortage of workers, and insufficient coordination with, and cooperation from, local constituents.[91] In addition, existing Sanitary Landfills cannot keep up with the increasing amounts of generated municipal waste.[92] As local government and national government agencies struggle to deal with domestic waste, the entry of foreign waste imports further worsens the situation.

Officially, RA 9003 prohibits the importation of toxic wastes misrepresented as "recyclable" or "with recyclable content" and the transport and dumping in bulk of collected domestic, industrial, commercial and institutional wastes in areas other than accredited centers or facilities.[93] Republic Act 6969 (RA 6969), or the Toxic Substances and Hazardous Nuclear Wastes Control Act of 1990 and Republic Act 10863 (RA 10863) or the Customs Modernization and Tariffs Act also prohibit the storage, importation, or bringing into the country, even in transit, of any amount of hazardous waste.[94] However, plastic waste is currently not included in the classification of prescribed hazardous wastes, significantly limiting the application of these bans. In particular, DENR Administrative Order No. 2013-22 allows the importation of recyclable materials containing hazardous substances subject to certain limitations and conditions.[95]

Protestors call for Canada to take back their shipments of waste to the Philippines.
© Manny Calonzo/EcoWaste Coalition

The highly publicized controversy of the hazardous waste imports from Canada between 2013 and 2014 galvanized public awareness and action against the illegal waste imports entering the Philippines. In the years that followed, more containers of imported waste have been apprehended or uncovered throughout the country, with some containers eventually repatriated to their countries of origin,[96] such as the 7,408 metric tons of illegal waste imports that were shipped back to South Korea in 2019-2020. Nevertheless, it is likely that there are hundreds of other cases of illegal waste shipments that have eluded interception and investigation.

THAILAND

As of 2015, Thailand's municipal solid waste generation amounted to approximately 26.85 million tons. Only 20 percent of this was reused, with the remainder disposed in landfills or incinerated. Half of the municipal waste was the organic matter, with plastic waste comprising 20 percent of the total.[97] Industrial waste, on the other hand, totaled

87 Department of Environment and Natural Resources – Environmental Management Bureau (DENR-EMB). 2019. Compliance Updates – Ecological Solid Waste Management Act (RA 9003), at https://emb.gov.ph/wp-content/uploads/2019/11/Compliance-Updates-as-of-October-2019.pdf (accessed December 2, 2019).

88 Senate Economic Planning Office (SEPO) 2017 Philippine Solid Wastes at a Glance at https://senate.gov.ph/publications/SEPO/AAG_Philippine%20Solid%20Wastes_Nov2017.pdf (accessed 24 November 2019).

89 Republic Act 9003 (2000) Sec 10

90 Ibid.

91 Department of Environment and Natural Resources – Environmental Management Bureau (DENR-EMB) 2018 *National Solid Waste Management Status Report* at https://emb.gov.ph/wp-content/uploads/2019/08/National-Solid-Waste-Management-Status-Report-2008-2018.pdf (accessed 24 November 2019), 9

92 Ibid 23

93 RA 9003 Sec 48

94 RA 6969 (1990) Sec. 13(d) and RA 10863 (2016) Sec. 118 (g)

95 *See* https://emb.gov.ph/wp-content/uploads/2018/06/dao-2013-22.pdf

96 *See*: Flores, H. 2019. "Canada trash sails from Philippines; envoys told to return," The Philippine Star at https://www.philstar.com/headlines/2019/06/01/1922695/canada-trash-sails-philippines-envoys-told-return (accessed 19 November 2019), Mogato, A. 2019. "Hong Kong container carrying illegal waste shipped back," Rappler at https://www.rappler.com/nation/232139-hong-kong-container-carrying-illegal-waste-shipped-back-june-2019 (accessed 18 November 2019)

97 Witchai-utcha, N. and O. Chavalparit (2019) "3Rs Policy and plastic waste management in Thailand" *Journal of Material Cycles and Waste Management* (2019)

37.4 million tons, with 7.5 percent considered hazardous waste.[98] Thailand's Hazardous Waste Substance Act (B.E. 2535, 1992) defines and categorizes hazardous substances, and provides for requirements that producers, exporters, and importers must comply with.[99]

Later amendments have been introduced under B.E. 2544 (2001) and 2551 (2008). Substances classified under Category 3, in particular, may not be produced, exported, or imported without a license from the concerned Ministry,[100] as well as registration before production or import.[101] Per the latest listing, Category 3 substances include medical wastes and electronic wastes (including used household appliances), among others.[102] As with the Philippines, plastic waste is not currently classified under these hazardous waste categories.

In addition to these policies, a National Solid Waste Management Master Plan was drawn up in 2016 and will be in effect until 2021. A previously developed Industrial Waste Management Plan (2015-2019), outlined actions to "reduce the flows of waste to final disposal sites, reduce GHG emissions, and improve resource efficiency and energy recovery."[103] Moreover, the 2019 Plastic Waste Management Road Map (2018-2030) seeks to phase out seven types of single-use plastics by 2022 and recycle 100 percent of plastic waste by 2027.[104]

Officials from the Thai Customs Department inspect a container full of waste.
© Karnt Thassanaphak / EARTH Thailand

Thailand is also a destination country for international waste imports - in a span of only three months from May to July 2019, the Thai Customs Department reported ten illegal waste trade cases apprehended at various seaports. Eight of these were waste imports, with one case classified as export and transit. The imports originated from the United Arab Emirates, Japan, the United States, Hong Kong, and Trinidad and Tobago, and consisted of plastic, household, and electronic waste. The movement was facilitated either through false declarations of the containers' contents, or the payment of a higher tax rate to avoid profiling and screening. Perpetrators of these illegal activities ranged from "low profile" importers to larger criminal organizations.[105]

ANALYSIS OF COUNTRY CASE STUDIES

WASTE TRADE IS A COMMON CONCERN FOR ASEAN COUNTRIES

There is no doubt that the four countries surveyed see waste trade as a significant environmental issue. Given that these countries play a significant economic and political role in the region, it can also be safely concluded that waste trade is – and needs to be – an ASEAN issue of concern. Some of the similarities between the countries are:

- Legal frameworks and mechanisms are in place to regulate waste trade, given that all are parties to the Basel Convention. However, only Indonesia and Malaysia have ratified the Basel Ban Amendment.
- Implementation and enforcement of waste trade-related laws are a common challenge. This echoes similar challenges in the implementation of waste management laws and regulations in general.
- The bulk of waste trade flows into the region enter these countries, and all have experienced illegal waste shipments in recent years – and more importantly, have taken steps to send these back or tighten measures.

GENERAL WASTE MANAGEMENT CHALLENGES EXIST ALONGSIDE WASTE TRADE

Even before the waste trade issue, these four ASEAN countries, along with other states in the region, already have to deal with the growing waste crisis. Increasing urbanization, rising volumes of waste, and poor implementation of waste management laws are putting immense pressure on waste systems. Low recycling rates and a lack of measures to reduce consumption patterns and promote zero-waste alternatives also add to the problem. Thus, any influx of waste from other jurisdictions adds to the crisis faced by ASEAN countries.

Further worsening the situation is the ongoing COVID-19 pandemic and the concomitant increase in domestic plastic and medical wastes. As

21:10–22 https://doi.org/10.1007/s10163-018-0781-y, 11 citing Pollution Control Department (2016) Thailand state pollution report

98 Ibid.

99 *See*: Hazardous Substance Act - BE 2535, 1992, Sections 18, 21-25. Unofficial translation available at https://www.chemsafetypro.com/Topics/Thailand/Thailand_Hazardous_Substance_Act_BE_2535.pdf

100 Ibid. Section 23

101 Ibid. Section 36

102 Thai Ministry of Industry (2013) List of Hazardous Substances (BE 2556) Unofficial translation available at https://www.env.go.jp/en/recycle/asian_net/Country_Information/Law_N_Regulation/Thailand/HW%20List%205.2%20(2013)%20hazardlist13_eng.pdf (accessed 29 March 2021)

103 Ibid. 14

104 Thai Government Public Relations Department (2019) "Roadmap on Plastic Waste Management" Available online at https://thailand.prd.go.th/1700/ewt/thailand/ewt_news.php?nid=7831&filename=index (accessed 29 March 2021)

105 Thai Customs Department (2019) Waste Force project - Case Analysis: seized cases between May 2019 to July 2019 (PowerPoint presentation) 17 December 2019

detailed above, few countries, especially at the local government level, are prepared and equipped to deal with the daily increasing amount of pandemic-related waste. This has also pushed some risky and problematic solutions such as allowing incineration, or thermal waste-to-energy facilities.

WEAK IMPLEMENTATION OF WASTE TRADE-RELATED LAWS OPENS DOORS TO ILLEGAL WASTE SHIPMENT

Environmental law enforcement and compliance are continuing challenges for most ASEAN countries, particularly in the four countries surveyed. Deforestation, air and water pollution, illegal wildlife trade, illegal dumpsites and poor waste management, mining, and harmful fishing practices are just some of the issues which governments in these countries have to contend with. Limited resources, geography and topography, graft and corruption, and weak environmental governance and justice systems all contribute to the worsening of these issues.

Waste trade, whether legal or illegal, comes as an added environmental issue. On one hand, illegal shipments are a direct violation of international environmental laws and regulations, particularly of the Basel Convention. To some degree, there may also be a violation of international customs and tariff laws. On the other hand, both legal and illegal shipments can impact and aggravate existing environmental issues in the country concerned due to the weak environmental enforcement and compliance system.

Incidents from the four countries studied show how waste that legally enters and passes through the customs checks (if they are screened at all) can potentially end up being dumped into the open environment, or added to sanitary landfills, when it should have been processed in a designated facility. Government law enforcers have limited capacity to ensure that these shipments are properly handled, processed, and disposed of once they leave the port of entry.

LACK OF A COMMON AND REGIONAL RESPONSE TO THE WASTE TRADE ISSUE IN ASEAN

The analysis from the four countries also shows that there is a lack of a clear regional response to waste trade. Aside from their participation in, and adherence to the Basel Convention, none of the countries have any other treaty, bilateral or otherwise, dealing with the regulation of waste trade. Each country has made individual statements– particularly on not making ASEAN a dumping ground of waste – but no common statements have so far been issued. This gap in the regional legal and policy landscape opens up the region to a deluge of unwanted waste and discards from other countries.

V
Conclusion and Recommendations
Legal Justifications and A Roadmap For Regional Action On Waste Trade

This report has brought to light the fact that waste trade is an ASEAN issue. It is not just the concern of one country, or of a few who are affected by it – but of all members of the regional bloc. The analysis of four ASEAN countries also emphasized that the issue of waste trade is bound to aggravate existing environmental problems, most especially that of waste management and pollution.

Countries in ASEAN have also shown that they are willing to take a stand against waste trade and not make the region the dumping ground of the world. Yet despite these efforts, waste continues to flow into the ports and harbors of ASEAN – and these end up in already full and poorly managed dump sites, or into the environment. Concerted regional action will help ASEAN countries in their efforts to protect and preserve the region's rich ecosystem and biodiversity for current and future generations.

This section will briefly look at legal justifications which ASEAN countries can look at to push for regional action. A proposed roadmap and action plan to tackle the waste trade will then be discussed.

Imported plastic waste residuals dumped in Sungai Rambai, Malaysia
© Mageswari Sangaralingam

LEGAL JUSTIFICATIONS FOR REGIONAL ACTION

There already exists a body of international, regional, and national legal justifications for a stronger ASEAN regional action on waste trade. These can be found in the ASEAN Charter and Declarations; country constitutions and national laws and policies; general principles of environmental law; and other multilateral environmental agreements.

ASEAN CHARTER AND DECLARATIONS

The ASEAN as a community puts sustainable development, the protection of the environment, and the well-being and health of its citizens at the center of its purpose and existence. This is reflected in the ASEAN Charter, and other documents and declarations. Below are some examples of these statements and provisions:

A) THE ASEAN CHARTER [106]

- Preamble – RESOLVED to ensure sustainable development for the benefit of present and future generations and to place the well-being, livelihood, and welfare of the peoples at the centre of the ASEAN community building process.
- Article I Purposes – 9. To promote sustainable development to ensure the protection of the region's environment, the sustainability of its natural resources, the preservation of its cultural heritage, and the high quality of life of its peoples.
- Article II Principles – (g) enhanced consultation on matters seriously affecting the common interests of ASEAN.

B) ASEAN SOCIO-CULTURAL COMMUNITY BLUEPRINT 2025[107]

- At the heart of the ASEAN Socio-Cultural Community (ASCC) is the commitment to lift the quality of life of its peoples through cooperative activities that are people-oriented, people-centered, environmentally friendly, and geared towards the promotion of sustainable development.
- Pollution and resource degradation are also increasingly serious problems in a number of ASEAN Member States. ASEAN is also among the most highly vulnerable regions to climate change and will need to find solutions to adapt to climate change in building a resilient ASEAN.
- One of the aims of the Blueprint is "a sustainable community that promotes social development and environmental protection through effective mechanisms to meet the current and future needs of the peoples".
- Strategic measures identified include:
  - Promote cooperation for the protection, restoration, and sustainable use of the coastal and marine environment, respond and deal with the risk of pollution and threats to the marine ecosystem and coastal environment, in particular in respect of ecologically sensitive areas.
  - Adopt good management practices and strengthen policies to address the impact of development projects on coastal and international waters and transboundary environmental issues, including pollution, illegal movement, and disposal of hazardous substances and waste, and in doing so, utilize existing regional and international institutions and agreements.
  - Promote the integration of Sustainable Consumption and Production strategy and best practices into national and regional policies or as part of CSR activities.

C) ASEAN JOINT DECLARATION ON HAZARDOUS CHEMICALS AND WASTES MANAGEMENT[108]

- URGENTLY HIGHLIGHTING the need to implement environmentally sound management of hazardous chemicals and wastes particularly the recycling, recovery, and treatment of hazardous wastes, more effectively through governance, capacity building, and exchange of information.
- RECOGNIZING the environmental and health concerns, especially in developing countries and among the vulnerable populations including women, children, and future generations, resulting from exposure to hazardous chemicals and wastes.
- ENSURING the transboundary movement of hazardous chemicals and wastes are managed in an environmentally sound manner through technical cooperation, capacity building, and information exchange to combat illegal traffic of hazardous chemicals and wastes more effectively.
- CONTINUE our efforts, per agreed international frameworks and agreements, to significantly minimize the adverse impacts on human health and the environment caused by the release of hazardous chemicals and wastes to air, water, and soil, in the ASEAN region.
- ENCOURAGE each ASEAN Member State that has not yet ratified the Minamata Convention and the Ban Amendment of the Basel Convention to do so expeditiously to accelerate their effective implementation.

D) BANGKOK DECLARATION ON COMBATTING MARINE DEBRIS IN ASEAN REGION[109]

- REITERATING our concern on the high and rapidly increasing levels of marine debris in particular marine plastic litter and the expected increase in negative effects on marine biodiversity, ecosystems, animal well-being, fisheries, maritime transport, recreation and tourism, local societies and economies, and the urgent need for strengthened knowledge of the levels and effects of microplastics and nanoplastics on marine ecosystem, food safety and human health.
- ENCOURAGE an integrated land-to-sea approach to prevent and reduce marine debris, and strengthen national laws and regulations

106 Available at https://asean.org/storage/November-2020-The-ASEAN-Charter-28th-Reprint.pdf

107 Available at https://asean.org/storage/2016/01/ASCC-Blueprint-2025.pdf

108 Available at https://asean.org/wp-content/uploads/2017/11/Annex-2_Joint-Declaration-HCWM-Adopted-by-AMME.pdf

109 *See* https://asean.org/storage/2019/06/2.-Bangkok-Declaration-on-Combating-Marine-Debris-in-ASEAN-Region-FINAL.pdf

as well as enhance regional and international cooperation including on relevant policy dialogue and information sharing
- PROMOTE inter-sectoral coordination between ASEAN sectoral bodies to effectively address the multi-dimensional and far-reaching negative effects as well as sources of marine debris pollution.

E) ASEAN WORKING GROUP ON CHEMICALS AND WASTE[110]

ASEAN Working Group on Chemicals and Waste (AWGCW) was established to serve as a consultative platform among the ASEAN Member States to further strengthen regional coordination and cooperation in addressing chemicals-related issues under relevant multilateral environmental agreements such as Basel Convention, Rotterdam Convention, Stockholm Convention, and Minamata Convention, as well as internationally agreed-upon systems such as the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

COUNTRY CONSTITUTIONS AND NATIONAL LAWS AND POLICIES

A review of ASEAN member's national laws and policies also gives justification for more concrete action against harmful waste trade flows and practices. Based on a recent study by the Asian Development Bank,[111] the following can be observed:

- **All AMS have provisions or legal doctrines on the right to life** – This right has been, and can be interpreted, to refer to a clean and healthy environment that protects and promotes a decent and dignified life. Toxics and harmful chemicals from waste, plus the mismanagement of other waste can have dire consequences for the health of people and nature – which in turn will lead to a violation of this right.

- **All AMS, except Singapore, have a constitutional, legal, or jurisprudential right to a clean and healthy environment** – This right can be used as a strong justification to prevent and halt harmful waste trade practices due to their impact on the local environment. This right calls on governments to enact laws and policies, and also to interpret and implement treaty obligations, in a way that will ensure the protection and preservation of nature which inures to the benefit of the people.

- **Almost all AMS have a constitutional, legal, or jurisprudential right to health**. – One of the most harmful impacts of the waste trade is on the health not only of people but of nature and fragile ecosystems. That is why this right to health can be made a justification to prevent waste shipments, especially when existing domestic waste already poses a threat to health. This right becomes more relevant due to the impacts of the Covid-19 pandemic, particularly with the increase in medical and hazardous wastes, and that of plastics.
- **Laos, the Philippines, Thailand, and Vietnam have constitutional and legal pronouncements on sustainable development**. – The current consumeristic and wasteful culture to which the world is accustomed goes against the very nature of the principle of sustainable development. The more we use and consume, the more waste is produced – especially in more developed and affluent countries. This then leads to an increase in waste trade to the developing world, who are at times made to believe this practice is a lucrative industry that will boost the economy. There will come a point when the world will be unable to manage the deluge of waste – which will result in more harmful and unsustainable solutions (e.g., incineration, open dumping). Sustainable development calls on countries to prevent this kind of situation from happening and to look at more sustainable policies and solutions.

RELEVANT PRINCIPLES OF ENVIRONMENTAL LAW

These general principles of environmental provide additional legal justifications to take action against waste trade in ASEAN. Each principle will be briefly described followed by an analysis of its applicability and/or relevance to waste trade.

A) THE PRECAUTIONARY PRINCIPLE

This principle has been generally defined and understood as: "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation". Linking it to sustainable development, one international treaty said: "To achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation."[112] To adopt the precautionary principle is to accede to the notion that taking action before the risk becomes known is the more prudent approach to environmental protection today.[113]

The precautionary principle calls on ASEAN states to take a more cautious approach in opening the region's doors to waste trade. The full impact of the discards and garbage being shipped from other countries has yet to be ascertained – especially since the actual contents of many of these shipments cannot be verified. The local environment of the receiving state may not be able to cope with the influx of additional waste, which may contain harmful, toxic, and hazardous chemicals. This is more true for ASEAN states which are teeming with rich ecosystems and unique, but fragile biodiversity.

110 *See* https://environment.asean.org/awgcw/

111 *See* https://www.adb.org/sites/default/files/publication/659966/national-climate-change-legal-frameworks.pdf

112 Bergen, 16 May 1990, para. 7; IPE (I/B/16_05_90).

113 Nicholas de Sadeleer, Environmental Principles From Political Slogans to Legal Rules 1st ed. 18 (2002).

B) THE POLLUTER PAYS PRINCIPLE

The polluter pays principle indicates that the costs of pollution should be borne by the person responsible for causing the pollution.[114] It can also be found in Principle 16 of the Rio Declaration: "National authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the costs of pollution, with due regard to the public interests and, without distorting international trade and investment." When the polluter is made to pay, the polluter takes responsibility for all the costs arising from pollution but is considered incomplete when part of the cost is shifted to the community as a whole.[115]

A straight application of this principle will necessarily imply that countries which send their waste – the polluter who generated the said waste – should be the one to deal with the waste. This is to be done not by shipping it somewhere else and having another country deal with it, but by taking measures within its territorial jurisdiction to properly dispose of the waste. In addition, the principle also supports the argument that if there is an illegal waste shipment, or if legally shipped waste causes harm to the people or environment of the receiving State, then the sending state is duty-bound to either take back the illegal shipment, or clean-up the mess made and compensate the victims.

C) THE PRINCIPLE OF PREVENTION

This principle requires the prevention of damage to the environment, and otherwise to reduce the limit or control activities that might cause or risk such damage.[116] States are asked to act with due diligence, which has been defined by the International Court of Justice as "an obligation which entails not only the adoption of appropriate rules and measures but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators."[117]

The influx and unabated entry of waste, legal and illegal, can have serious and harmful consequences to people and the environment which states are duty-bound to prevent. Based on this principle, ASEAN governments must exercise due diligence and take measures to prevent the potential harm which waste trade can bring.

D) SUSTAINABLE DEVELOPMENT

The term 'sustainable development' is generally considered to have been coined by the 1987 Brundtland Report, which defined it as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.[118] It contains within it two concepts:[119]

- the concept of 'needs, in particular, the essential needs of the world's poor, to which overriding priority should be given; and
- the idea of limitations imposed, by the state of technology and social organization, on the environment's ability to meet present and future needs.

Allowing waste trade to the detriment of the developing world where the majority of the world's poor are goes against the core of sustainable development. Moreover, the consumerism and increasing consumption patterns that result in ever greater waste breach the limits which the environment can take, depriving the current and future generation of a clean and healthy environment that provides for the basic needs of both people and the planet.

114 Sands, P. 2012. *Principles of International Environmental Law*. Cambridge: Cambridge University Press, 228.

115 Nicholas de Sadeleer, Environmental Principles From Political Slogans to Legal Rules 21 (2002).

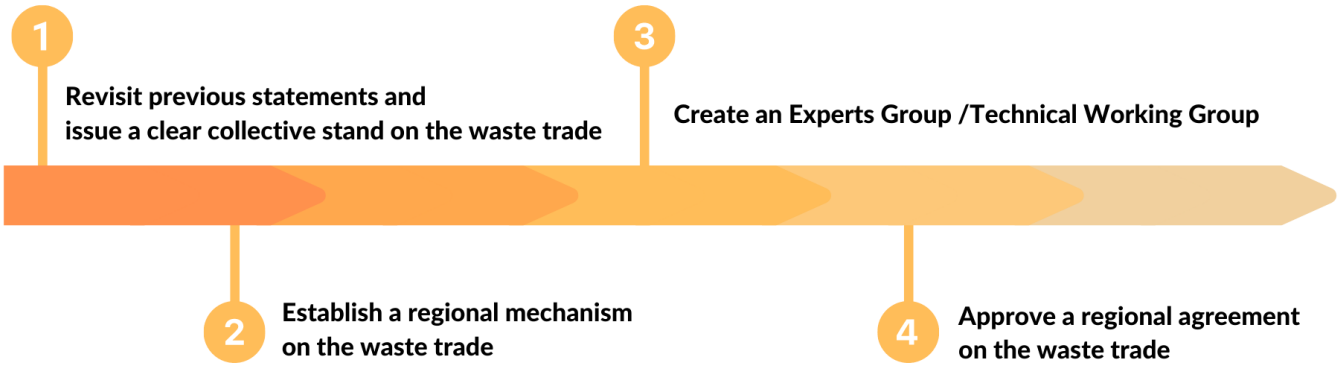
116 Sands, P. 2012. *Principles of International Environmental Law*. Cambridge: Cambridge University Press, 200 citing D. Goba, 'Le Principe de Pre´vention en Droit International de l'Environnement', 36 *Revue Ivorienne de Droit* 9 (2004).

117 Pulp Mills Case, para. 197.

118 Sands, P. 2012. *Principles of International Environmental Law*. Cambridge: Cambridge University Press, 206.

119 Report of the World Commission on Environment and Development, *Our Common Future* (1987), 43.

AN ASEAN ROADMAP ON THE WASTE TRADE



The legal justifications outlined above can be made as basis to urge ASEAN governments to take a firm stand on waste trade – more specifically to prevent the region from becoming the dumping ground of discards, garbage, and rejected goods from other countries. Both international law principles, MEAs, and national constitutions and laws of Southeast Asian countries provide the necessary impetus for regional cooperation on waste trade.

This section will outline recommendations that can serve as a Roadmap for ASEAN regional action on waste trade. The actions proposed take into consideration recent developments at the regional and international level, as well as specific laws and the situation in the four countries studied in this report.

1. REVISITING ASEAN STATEMENTS, ISSUING A CLEAR STAND ON WASTE TRADE

ASEAN's charter and its various statements make sustainable development, and a clean and healthy environment one of the many aspirations and goals for the people in the region. From its charter to more recent blueprints into the next decade, protecting the environment and natural resources play an important role in achieving prosperity in the region. One clear threat to this important goal is the influx of waste – through legal and illegal trade flows – into the region's shores.

Simply revisiting the many ASEAN statements will reveal that harmful practices such as waste trade will hamper the realization of sustainable development and the protection of the rich environment and biodiversity of the region.

One important step is to have a clear and concrete ASEAN stand on waste trade. At the minimum, this declaration can include the following:

- Call on ASEAN member states to immediately ratify the Basel Ban Amendment.
- Urging all members to take steps to ban all waste shipments into their countries, which shall be achieved within a specified time frame. This is preparatory for calls for an ASEAN-wide ban on waste imports.
- Establish regional mechanisms on waste trade, whether through existing bodies or the creation of new ones to look into:
  - Information sharing and exchange on waste imports and exports;
  - Improving enforcement and compliance capacity, including a focus on upstream policies that look at reduction of production of sources of pollution such as plastics;
  - Regional monitoring mechanism of waste shipments to ensure traceability and transparency of shipments, if any;
  - Assessment of national laws and policies related to waste trade;
  - Creation of an experts group/technical working group on waste trade, with the involvement of CSOs and NGOs;
- Ensuring a just transition for workers in the waste sector who will be affected by reforms, especially those in the informal waste sector.
- Call for and establish a strong and common regional position and message on waste trade to be used in international fora.

2. ESTABLISHING A REGIONAL MECHANISM ON WASTE TRADE

Once the position of ASEAN countries has been clarified through a statement on waste trade, an immediate next step is to establish a regional mechanism that will put into effect the provisions of the said declaration. This mechanism can be done through existing bodies within the ASEAN system (i.e., the Secretariat; the ASEAN Biodiversity Center, etc.); or by creating a new entity (possibly the experts' group/ technical working group proposed below). The important point is that the entity must have some permanence and not be merely an ad-hoc and temporary measure. This is to signify the importance of waste management and waste trade issues for the region.

The regional mechanism can focus on the following items as soon as it is established, in the short and medium-term:

- Establishing a platform for information sharing and exchange on, and region-wide monitoring of waste imports and exports;
- In-depth review and assessment of member state's national laws and policies on waste trade, including trade agreements. This includes support of the development or revision of laws and policies in specific countries;
- Identification of gaps, loopholes, and inconsistencies in ASEAN documents, statements, and declarations, and also individual country statements or positions, which run counter to the stated goals of curbing and banning waste trade into the region;
- Creation of the expert group/technical working group, providing of its membership, roles, responsibilities, and clear mandate. This group shall act as the "think tank" of the regional mechanism.
- Determine the regional position and stand of ASEAN on waste trade, developing a common message in international fora.
- Draft and lobby for an ASEAN regional agreement on waste trade.

3. CREATE AN EXPERTS GROUP/TECHNICAL WORKING GROUP

The regional response, to be a success, will need to tap into regional expertise on waste management and waste trade. The creation of an experts group/technical working group (EG/TWG) will help ensure that any position, statement, or action taken by ASEAN countries is based on data, careful analysis, and expert study and opinions. The EG/TWG can assist member states in ensuring that the substance of its actions is sound, legal, logical, and reasonable.

Some broad elements of the group is as follows:

- The EG/TWG should have equal representation from all ASEAN countries, representing a broad range of stakeholders from different sectors, fields, and disciplines. This will enable the group's outputs to be representative of the various interests involved in the waste trade.
- The group should endeavor, as best as possible, to be independent of ASEAN governments and leaders. This will enable it to make recommendations that are not beholden to any government, or to existing laws and policies which may run counter to addressing waste trade. This will also help build trust and confidence in its work and output.
- Its work should be open and transparent, allowing the public and other concerned NGOs and CSOs to not only scrutinize and critique its work but also to engage it constructively and amicably, true to the ASEAN-style of working and collaboration.
- The group's outputs and work, including any data sources, should be easily accessible understandable by all ASEAN citizens. This helps support the call for a transparent body and process. It will also enable more local NGOs and CSOs to make use of the group's work and to replicate the same in their home countries.

4. DRAFT AND APPROVE A REGIONAL AGREEMENT ON WASTE TRADE

To secure and solidify the recommendations given above and the ASEAN position on waste trade, member states can enter into a regional agreement on waste trade. This will then make its position legally binding on the member countries, and can also be made a source of legal rights and remedies for the people of the region.

The establishment of a regional agreement on waste trade, outside of and in addition to the Basel Convention, is not without precedent. Regional blocs and groups of countries have entered into their own legally binding arrangements to complement, or to strengthen the provisions of international treaties and conventions. Some of these agreements are:[120]

- Waigani Convention - Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region adopted on 16 September 1995.
- Bamako Convention on the Ban of the Import into Africa and the Control the Transboundary Movement and Management of Hazardous Wastes in Africa, adopted on 30 January 1991.
- Agreement of the Commonwealth of Independent States (CIS) on the Monitoring of Transboundary Shipments of Hazardous and Other Wastes, entered into force on 12 April 1996.
- Centroamerican Agreement on Transboundary Movements of Hazardous Wastes.
- OECD Council Decision C(2001))107/Final on the Control of Transboundary Movements of Wastes Destined for Recovery Operations.

It is interesting to note that, save for the OECD agreement, all the other regional agreements on waste trade have been made by countries in the developing world – countries that are most likely the destination of waste shipments from richer and more developed countries. It also appears that Asian countries, and not just those in ASEAN, have not taken steps to have a stronger stand on waste trade in their backyard. It is perhaps not surprising that this region is the preferred destination of waste shipments globally. The signing of an ASEAN regional agreement on waste trade can be a milestone event for waste trade in the region and the rest of Asia.

The agreement can contain the above recommendations – allowing for those steps and measures to be more permanent and legally binding for member-states. In addition, the treaty can contain other mechanisms for regional efforts on waste reduction and management among the ASEAN countries.

120 For the text of these agreements, see http://www.basel.int/Countries/Agreements/MultilateralAgreements/tabid/1518/Default.aspx

REFERENCES

International Environmental Agreements and Related Documents

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal - Convention Text, Additional Annexes and Amendment. http://www.basel.int/TheConvention/Overview/TextoftheConvention/tabid/1275/Default.aspx.

Convention on Biological Diversity. CBD/COP/DEC/14/10 Other Matters related to coastal and marine biodiversity (November 30, 2018). https://www.cbd.int/doc/decisions/cop-14/cop-14-dec-10-en.pdf.

Convention on Biological Diversity. UNEP/CBD/COP/DEC/XIII/10 Addressing impacts of marine debris and anthropogenic underwater noise on marine and coastal biodiversity (December 2016). https://www.cbd.int/decisions/cop/13/10/1.

Convention on the Conservation of Migratory Species of Wild Animals. "Decisions 13.122 to 13.125 - Impacts of Plastic Pollution on Aquatic, Terrestrial and Avian Species" (2020). https://www.cms.int/en/page/decisions-13122-13125-impacts-plastic-pollution-aquatic-terrestrial-and-avian-species.

Minamata Convention on Mercury - Text and Annexes. https://www.mercuryconvention.org/Portals/11/documents/Booklets/COP3-version/Minamata-Convention-booklet-Sep2019-EN.pdf.

Secretariat of the Convention on Biological Diversity. *Global Biodiversity Outlook 5.* (Montreal: Secretariat of the Convention on Biological Diversity, 2020). https://www.cbd.int/gbo/gbo5/publication/gbo-5-en.pdf.

Secretariat of the Ramsar Convention on Wetlands. *Global Wetland Outlook - State of the world's wetlands and their services to people* (Gland: Ramsar Convention Secretariat, 2018). https://www.ramsar.org/sites/default/files/documents/library/gwo_e.pdf

Stockholm Convention on Persistent Organic Pollutants - Convention Text, Additional Annex and Amendments to Annexes. http://www.pops.int/TheConvention/Overview/TextoftheConvention/tabid/2232/Default.aspx.

United Nations Environment Assembly. "Chair's summary of the work of the ad hoc open-ended expert group on marine litter and microplastics for consideration by the United Nations Environment Assembly at its fifth session (Unedited summary)" (2020). https://wedocs.unep.org/bitstream/handle/20.500.11822/34635/K2100061.pdf?sequence=11&isAllowed=y 1.

ASEAN Documents

ASEAN. *The ASEAN Charter - 28th Reprint.* (Jakarta: ASEAN Secretariat, 2020). https://asean.org/storage/November-2020-The-ASEAN-Charter-28th-Reprint.pdf.

ASEAN. Bangkok Declaration on Combatting Marine Debris in the ASEAN Region (June 22, 2019). https://asean.org/storage/2019/06/2.-Bangkok-Declaration-on-Combating-Marine-Debris-in-ASEAN-Region-FINAL.pdf.

ASEAN. ASEAN Joint Declaration on Hazardous Chemicals and Wastes Management (April 26, 2017). https://asean.org/wp-content/uploads/2017/11/Annex-2_Joint-Declaration-HCWM-Adopted-by-AMME.pdf.

ASEAN. *ASEAN Socio-Cultural Community Blueprint 2025* (Jakarta: ASEAN Secretariat, 2016). https://asean.org/storage/2016/01/ASCC-Blueprint-2025.pdf.

ASEAN. *ASEAN Community Vision 2025* (2015). https://www.asean.org/wp-content/uploads/images/2015/November/aec-page/ASEAN-Community-Vision-2025.pdf.

ASEAN Cooperation on Environment. "About ASEAN Cooperation on Environment." (no date). https://environment.asean.org/about-asean-cooperation-on-environment/.

ASEAN Cooperation on Environment. "ASEAN Cooperation on Chemicals and Waste" (no date). https://environment.asean.org/awgcw/.

ASEAN Secretariat. *ASEAN Regional Action Plan for Combating Marine Debris in the ASEAN Member States - Action Plan Summary.* (Jakarta: ASEAN Secretariat, May 2021). https://asean.org/storage/FINAL_210524-ASEAN-RAP-Summary_Ready-to-Publish_v1.pdf.

National Policies, Projects and Action Plans

Customs Department - Thailand. "PowerPoint Presentation: Waste Force project - Case Analysis: seized cases between May 2019 to July 2019." (December 2019).

Department of Environment and Natural Resources - Philippines. DENR Administrative Order 2013-22 - Revised Procedures and Standards for the Management of Hazardous Wastes (December 4, 2013). https://emb.gov.ph/wp-content/uploads/2018/06/dao-2013-22.pdf.

Environmental Management Bureau: Department of Environment and Natural Resources - Philippines. "PowerPoint Presentation: Compliance Updates - Ecological Solid Waste Management (RA 9003)." (2019). https://emb.gov.ph/wp-content/uploads/2019/11/Compliance-Updates-as-of-October-2019.pdf.

Environmental Management Bureau: Department of Environment and Natural Resources - Philippines. *National Solid Waste Management Status Report 2008-2018* (2018). https://emb.gov.ph/wp-content/uploads/2019/08/National-Solid-Waste-Management-Status-Report-2008-2018.pdf.

Kingdom of Thailand. B.E. 2535 - Hazardous Substance Act (1992) (Unofficial Translation) https://www.chemsafetypro.com/Topics/Thailand/Thailand_Hazardous_Substance_Act_BE_2535.pdf.

Ministry of Environment and Forestry - Indonesia. *National Plastic Waste Strategic Actions for Indonesia* (Indonesia: Ministry of Environment and Forestry, 2020). https://wedocs.unep.org/bitstream/handle/20.500.11822/32898/NPWRSI.pdf?sequence=1&isAllowed=y.

Ministry of Industry - Thailand. B.E. 2556 - List of Hazardous Substances (2013) https://www.env.go.jp/en/recycle/asian_net/Country_Information/Law_N_Regulation/Thailand/HW List 5.2 (2013) hazardlist13_eng.pdf.

Republic of the Philippines. Republic Act 9003 - Ecological Solid Waste Management Act of 2000 (2000). https://www.officialgazette.gov.ph/2001/01/26/republic-act-no-9003-s-2001/.

Republic of the Philippines. Republic Act 6969 - Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 (1990). https://www.officialgazette.gov.ph/1990/10/26/republic-act-no-6969/

Reports and other Materials

Asian Development Bank. *Managing Infectious Medical Waste during the COVID-19 Pandemic* (2020) https://www.adb.org/sites/default/files/publication/578771/managing-medical-waste-covid19.pdf.

Asian Development Bank. *National Climate Change Legal Frameworks in Asia and the Pacific* (2020) https://www.adb.org/sites/default/files/publication/659966/national-climate-change-legal-frameworks.pdf.

Bagayas, Samantha. "PH local governments juggle COVID-19 response and garbage problem." *Rappler* (December 11, 2020). https://www.rappler.com/environment/philippines-local-governments-juggle-covid-19-response-garbage-problem.

Bangkok Post. "Curbs slash imports of plastic, e-waste." *Bangkok Post* (July 5, 2019). https://www.bangkokpost.com/business/1707226/curbs-slash-imports-of-plastic-e-waste.

Bauman, Brooke. "How plastics contribute to climate change." *Yale Climate Connections* (August 20, 2019). https://yaleclimateconnections.org/2019/08/how-plastics-contribute-to-climate-change/.

Brooks, Amy, Shunli Wang and Jenna Jambeck. "The Chinese import ban and its impact on global plastic waste trade." *Science Advances* 4 no. 6 (June 20, 2018) file://localhost/DOI/ 10.1126:sciadv.aat0131.

Buchholz, Katharina. "Malaysia New Hub for Plastic Waste as China Exits Market." *Statista* (June 20, 2019). https://www.statista.com/chart/18451/trade-flows-of-major-exporters-of-plastic-waste/.

Bueta, Grip. "COVID, Climate, the Environment, and I: Why It All Matters." *Industry Individual* (February 26, 2021). https://industryindividual.com/journal/covid-climate-the-environment-and-i-why-it-all-matters.

Centre for International Environmental Law. *Plastic and Climate: The Hidden Costs of a Plastic Planet - Executive Summary* (2019) https://www.ciel.org/wp-content/uploads/2019/05/Plastic-and-Climate-Executive-Summary-2019.pdf.

Chen, Hui Ling, Tapan Kumar Nath, Siewhui Chong, Vernon Foo, Chris Gibbins and Alex Lechner. "The plastic waste problem in Malaysia: management, recycling and disposal of local and global plastic waste." *SN Applied Sciences* 3 (2021) https://doi.org/10.1007/s42452-021-04234-y.

Clapp, J. " The toxic waste trade with less-industrialized countries: Economic linkages and political alliances." *Third World Quarterly* 15 no. 3 (1994) https://www.jstor.org/stable/i383015

Climate Policy Initiative. "New study measures the 'greenness' of the COVID-19 recovery packages and their contribution towards country-level climate objectives in five Asian countries" Climate Policy Initiative - Press Releases (March 8, 2021) https://www.climatepolicyinitiative.org/press-release/new-study-measures-the-greenness-of-the-covid-19-recovery-packages-and-their-contribution-towards-country-level-climate-objectives-in-five-asian-countries/.

Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security. "Coral Triangle Day Appeals More Attention and Real Action on the Real Threat: Plastic Pollution" (May 20, 2016). https://coraltriangleinitiative.org/index.php?q=news/coral-triangle-day-appeals-more-attention-and-real-action-real-threat-plastic-pollution.

De Sadeleer, Nicholas. *Environmental Principles: From Political Slogans to Legal Rules - First Edition* (USA: Oxford University Press, 2002).

Deutsche Gesellschaft für Internationale Zusammenarbeit. *Briefing Series: Sectoral Implementation of Nationally Determined Contributions* (2017) http://www.transparency-partnership.net/system/files/document/NDC Brief - Circular Economy and Solid Waste Management.pdf.

Environmental Protection Agency - United States. “Climate Change and Municipal Solid Waste.” *EPA Web Archive* (no date). https://archive.epa.gov/wastes/conserve/tools/payt/web/html/factfin.html.

Flores, Helen. “Canada trash sails from Philippines; envoys told to return.” *The Philippine Star* (June 1, 2019) https://www.philstar.com/headlines/2019/06/01/1922695/canada-trash-sails-philippines-envoys-told-return.

Gokkon, Basten. “Indonesia re-exporting illegal waste to other countries, report finds.” *Mongabay* (November 7, 2019). https://news.mongabay.com/2019/11/indonesia-waste-plastic-export-import-illegal/.

Government Public Relations Department - Thailand. “Roadmap on Plastic Waste Management.” (April 19, 2019). https://thailand.prd.go.th/1700/ewt/thailand/ewt_news.php?nid=7831&filename=index.

Greenpeace Philippines and EcoWaste Coalition. *Waste Trade in the Philippines: How Local and Global Policy Instruments Can Stop the Tide of Foreign Waste Dumping in the Country* (March 2020) https://www.greenpeace.org/static/planet4-philippines-stateless/2020/03/da311344-waste-trade-in-the-philippines-report-v2.pdf.

Greenpeace Philippines. “Climate DRR should drive PH COVID recovery.” (October 13, 2020). https://www.greenpeace.org/philippines/press/10136/climate-drr-should-drive-ph-covid-recovery/

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services . *The Global Assessment Report on Biodiversity and Ecosystem Services - Summary for Policymakers*. (Bonn: IPBES Secretariat, 2019).

International Court of Justice. *Judgment - Pulp Mills on the River Uruguay (Argentina vs. Uruguay)* (April 20, 2010). https://www.icj-cij.org/en/case/135/judgments.

International Resource Panel. *Policy Options to Eliminate Additional Marine Plastic Litter by 2050 under the G20 Osaka Blue Ocean Vision* (Nairobi: United Nations Environment Programme, 2021). https://www.resourcepanel.org/reports/policy-options-eliminate-additional-marine-plastic-litter.

International Union for the Conservation of Nature. “Marine Plastics.” *IUCN Issues Brief* (May 2018) https://www.iucn.org/sites/dev/files/marine_plastics_issues_brief_final_0.pdf.

Jambeck, Jenna, Roland Geyer, Chris Wilcox, Theodore Siegler, Miriam Perryman, Anthony Andrady, Ramani Narayan and Kara Lavender Law. “Marine pollution. Plastic waste inputs from land into the ocean.” *Science* 347 (February 2015) file://localhost/DOI/ 10.1126:science.1260352.

Jasmin, Alyssa Farha and Wong Ee Kin. “An Introduction to Malaysia’s Plastic Waste Problem.” *Khazanah Research Institute* (September 11, 2019). http://www.krinstitute.org/Views-@-Plastic-;_An_Undegradable_Problem.aspx.

Kaza, Silpa, Lisa Yao, Perinaz Bhada-Tata and Frank Van Woerden. *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050.* Washington DC: World Bank, 2018. doi:10.1596/978-1-4648 -1329-0. License: Creative Commons Attribution CC BY 3.0 IGO

Kojima, Michikazu, Fusanori Iwasaki, Hendro Putra Johannes and Ellen Putri Edita. “Strengthening Waste Management Policies to Mitigate the COVID-19 Pandemic.” *Policy Brief No. 2020-05* Economic Research Institute for ASEAN and East Asia (July 2020) https://www.eria.org/uploads/media/policy-brief/Strengthening-Waste-Management-Policies-to-Mitigate-the-COVID19-Pandemic-.pdf.

Lipman, Zada. “Hazardous Waste.” In *Selected International Environmental Law Examples*, eds. Shawkat Alam, Sumudu Atapattu, Carmen Gonzalez and Jona Razzaque. Cambridge: Cambridge University Press, 2015.

Ministry of Environment, Science, Technology and Innovation - Republic of Ghana. “Ghana to Host International Ministerial Conference on Marine Litter and Plastic Pollution.” *MESTI News* (February 26, 2021). https://mesti.gov.gh/ghana-host-international-ministerial-conference-marine-litter-plastic-pollution/.

Mogato, Anna. “Hong Kong container carrying illegal waste shipped back.” *Rappler* (June 3, 2019) https://www.rappler.com/nation/232139-hong-kong-container-carrying-illegal-waste-shipped-back-june-2019.

Nguyen, Dat. “Vietnam to end plastic scrap imports from 2025.” *VN Express International* (March 27, 2019). https://e.vnexpress.net/news/business/economy/vietnam-to-end-plastic-scrap-imports-from-2025-3900351.html.

Parker, Laura. “U.S. generates more plastic trash than any other nation, report finds.” *National Geographic* (October 31, 2020). https://www.nationalgeographic.com/environment/article/us-plastic-pollution.

Philippine News Agency. “IMF calls on world to make green recovery from Covid-19.” *Philippine News Agency* (April 30, 2020). https://www.pna.gov.ph/articles/1101447.

Ramachandran, Selva and Khalid Hassan. “Creating a green recovery pathway for the Philippines.” *International Labour Organization* (March 12, 2021). https://www.ilo.org/manila/public/pr/WCMS_775345/lang--en/index.htm.

Reuters Staff. “Indonesia plans new rules to curb jump in imports of plastic waste.” *Reuters* (July 26, 2019). https://www.reuters.com/article/us-indonesia-environment-plastic/indonesia-plans-new-rules-to-curb-jump-in-imports-of-plastic-waste-idINKCN1UL1E4

Reuters Staff. “Malaysia to curb imports of plastic waste - minister.” *Reuters* (October 26, 2018) https://www.reuters.com/article/us-malaysia-waste-imports/malaysia-to-curb-imports-of-plastic-waste-minister-idUSKCN1N028P.

Ritchie, Hannah and Max Roser. “Plastic Pollution.” *Our World in Data* (September 2018) https://ourworldindata.org/plastic-pollution - how-much-of-ocean-plastics-come-from-land-and-marine-sources.

Rucevska, I., C. Nellemann, N. Isarin, W. Yang et. al. *Waste Crime - Waste Risks: Gaps in Meeting the Global Waste Challenge* (Nairobi and Arendal: United Nations Environment Programme and GRID-Arendal, 2015). https://wedocs.unep.org/bitstream/handle/20.500.11822/9648/Waste_crime_RRA.pdf?sequence=1&isAllowed=y.

Sands, Philippe. *Principles of International Environmental Law - Third Edition.* Cambridge: Cambridge University Press, 2012. .

Sembring, Margareth, “Global Waste Trade Chaos: Rising Environmentalism or Cost-Benefit Analysis*?” NTS Insight, no. IN19-02.* Nanyang Technological University (July 2019) https://www.think-asia.org/bitstream/handle/11540/10797/NTS-Insight-Global-waste-trade_010719.pdf?sequence=1.

Senate Economic Planning Office - Philippines. “Philippine Solid Wastes at a Glance.” (November 2017) http://legacy.senate.gov.ph/publications/SEPO/AAG_Philippine Solid Wastes_Nov2017.pdf.

Sinha, Rajesh, James Michelsen, Elcin Akcura and Lamin Nije. *COVID-19’s Impact on the Waste Sector.* International Finance Corporation (June 2020) https://www.ifc.org/wps/wcm/connect/dfbceda0-847d-4c16-9772-15c6afdc8d85/202006-COVID-19-impact-on-waste-sector.pdf?MOD=AJPERES&CVID=na-eKpI.

Siregar, Kiki. “My house is full of garbage: In West Java, imported waste worsens living conditions of villagers.” *Channel News Asia* (August 22, 2019) https://www.channelnewsasia.com/news/asia/indonesia-imported-waste-foreign-bekasi-burangkeng-west-java-11822250.

Straits Times. “Plastic waste piles up as Indonesia’s import crackdown backfires.” *The Straits Times* (August 2, 2019). https://www.straitstimes.com/asia/se-asia/plastic-waste-piles-up-as-indonesias-import-crackdown-backfires.

United Nations Environment Assembly. “Townhall on Turning the Tide on Marine Plastics: How UNEA 5 Can be a Turning Point - Outcomes.” (June 8, 2020). https://www.unep.org/environmentassembly/turning-tide-marine-plastics-how-unea-5-can-be-turning-point-open-meeting.

United Nations Economic and Social Commission for Asia and the Pacific. “New UN initiative to reduce plastic pollution from ASEAN cities” (May 5, 2020). https://www.unescap.org/news/new-un-initiative-reduce-plastic-pollution-asean-cities.

United Nations Environment Programme and International Solid Waste Association. *Global Waste Management Outlook,* ed. David Wilson. (2015) https://www.unep.org/resources/report/global-waste-management-outlook.

United Nations Environment Programme. *Making Peace With Nature: A Scientific Blueprint to Tackle the Climate, Biodiversity and Pollution Emergencies* (2021) https://www.unep.org/resources/making-peace-nature.

Witchai-utcha, N. and O. Chavalparit. “3Rs Policy and plastic waste management in Thailand.” *Journal of Material Cycles and Waste Management* 21 (August 31, 2018) https://doi.org/10.1007/s10163-018-0781-y.

The World Bank. *Building a Resilient Recovery: Philippines Economic Update* (Washington DC: The World Bank, 2020). https://openknowledge.worldbank.org/bitstream/handle/10986/34899/Philippines-Economic-Update-Building-a-Resilient-Recovery.pdf.

World Bank Group. *Indonesia: Marine Debris Hotspot - Rapid Assessment and Synthesis Report* (April 2018). https://documents1.worldbank.org/curated/en/983771527663689822/pdf/Indonesia-Marine-debris-hotspot-rapid-assessment-synthesis-report.pdf.

World Commission on Environment and Development. *Report of the World Commission on Environment and Development: Our Common Future* (1987). https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf.

Zero Waste Europe. *European Waste Trade Impacts on Malaysia’s Zero Waste Future* (January 2021) https://zerowasteeurope.eu/wp-content/uploads/2021/01/zwe_case-study_european-waste-trade-impacts-on-malaysias-zero-waste-future_en.pdf.

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Established in 1998, IPEN is the global environmental network of nearly 600 public interest NGOs in over 125 countries working to eliminate and reduce the most hazardous substances to forge a toxics-free future for all.

EcoWaste Coalition

Founded in 2000, the EcoWaste Coalition is a nonprofit network of over 140 public interest groups in the Philippines that have coalesced to advance "a zero waste and toxics-free society where communities enjoy a safe and healthy environment."

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