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## Plastic Waste Trade in Southeast Asia After China's Import Ban: Implications of the New Basel Convention Amendment and Recommendations for the Future

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**SYMPOSIUM**

**PLASTIC WASTE TRADE IN SOUTHEAST ASIA AFTER  
CHINA'S IMPORT BAN: IMPLICATIONS OF THE NEW BASEL  
CONVENTION AMENDMENT AND RECOMMENDATIONS FOR  
THE FUTURE**

YEEUN UHM\*

ABSTRACT

*It has become evident when some countries strengthen their domestic plastic waste restrictions and oversight of imports, global flows of plastic waste simply shift elsewhere. However, the pattern of continually diverting plastic waste shipments to countries that have less strict regulatory standards will become difficult under new rules adopted under the Basel Convention in May 2019. This Article explores the Basel Convention's role in reversing the existing plastics trade between developed and developing countries, and the legal implications of the new amendments on the international plastic waste trade, with a particular focus on the Southeast Asian countries that have been significantly impacted by China's plastic waste import ban in 2018. The author also argues the 2019 plastic*

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*amendments could have implications far beyond the States Parties. This presents an even greater need for the United States to comply with the new amendments even though it has not yet ratified the Convention. Finally, the Article concludes with some recommendations to improve the existing framework of the Basel Convention on the following issues: regulating marine plastic pollution, implementing special or differential treatment for developing countries, and reducing the generation of plastic waste.*

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## INTRODUCTION

Plastics have become part of our everyday life, from bottles and grocery bags to multi-layer packaging. Despite their convenience, plastics can cause irreparable damage to the environment and wildlife if plastic waste is not properly managed. Recently, countless reports show marine animals dying after ingesting or getting entangled in plastic, which renews focus on the pervasive problem of mismanaged plastics ending up in oceans.<sup>1</sup> While it is widely understood that more than half of land-based plastic pollution in oceans comes from China, Indonesia, the Philippines, Thailand and Vietnam,<sup>2</sup> the current plastic crisis should not be treated merely as a domestic or regional concern. Global plastic waste trade patterns reveal that successfully tackling the plastic waste problem will require strong commitments on the international level.

For decades, developed countries have been exporting their plastic waste to developing countries because it is cheaper and easier to ship waste around than to process it at home. Based on this simple economic logic, global plastic waste trade has been maintained through a continuous cycle of imports and exports between different countries. It was not until July of 2017, when China decided to ban plastic scrap and waste imports, that the global plastic waste trade was cast in a new light. Before the ban, China was the biggest importer of plastic waste—taking in nearly half of all globally-traded plastic waste. Accordingly, when China banned twenty-four types of solid waste imports and announced it would only accept plastic scrap with a contamination rate of 0.5% or less starting in 2018,<sup>3</sup> the structure of the global plastic waste trade went through an unprecedented change. The exporting countries, such as the United States, Japan, and the United Kingdom, soon began looking for new countries where they could ship their plastic waste.<sup>4</sup>

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1. See, e.g., *Plastic Waste Kills*, ASEAN POST (Dec. 3, 2019), <https://theaseanpost.com/article/plastic-waste-kills> (noting marine animals found dead in Thailand, Philippines, Malaysia, and Indonesia had plastic shreds in their stomachs).

2. See *infra* Part IV.A.

3. Ying Xia, *China's Environmental Campaign: How China's "War on Pollution" Is Transforming the International Trade in Waste*, 51 N.Y.U. J. INT'L L. & POL. 1101, 1103 (2019).

4. Laura Parker, *China's Ban on Trash Imports Shifts Waste Crisis to Southeast Asia*, NAT'L GEOGRAPHIC (Nov. 16, 2018),

In the aftermath of the Chinese ban, Southeast Asia was impacted most significantly. The Association of Southeast Asian Nations (ASEAN) region “experienced a 171% surge of plastic waste imports from 836,529 [tons] in 2016 to 2,231,127 [tons] in 2018.”<sup>5</sup> Most notably, plastic waste imports in Thailand, Vietnam, the Philippines, and Malaysia plummeted.<sup>6</sup> These statistics show how the majority of plastics that had previously gone to China were then sent to countries in Southeast Asia.<sup>7</sup> A recent study conducted at the University of Georgia predicts as a result of the new Chinese policy, an estimated 111 million metric tons of plastic waste will be displaced by 2030.<sup>8</sup>

On a positive note, parties to the Basel Convention recently acknowledged the plastic waste problem is one of the world’s most pressing environmental issues, and the parties agreed to regulate the movement of plastic waste between countries.<sup>9</sup> During the Conference of the Parties to the Basel Convention held from April 29 to May 20, 2019, parties agreed on a new amendment that added plastic waste to the list of hazardous waste and other waste to be covered by the legally-binding framework.<sup>10</sup> This recent legal development in the international arena is expected to make the transboundary movement of plastic waste more transparent and safer for both human health and the environment.<sup>11</sup>

In the following sections, this Article will examine the circumstances leading to the adoption of the new amendment—focusing on waste imports in Southeast Asia. Next, this Article will investigate the new amendment adopted at the Basel Convention in 2019 and analyze how these legal

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<https://www.nationalgeographic.com/environment/2018/11/china-ban-plastic-trash-imports-shifts-waste-crisis-southeast-asia-malaysia/>.

5. GREENPEACE, SOUTHEAST ASIA’S STRUGGLE AGAINST THE PLASTIC WASTE TRADE: A POLICY BRIEF FOR ASEAN MEMBER STATES 4 (2019), <https://storage.googleapis.com/planet4-malaysia-stateless/2019/06/a4175fab-waste-trade-report-gpsea.pdf> [hereinafter GREENPEACE, SOUTHEAST ASIA’S STRUGGLE AGAINST THE PLASTIC WASTE TRADE].

6. *Id.* at 3.

7. *Id.* at 2.

8. Amy L. Brooks et al., *The Chinese Import Ban and Its Impact on Global Plastic Waste Trade*, SCI. ADVANCES, June 20, 2018, at 1.

9. Amendments to Annexes II, VIII and IX to the Basel Convention, May 10, 2019, BC-14/12 [hereinafter Amendments].

10. *Id.*

11. *See id.* (noting the strict regulation of hazardous material).

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mechanisms apply to the parties involved in the global plastic trade. Lastly, this Article will connect these trade and environmental issues to the United States by exploring how the Basel Convention will impact the United States' laws and policies in light of the United States' position as a significant exporter of plastic waste to Asian countries.

Prior to entering substantive discussions, it is relevant to note the terms "Asia" or "Southeast Asia" are not used as references to homogeneous groups. This Article specifically focuses on Asian importing countries that have dominated global plastic imports over recent decades, including China, Thailand, Malaysia, Vietnam, and the Philippines. Developed countries in Asia, such as Japan and South Korea, also export their waste to other Asian countries<sup>12</sup>

## II. THE DAMAGING EFFECT OF TRADE IN PLASTIC WASTE AND CURRENT EVENTS

### A. *The Structure of the Global Waste Trade*

Global waste trade has been a long-standing practice since the start of industrialization and the liberation of trade. According to the information provided by the reporting countries to the United Nations Commodity Trade Database in 2017, the world's plastic waste trade export is valued at USD 4.5 billion and the import at USD 6.1 billion.<sup>13</sup> The worldwide trade of various types of waste and scrap, including plastic, metal, chemicals, papers, and textiles, is possible because exporting countries can reduce the cost of waste management by shipping their waste to countries mostly located in the Global South with lower costs of waste management and less stringent environmental regulations. While some types of waste have less environmental impact than others, wastes like chemicals and plastic have high chances of causing harmful effects to both the environment and human health. Overtime, the transboundary movement of waste from developed

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12. See GREENPEACE, DATA FROM THE GLOBAL PLASTICS WASTE TRADE 2016-2018 AND THE OFFSHORE IMPACT OF CHINA'S FOREIGN WASTE IMPORT BAN 4, 15 (2019) [hereinafter GREENPEACE, DATA FROM THE GLOBAL PLASTICS WASTE TRADE]; see also GREENPEACE, SOUTHEAST ASIA'S STRUGGLE AGAINST THE PLASTIC WASTE TRADE, *supra* note 5, at 7.

13. Margareth Sembiring, *Global Waste Trade Chaos: Rising Environmentalism or Cost-Benefit Analysis?*, NTS INSIGHT, July 1, 2019, at 2, [https://www.rsis.edu.sg/wp-content/uploads/2019/07/NTS-Insight-Global-waste-trade\\_010719.pdf](https://www.rsis.edu.sg/wp-content/uploads/2019/07/NTS-Insight-Global-waste-trade_010719.pdf).

countries to developing countries demonstrates unregulated free trade can harm the environment. Known as the “Pollution Haven Hypothesis,” businesses in developed countries will relocate waste to countries with lower costs for raw materials, labor, and environmental compliance.<sup>14</sup> This movement allows for businesses to maximize their economic advantage.

Importing countries also benefit from the international waste trade. They view waste as a resource and use processed material recovery to derive the waste’s economic value. In fact, proponents of global waste trade argue importing waste is beneficial to developing countries because it generates jobs and foreign-earned income.<sup>15</sup> Proponents also assert waste is a valuable resource that can be used to manufacture other products, thereby stimulating the economies in developing countries.<sup>16</sup>

However, it is highly debated whether these arguments hold true. Scholars point out the “immediate capital received by importing states may fall short of what is necessary to deal with the long-run social and environmental harms caused by the waste imports.”<sup>17</sup> In particular, plastic waste has similar effects on the environment as other hazardous or toxic waste.<sup>18</sup> This is because mismanaged plastic waste can pollute land-based ecosystems, harm biodiversity, and pose risks for human health.<sup>19</sup>

Therefore, it is irresponsible and risky to rely on arguments that economic gains generated from the waste trade industry will enable

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14. Mohammed Aminu Aliyu, *Foreign Direct Investment and the Environment: Pollution Haven Hypothesis Revisited*, in Eighth Annual Conference on Global Economic Analysis (June 9-11, 2005), <https://www.gtap.agecon.purdue.edu/resources/download/2131.pdf> (last visited Nov. 20, 2020).

15. Dean M. Poulakidas, *Waste Trade and Disposal in the Americas: The Need for and Benefits of a Regional Response*, 21 VT. L. REV. 873, 875 (1997); see also Jennifer R. Kitt, *Waste Exports to the Developing World: A Global Response*, 7 GEO. INT’L ENVTL. L. REV. 485, 490 (1995).

16. See generally Jennifer Clapp, *The Toxic Waste Trade with Less-Industrialised Countries: Economic Linkages and Political Alliances*, 15 THIRD WORLD QUARTERLY 505, 508 (1994).

17. Poulakidas, *supra* note 15, at 875.

18. *Id.*

19. ORG. FOR ECON. CO-OPERATION AND DEV., IMPROVING PLASTICS MANAGEMENT: TRENDS, POLICY RESPONSES, AND THE ROLE OF INTERNATIONAL CO-OPERATION AND TRADE 5 (Sep. 2018), <https://www.oecd.org/environment/waste/policy-highlights-improving-plastics-management.pdf>.

developing countries to improve infrastructure and waste management capacity. Especially when mismanaged waste in these countries is presently causing irreparable harm to both the environment and human health.<sup>26</sup> Additionally, only 9% of the 8.3 billion metric tons of plastic produced globally have been recycled, with roughly 79% accumulating in either landfill or the natural environment.<sup>20</sup> This indicates that with plastic waste, only a small percentage is being recycled into valuable materials to stimulate economies.<sup>21</sup>

In Asia, the plastic waste industry became lucrative at the expense of the environment and human health. The volume of waste traded globally increased rapidly with the rise of consumer society, and a significant share of the plastic waste has been exported to Asia. From 1988-2017 the continent amassed more than half of the world's total import volume of plastic waste.<sup>22</sup> China was undoubtedly the world's largest importer of plastic waste at the time.<sup>23</sup> Since reporting to the United Nations Comtrade Database began in 1992, China has imported 106 million metric tons of plastic waste. That amount is the equivalent to 45.1% of all accumulative plastic imports.<sup>24</sup> However, the waste management systems in many of the importing countries are not prepared to handle the sheer amount of waste. This resulted in increased cases of waste trafficking, mismanagement, and illegal dumping.<sup>25</sup> A 2015 report ranked the top twenty countries by mass of mismanaged plastic waste, and China topped the list, followed by Indonesia, the Philippines, Vietnam, Sri Lanka, Thailand, Egypt, and Malaysia.<sup>26</sup> These statistics indicate a significant share of plastic waste imported by Asian countries is mismanaged. This waste is either littered or inadequately disposed of in dumps or open, uncontrolled landfills.

Over the past decades, waste generators, as well as the waste management markets, have conducted a simple cost-benefit analysis without

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20. Roland Geyer et al., *Production, Use and Fate of All Plastics Ever Made*, SCI. ADVANCES, July 19, 2017, at 1.

21. *Id.*

22. Chao Wang et al., *Structure of the Global Waste Trade Network and the Impact of China's Import Ban*, 153 RESOURCES, CONSERVATION & RECYCLING 1, 6-7 (Nov. 2019).

23. Amy L. Brooks et al., *supra* note 8, at 1, 2.

24. *Id.* at 2.

25. Kitt, *supra* note 15, at 492.

26. Jenna R. Jambeck et al., *Plastic Waste Inputs from Land into the Ocean*, SCIENCE, Feb. 13, 2015, at 769.



considering the long-term environmental impacts. This has led to the current global waste trade crisis. Although this Article focuses on Asian countries, African nations have also imported large amounts of chemicals and other substances from industrialized countries since the 1980s. This led to the adoption of the Basel Convention.<sup>27</sup> The difficult reality is that developed countries can easily shift the burden of processing their waste to lower-income countries through trade. Although it is not possible to completely ban trade in waste, it is possible to make the processes more transparent and better regulated. The Basel Convention was one attempt to create a set of international standards and regulatory compliance requirements. The Convention was adopted in 1989 to restrict transboundary movements of hazardous wastes but included exceptions for environmentally sound management of waste.<sup>28</sup> Under the Convention's regulatory system, which is based on the concept of prior informed consent, exporting countries must provide detailed information to the importing countries about the intended movement of waste. The movement may then only proceed when all States concerned have given their written consent.<sup>29</sup> One should not overlook the fact, however, that exporters and importers rely on each other to sustain the waste industry. Imposition of restrictions on the international waste trade will thus undermine economies in both developed and developing countries. Therefore, any efforts to modify the existing structure of global waste trade must be made carefully while also promoting a circular economy<sup>30</sup> and developing the capacity of waste management in all countries involved.<sup>31</sup>

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27. Valentina O. Okaru, *The Basel Convention: Controlling the Movement of Hazardous Wastes to Developing Countries*, 4 FORDHAM ENVTL. L. REV. 137 (1993).

28. See *infra* Section II.A.

29. *Id.*

30. See SCI. AND TECHNICAL ADVISORY PANEL ET AL., PLASTICS AND THE CIRCULAR ECONOMY 4, (2018), <https://www.thegef.org/sites/default/files/publications/PLASTICS%20for%20postin%20g.pdf> (transboundary movements of wastes will naturally decrease if more countries construct a circular economy which eliminates waste, maximizes value, and uses plastic efficiently).

31. See Lisa Widawsky, *In My Backyard: How Enabling Hazardous Waste Trade to Developing Nations Can Improve the Basel Convention's Ability to Achieve Environmental Justice*, 38 ENVTL. L. 577, 582 (2008) (proposing that "the Basel Ban on all export to non-Annex VII nations should be modified to only apply until a developing nation can establish a facility able to pass inspection and receive a permit certifying ESM practices," as a way to both achieve economic progress in

*B. The Impact of the Chinese Ban on Countries in Southeast Asia*

In July 2017, China announced an import ban on twenty-four types of solid waste from foreign countries, including plastic. According to the State Council of China, the ultimate goal of the new “National Sword” policy is to “protect the natural environment and human health, while the intermediate goal is to increase domestic recycling and boost self-sufficiency in the demand for recycled materials.”<sup>32</sup> After the new policy was implemented on January 1, 2018, exporting countries, such as the United States and Japan, quickly began sending shipments of plastic waste to other countries in Southeast Asia. The ASEAN region “experienced a 171% surge of plastic waste imports [] from 836,529 [tons] in 2016 to 2,231,127 [tons] in 2018[.]”<sup>33</sup> Between January and November of 2018, the top three importers of plastic waste worldwide were Malaysia (10.7%), Thailand (5.5%), and Vietnam (5.2%).<sup>34</sup> On the export side, the top exporters to the ASEAN region in 2018 were the United States (439,129 tons), Japan (430,064 tons), Hong Kong (149,129 tons), Germany (136,034 tons), and the United Kingdom (112,046 tons).<sup>35</sup> Thailand is one of the countries most impacted by China’s ban on plastic import.<sup>36</sup> The correlation between China’s new policy and the increase in plastic waste imports to Thailand is unavoidable. While China’s

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developing nations and make hazardous waste trades safer for the environment and human health).

32. Ying Xia, *China’s Environmental Campaign: How China’s War on Pollution is Transforming the International Trade in Waste*, 51 N.Y.U. J. INT’L L. & POL. 1101, 1135-36 (2019).

33. GREENPEACE, SOUTHEAST ASIA’S STRUGGLE AGAINST THE PLASTIC WASTE TRADE, *supra* note 5.

34. See generally CLAIRE ARKIN ET AL., PLASTIC ATLAS 39 (Heinrich-Böll-Stiftung 2nd ed. 2019), [https://www.boell.de/sites/default/files/2020-01/Plastic%20Atlas%202019%202nd%20Edition.pdf?dimension1=ds\\_plastikatlas](https://www.boell.de/sites/default/files/2020-01/Plastic%20Atlas%202019%202nd%20Edition.pdf?dimension1=ds_plastikatlas) (last visited Oct. 17, 2020).

35. GREENPEACE, SOUTHEAST ASIA’S STRUGGLE AGAINST THE PLASTIC WASTE TRADE, *supra* note 5, at 7.

36. So Sasaki, *Current Status and Issues of Recyclable Waste Trade in Thailand*, The 5th 3R International Scientific Conference on Material Cycles and Waste Management Session XIV “Trade Restriction on Recyclable Waste and Recycling in Asia” (Feb. 28, 2019), [https://www.researchgate.net/publication/331517485\\_Current\\_Status\\_and\\_Issues\\_of\\_Recyclable\\_Waste\\_Trade\\_in\\_Thailand](https://www.researchgate.net/publication/331517485_Current_Status_and_Issues_of_Recyclable_Waste_Trade_in_Thailand).

trade volume dropped from 80.2% to 14.2% from 2017-2018, Thailand's plastic waste trade volume increased by more than 300,000 tons.<sup>37</sup>

Due to sharp increases in plastic waste imports after the Chinese ban, Southeast Asian countries started to take measures to protect themselves before their own waste management systems get out of control. Civil society and environmental nonprofit organizations play a crucial role in this drive to change the waste import regulations in Southeast Asian countries. They pressure governments to act by expressing concerns for the environment and human health.<sup>38</sup> In response, Thailand, Malaysia, Vietnam, and the Philippines have all taken steps to restrict the import of foreign plastic waste. In October 2018, Thailand announced a ban on foreign plastic waste imports by 2021.<sup>39</sup> Vietnam has stopped issuing new licenses of waste imports and will reportedly stop accepting scrap plastic starting in 2025.<sup>40</sup> Malaysia issued a temporary halt on imports in 2018 and announced plans to tighten requirements for issuing permits.<sup>41</sup> Most recently, the Philippines sent dozens of plastic waste shipments back to Canada after a Philippine court found that the import of 2,400 tons of Canadian waste was illegal.<sup>42</sup>

These Southeast Asian countries have restricted the importation of plastic waste because their waste management facilities are unable to properly classify, process, and recycle the influx of waste since 2018. In a 2004 United Nations Environment Programme (UNEP) report, it is argued

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37. *Id.*

38. *ASEAN leaders welcomed by "mountain of trash" and calls to ban plastic and e-waste imports*, GREENPEACE (June 20, 2019), <https://www.greenpeace.org/malaysia/press/1946/asean-leaders-welcomed-by-mountain-of-trash-and-calls-to-ban-plastic-and-e-waste-imports/>.

39. John Reed, *Thailand to ban foreign plastic waste from 2021*, FIN. TIMES (Oct. 13, 2018), <https://www.ft.com/content/06b5a136-ce09-11e8-b276-b9069bde0956>.

40. Dat Nguyen, *Vietnam to end plastic scrap imports from 2025*, VNEXPRESS INTERNATIONAL (Mar. 27, 2019), <https://e.vnexpress.net/news/business/economy/vietnam-to-end-plastic-scrap-imports-from-2025-3900351.html>.

41. Colin Staub, *Malaysia outlines new plastic import criteria*, PLASTICS RECYCLING UPDATE (Oct. 31, 2018), <https://resource-recycling.com/plastics/2018/10/31/malaysia-outlines-new-plastic-import-criteria/>.

42. Ronn Bautista, *Philippines sends trash back to Canada after Duterte escalates row*, REUTERS (May 30, 2019), <https://www.reuters.com/article/us-philippines-canada-waste/philippines-sends-trash-back-to-canada-after-duterte-escalates-row-idUSKCN1T10BQ>.

that Southeast Asian countries, except for Singapore, lack the skills, capacity, financing, and technological resources for proper waste management.<sup>43</sup> The report investigated the waste management status of ASEAN countries and found that a majority of ASEAN countries have insufficient policies on waste management. Most lacked policies on integrated waste management, training programs for waste management, and policies on private sector participation.<sup>44</sup> However, major improvements in the waste management system of ASEAN countries are shown in the 2017 UNEP report, which states both that the waste management technology in the ASEAN region is emerging from low-end to high-end and that the private sector participation has been progressing.<sup>45</sup> Despite positive changes, the same report shows open dumping and open burning of waste are still prevalent in the majority of ASEAN countries.<sup>46</sup> As of today, open dumping and open burning are still seen in countries such as Malaysia and Thailand.<sup>47</sup>

### III. LEGAL IMPLICATIONS OF THE BASEL CONVENTION AND ITS NEW AMENDMENT ON PLASTIC WASTE

#### *A. Introduction to the New Basel Convention Amendment*

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (hereafter the “Convention”) was adopted on March 22, 1989, in response to an upsurge in the shipment of hazardous wastes from industrialized countries to developing countries.<sup>48</sup> It

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43. Sembiring, *supra* note 13, at 7 (citing United Nations Environment Programme (UNEP), *State of Waste Management in South East Asia*, Osaka, Shiga: UNEP, 33 (2004)).

44. *Id.*

45. U.N. Env't Programme, *Waste Management in ASEAN Countries: Summary Report*, 20-22 (2017), <https://www.unenvironment.org/resources/report/waste-management-asean-countries-summary-report>.

46. *Id.* at 19.

47. Henry Ridgwell, *Wealthy Countries' Trash Overwhelms Southeast Asia*, VOA NEWS (May 2, 2019), <https://www.voanews.com/east-asia-pacific/wealthy-countries-trash-overwhelms-southeast-asia>.

48. Katherina Kummer Peiry, *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, UNITED

entered into force in 1992 after being ratified by twenty countries. As of February 2020, 187 countries are parties to the Convention.

The Convention supported a broader definition of “hazardous waste” by defining it as (a) wastes that belong to any category in Annex I, unless they do not possess any of the characteristics contained in Annex III and (b) wastes that are not covered under paragraph (a) but are defined as, or are considered to be, hazardous wastes by the domestic legislation of the Party of export, import, or transit.<sup>49</sup> The Convention applies to trade in waste categorized as “hazardous waste” under the Convention itself or the Parties’ national laws.<sup>50</sup>

The list of wastes categorized as hazardous waste in Annex I did not have any direct reference to plastic, and many of the countries that export, import, or transit plastic waste did not categorize plastic waste as hazardous in their national laws. As a result, it was difficult to utilize the legal mechanisms established under the Basel Convention to address the serious environmental problems posed by the plastic waste trade.<sup>51</sup> Furthermore, at the time of the Basel Convention, plastic waste was not considered to be an urgent environmental problem as it is presently.<sup>52</sup> At the time of adoption, the Convention was primarily aimed at protecting developing countries from the harmful effects of other common types of hazardous wastes, such as chemicals and pesticides.<sup>53</sup>

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NATIONS AUDIOVISUAL LIBRARY OF INTERNATIONAL LAW, at 1 (2010), [https://legal.un.org/avl/pdf/ha/bcctmhwd/bcctmhwd\\_e.pdf](https://legal.un.org/avl/pdf/ha/bcctmhwd/bcctmhwd_e.pdf).

49. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Mar. 22, 1989, 1673 U.N.T.S. 57, at art. 1 [hereinafter Basel Convention].

50. The Basel Conventions broad definition of hazardous waste “include wastes from a particular waste stream, such as medical wastes, or wastes containing particular chemicals, as long as they also show certain characteristics (e.g., ignitability. Wastes that are not covered by these categories are hazardous waste if they are defined as such by one of the parties involved in the transboundary movement: the country of export, the country of import or a transit country.” Kitt, *supra* note 15, at 494-95.

51. Chelsea M. Rochman et. al., *Classify Plastic Waste as Hazardous*, 494 NATURE 169 (2013).

52. See European Comm’n, *Plastic Waste: Ecological and Human Health Impacts*, at 3 (2011), [https://ec.europa.eu/environment/integration/research/newsalert/pdf/IR1\\_en.pdf](https://ec.europa.eu/environment/integration/research/newsalert/pdf/IR1_en.pdf).

53. Basel Convention, *supra* note 49, at Annex I (Specifying 18 waste streams and 27 substances to be controlled by the Convention).

Without any international legal instruments to monitor and regulate the transboundary movement of plastic waste, importing countries remained responsible for combating the problem on their own. The problem soon became unmanageable after China's import ban. Due to the urgent need to address the plastic problem in Southeast Asia,<sup>54</sup> a new amendment to the Basel Convention was adopted in May 2019 and is expected to enter into force on January 1, 2021.<sup>55</sup> The new Basel Convention amendment included plastic waste in the legally-binding framework for the first time by adding plastic waste to Annex II (wastes requiring special consideration, or "other waste"), Annex VIII ("hazardous waste"), and Annex IX (wastes not covered by Article 1, or "non-hazardous waste").<sup>56</sup> The new amendment's most important implication is that plastic waste listed under Annex II and Annex VIII will be subject to the Convention's control system<sup>57</sup> This system includes prior informed consent requirements; an obligation to ensure environmentally sound management, packaging, and labeling; transportation requirements; transmission of information requirements; and the duty to re-import should the need arise.<sup>58</sup>

The category for non-hazardous plastic waste lists different types of plastic waste, including cured resins, non-halogenated and fluorinated polymers, and mixtures of plastic waste consisting of polyethylene (PE), polypropylene (PP), or polyethylene terephthalate (PET).<sup>59</sup> These types of plastic waste can be excluded from the Convention's compliance mechanisms, provided that they are "destined for recycling in an environmentally sound manner and almost free from contamination and other types of wastes."<sup>60</sup> Accordingly, plastic waste that does not meet these

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54. Hillary Leung, *Southeast Asia Doesn't Want to Be the World's Dumping Ground. Here's How Some Countries Are Pushing Back*, TIME (Jun. 3, 2019), <https://time.com/5598032/southeast-asia-plastic-waste-malaysia-philippines/>.

55. Amendments, *supra* note 9.

56. *Id.*

57. IMPLEMENTATION & COMPLIANCE COMM., UNITED NATIONS ENV'T PROGRAMME, BASEL CONVENTION GUIDE TO THE CONTROL SYSTEM INSTRUCTION MANUAL FOR USE BY THOSE PERSONS INVOLVED IN TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTE 7-8, 10 (2015) (discussing the Basel Convention control system, which is a general control procedure the Basel Convention uses to implement "strict controls over transboundary movements of hazardous wastes and other wastes to protect human health and the environment against the adverse effects").

58. Basel Convention, *supra* note 49, at art. 4, 8.

59. Amendments, *supra* note 9.

60. *Id.*

requirements will either belong to the hazardous waste or other waste categories and will be covered by the control procedures of the Convention. Plastic waste that is hazardous waste pursuant to paragraph 1(a) of Article 1 will be classified as hazardous waste, and all other types of plastic waste that are neither non-hazardous nor hazardous will be classified as other waste.<sup>61</sup> Under the Convention, hazardous waste and other waste are equally covered by the Convention's control system.<sup>62</sup> In essence, the new amendment draws a distinction between plastic waste that is "destined for recycling in an environmentally sound manner and almost free from contamination and other types of waste"<sup>63</sup> and all other types of plastic waste. Plastic waste that is deemed to be non-hazardous waste according to the above description falls outside the scope of the Convention.<sup>64</sup>

However, the new amendment is still unclear about what "environmentally sound manner" or "almost free from contamination and other types of waste" means.<sup>65</sup> Article 2 paragraph 8 of the Basel Convention states that environmentally sound management (ESM) means "taking all the practical steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against adverse effects which may result from such wastes."<sup>66</sup> The Framework document further elaborates this by listing criteria for ESM, which includes regulatory infrastructure, facilities with environmentally sound technologies, and training for those involved in the management of wastes.<sup>67</sup> However, the above criteria is intended to provide general guidance. Thus, the criteria are not very useful in clarifying the definition of environmentally sound management, specifically concerning plastic waste recycling.<sup>68</sup> The technical guidelines on plastic waste written in 2002 address plastic waste from the Convention more specifically, but this document is outdated and provides little information about environmentally

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61. *Id.*

62. Basel Convention, *supra* note 49, at art. 3.

63. Basel Convention, *supra* note 49.

64. *Id.* at art. 1.

65. Basel Convention, *supra* note 49.

66. *Id.* at art. 2.

67. Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, *Framework for the Environmentally Sound Management of Hazardous Wastes and Other Wastes*, ¶ 4, UNEP/CHW.11/3/Add.1/Rev.1 (Jun. 4, 2013).

68. *Id.*

sound recycling practices.<sup>69</sup> Without a clear definition of “environmentally sound management” and “contamination” for plastic waste and legal criteria for meeting the conditions, it will be extremely difficult to apply consistent standards across different jurisdictions.<sup>70</sup> Therefore, more detailed instructions are needed to ensure that each party’s customs authorities follow substantially identical definitions.<sup>71</sup>

### *B. Legal Ramifications of the New Amendment on Plastic Waste Trade*

Despite the uncertainties and possible areas for improvement, the new amendment is expected to bring some positive change to international plastic waste trade. Since about 91% of plastic waste will be classified as non-hazardous (uncontaminated recyclable plastics),<sup>72</sup> the Convention will regulate a majority of plastic waste through various compliance procedures.<sup>73</sup>

Prior informed consent is a compliance procedure, or central mechanism, the Convention will use to enforce the new amendment. This mechanism requires exporting countries to obtain informed consent from importing countries before shipping wastes.<sup>74</sup> As stated in Article 6 of the Convention, the exporting state must notify the competent state import authority of any proposed transboundary movement of hazardous wastes or other wastes.<sup>75</sup> This notification should include information specified in Annex VA.<sup>76</sup> Subsequently, the importing state reviews the information and

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69. See Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, *Technical guidelines for the identification and environmentally sound management of plastic wastes and for their disposal*, UNEP/CHW.6/21 (Aug. 23, 2002).

70. Eur. Fed’n of Waste Mgmt. and Env’tl. Serv., *Basel Convention: FEAD reacts to new trade rules for plastic waste*, (May 20, 2019), <https://www.fead.be/press-releases>.

71. See Council Decision (EU) 2019/638 of Apr. 15, 2019, on the position to be taken on behalf of the European Union at the fourteenth meeting of the Conference of the Parties with regard to certain amendments to Annexes II, VIII and IX to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 2019 O.J. (L 109/19) 1.

72. Geyer, *supra* note 20, at 1.

73. Basel Convention, *supra* note 49, at art. 4, 8.

74. *Id.* at art. 6.

75. *Id.*

76. *Id.* at art. 6.



responds to the notifier in writing by either (1) consenting to the movement with or without conditions, (2) denying permission for the movement, or (3) requesting additional information.<sup>77</sup> The exporting state cannot permit the waste shipment of waste until it receives the importing state's written consent and the confirmation of a contract between the exporter and the disposer specifying the waste's environmentally sound management.<sup>78</sup>

Implementing the prior informed consent procedures will make the plastic waste shipping process take much longer than before. First, shipping will take longer because importing states have begun sending back illegal foreign waste shipments and shipments falling short of international and domestic environmental requirements back to their the country of origin.<sup>79</sup> Second, if a state consents to the waste's transboundary movement, but the shipment cannot be completed in compliance with the contract terms, the exporting state has a duty to re-import the wastes.<sup>80</sup> However, this process of obtaining prior informed consent is imperative to ensuring environmentally sound management of waste in importing countries. At the same time, this new legal mechanism is expected to decrease transboundary movement volume because it pressures exporting countries into increasing its waste management capacity and recycling and discarding more wastes at home.<sup>81</sup>

Further, the new amendment affects not only the parties to the Basel Convention, but also non-party trading partners. The Convention states that absent a pre-determined agreement between the countries, parties shall not permit Basel-covered waste to be exported to a non-party or to be imported from a non-party.<sup>82</sup> Therefore, non-party plastic waste exporters, such as the United States, cannot export plastic waste covered by the Convention to parties without their party's consent.<sup>83</sup> Since all of the major plastic waste importing countries (Thailand, Malaysia, Vietnam) are parties to the

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77. *Id.*

78. *Id.*

79. Jun Endo, *Southeast Asia sends back heaps of trash to rich countries*, NIKKEI ASIAN (July 30, 2019), <https://asia.nikkei.com/Spotlight/Environment/Southeast-Asia-sends-back-heaps-of-trash-to-rich-countries>.

80. Basel Convention, *supra* note 49, at art. 8.

81. *See* Okaru, *supra* note 27, at 153.

82. Basel Convention, *supra* note 49, at art. 4, ¶5; *see also id.* at art. 11, ¶1.

83. *Id.*

Convention, U.S. exporters to these countries will be significantly hindered when the new amendment takes effect.<sup>84</sup>

Additionally, classifying certain plastics as hazardous waste presents significant challenges to the Basel Convention parties who ratified the Ban Amendment. The Ban Amendment prohibits countries in the Organisation for Economic Cooperation and Development (OECD) from exporting hazardous wastes to non-OECD countries. So far, ninety-eight countries have ratified the Ban Amendment.<sup>85</sup> The recent plastic waste amendment prohibits developed countries, who are parties to the Ban Amendment, from exporting plastic waste characterized as hazardous (Annex VIII) under the Convention to developing countries.<sup>86</sup> Although the Ban Amendment does not cover wastes listed in Annex II, which include most mixed plastic wastes, except those that are hazardous or non-hazardous, parties are recommended to include Annex II wastes in their implementing legislation, as the European Union (EU) has done.<sup>87</sup> However, some major developed countries—who are also the biggest plastic waste exporters to Southeast Asia—have not ratified the amendment, including South Korea, Japan, the United States, Australia, and Canada.<sup>88</sup>

Lastly, changes to the Basel Convention also hindered other similar international agreements, such as the OECD's agreement to control the transboundary waste movements destined for recovery operations.<sup>89</sup> According to Chapter 2 (b) paragraph 3 of the agreement, without any other

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84. Secretariat of the Basel Convention, Status of Ratifications – Parties & Signatories, <http://www.basel.int/Countries/StatusofRatifications/PartiesSignatories/tabid/4499/Default.aspx> (last visited Nov. 20, 2020).

85. *Id.*

86. Secretariat of the Basel Convention, Status of Ratifications – Ban Amendment Overview, <http://www.basel.int/Implementation/LegalMatters/BanAmendment/Overview/tabid/1484/Default.aspx> (last visited Nov. 20, 2020).

87. Basel Action Network & IPEN, *The Entry into Force of the Basel Ban Amendment: A Guide to Implications and the Next Steps*, at 13 (2019), [http://wiki.ban.org/images/4/4e/BAN\\_IPEN\\_Basel\\_Ban\\_Amend\\_Guide\\_Nov2019.pdf](http://wiki.ban.org/images/4/4e/BAN_IPEN_Basel_Ban_Amend_Guide_Nov2019.pdf).

88. *Id.*

89. Org. for Econ. Co-operation and Dev., *Decision of the Council Concerning the Revision of Decision c(92)39/final on the Control of Transboundary Movements of Wastes Destined for Recovery Operations*, at 3-4, OCED Doc. C(2001)107/FINAL (Mar. 15, 2004).

formal decision, amendments made to Annex IX (non-hazardous waste) under the Basel Convention will be incorporated into Part I of Appendix 3 (green waste) of the agreement and amendments made to Annex II (other waste) and VIII (hazardous waste) under the Basel Convention will be incorporated into Part I of Appendix 4 (amber waste) of the agreement.<sup>90</sup> Currently, the agreement classifies plastic as green waste subject to the Green control procedure.<sup>91</sup> However, once the new amendment takes effect, plastic waste, except for those classified as non-hazardous, will now be classified as Amber waste and subject to the Amber control procedure.<sup>92</sup> The OECD agreement only operates between OECD member countries and therefore does not address the transboundary waste movements from developed countries to developing countries.<sup>93</sup> Yet, the OECD agreement can certainly affect the OECD member countries to apply similar standards when exporting plastic waste to non-OECD countries.

*C. Necessary Steps for Southeast Asian Countries to Ensure Effective Implementation of the Basel Convention and Its New Amendment*

Even though the new Basel Convention amendment is a step forward towards greater environmental and human health protection from the plastic waste trade, it is far from a perfect solution. Most commonly, the Basel Convention is criticized for its loose ESM definitions.<sup>94</sup> The Convention uses the term to encourage all parties to ensure that hazardous wastes and other wastes are managed in an environmentally sound manner whatever the place of disposal.<sup>95</sup> Additionally, the Convention uses the ESM provisions

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90. *Id.* at 7.

91. *Id.* at 20, 22.

92. *Id.* at 10 (explaining the two types of OECD control system is based on two types of control procedures: (1) Green control procedure for wastes presenting low risk for human health and the environment and, therefore, are not subject to any other controls than those normally applied in commercial transactions, and (2) Amber control procedure for wastes presenting sufficient risk to justify their control, which requires valid written contracts and financial guarantees).

93.ORG. FOR ECON. CO-OPERATION AND DEV., GUIDANCE MANUAL FOR THE CONTROL OF TRANSBOUNDARY MOVEMENTS OF RECOVERABLE WASTES 11 (2009), <https://www.oecd.org/env/waste/theoecdcontrolsystemforwasterecovery.htm> [hereinafter OECD, GUIDANCE MANUAL].

94. *See Okaru, supra* note 27, at 146.

95. *See* Basel Convention, *supra* note 49, preamble, at art. 4, 2(b).

as a main element to control parties' obligations.<sup>96</sup> For instance, parties must take appropriate measures to prevent the exports and imports of hazardous wastes or other wastes, if they believe "the wastes in question will not be managed in an environmentally sound manner."<sup>97</sup> However, in the supporting documents published by the Convention there is much redundancy and overlap when describing the criteria for ESM.<sup>98</sup> Moreover, there are also ambiguous terms, such as "reason to believe," which have not been clearly defined.<sup>99</sup>

Therefore, the success of the Basel Convention and its new amendment depends on each party interpreting the ambiguities and passing domestic laws that lay out specific standards for ESM. This may include the developing numeric criteria and classifying hazardous wastes and other wastes separately from non-hazardous wastes. As well as, establishing a compliance management framework and designating appropriate authorities.<sup>100</sup> While this particular process is primarily controlled by importing countries' national governments, the international community may be able to accelerate the process by providing technical assistance. In particular, the Basel Convention's Secretariat may facilitate the cooperation between developing and developed countries by coordinating technology transfer and workshops. These can help developing countries learn from international best practices and achieve continuous domestic development of ESM.

In Southeast Asia, waste management is predominantly performed by the informal sector.<sup>101</sup> Therefore, Southeast Asian countries should include

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96. *See id.* at art. 4, 10, 11.

97. *Id.* at art. 4, 2.

98. Harvey Alter, *Environmentally Sound Management of the Recycling of Hazardous Wastes in the Context of the Basel Convention*, 29 *RESOURCES, CONSERVATION & RECYCLING* 111 (2000).

99. Marguerite M. Cusack, *International Law and the Transboundary Shipment of Hazardous Waste to the Third World: Will the Basel Convention Make a Difference*, 5 *AM. U. J. INT'L L. REV.* 393, 414 (1990).

100. Grant L. Kratz, *Implementing The Basel Convention into U.S. Law: Will it Help or Hinder Recycling Efforts?*, 6 *BYU J. PUB. L.* 323, 331-32, 339-40 (1992).

101. *See generally* Anne Scheinberg et al., *Economic Aspects of the Informal Sector in Solid Waste Management*, 1 *Res. Rep. German Technical Cooperation [GTZ]* 1, 17 (2010) (Informal solid waste sector refers to "individuals or enterprises who are involved in private sector recycling and waste management activities which are not sponsored, financed, recognized, supported, organized, or acknowledged by

the informal sector into its public waste management systems to effectively implement the Basel Convention and its new amendment. The Southeast Asian countries' informal sector's recycling is generally conducted by scavengers, middle-man, waste dealers, cottage, or small-scale recyclers.<sup>102</sup> When plastic waste is imported to these countries—either as nonrecyclable or recyclable waste—informal sectors will sort, dismantle, refurbish, and resell the waste.<sup>103</sup> To monitor the trade flows under the Convention, state authorities will have to start increasing the informal sector's capacity to register information.<sup>104</sup> Creating incentive mechanisms is a possible solution to include the informal sector into the public system and increase public awareness.

Furthermore, integrating the informal sector into the public sector is essential to achieve the Basel Convention's goal to increase protection of both the environment and human health. This integration will need to address the associated health risks faced by the informal sector. In Southeast Asian states, people working in open dumpsites are vulnerable to numerous health hazards. Those working at small scale recycling facilities often engage in sorting and recovery of waste materials without protective equipment.<sup>105</sup> For example, in 1993, it was reported the employees of plastic waste recycling facilities in Indonesia were working under unsafe conditions, with lack of protective clothing to prevent harmful effects from

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the formal solid waste authorities, or which operate in violation of or in competition with formal authorities.”).

102. See generally David W. J. Green, *Managing Hazardous Wastes (Financed by the Asian Development Bank Technical Assistance Funding Program)*, ASIAN DEVELOPMENT BANK, at 9 (2007), <https://www.adb.org/sites/default/files/project-document/65582/38401-reg-tacr.pdf>; see generally Roland Linzner & Ulrike Lange, *Role and Size of Informal Sector in Waste Management – A Review*, 166 WASTE AND RESOURCE MANAGEMENT 69 (2013).

103. See Armin Ibitz, *Environmental Policy Coordination in ASEAN: The Case of Waste From Electrical and Electronic Equipment*, 5 ASEAS – AUSTL. J. OF SOUTH-EAST ASIAN STUD. 30, 38 (2012).

104. Costas Velis, *Waste pickers in Global South: Informal recycling sector in a circular economy era*, 35 WASTE MGMT. & RESEARCH 329, 330 (2017).

105. Asian Institute of Technology [AIT]/ United Nations Environmental Programme [UNEP], *Municipal Waste Report: Status-quo and Issues in Southeast and East Asian Countries*, at 28 (2010).

toxic cleaners, pesticides, and fertilizers.<sup>106</sup> Therefore, Southeast Asian government authorities must monitor how imported plastic waste is treated in each and every process of waste management and who is engaged in those activities. After collecting all the required information, central governments will take appropriate steps to ensure better work environments for both the formal and the informal sectors.

It is also important to ensure national enforcement officers are capable of detecting the illegal transboundary plastic waste movements. Under the Basel Convention, illegal traffic is defined as a transboundary movement of hazardous wastes: (a) without notification; (b) without the consent of the state concerned; (c) with consent obtained by falsification, misrepresentation, or fraud; (d) that does not materially conform with the documents; or (e) “that results in the deliberate disposal of [] hazardous wastes” in contravention with both the Convention and general principles of international law.<sup>107</sup>

Over the last three decades, common methods of illegal traffic included mislabeling, false declarations, or a mixture of the materials in a shipment.<sup>108</sup> The nature of these methods suggests plastic waste could sometimes be mislabeled as different waste materials to evade the new amendment's regulations. To address this issue, the Secretariat has organized training activities to develop national legislation and other measures to implement and enforce the Convention, while also preventing illegal traffic. Unfortunately, the pilot project is only implemented in a few African countries where funding is available.<sup>109</sup> In anticipation of the enforcement of the new amendment on January 1, 2021, the Secretariat of

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106. CONFRONTING CONSUMPTION 165 (Thomas Princen et al. eds., 2002) (“Plastic wastes often contain residues from their original contents, such as toxic cleaners, pesticides, and fertilizers.”).

107. Basel Convention, *supra* note 49, at art. 9.

108. See, e.g., *Illegal Traffic in Toxic Waste and Dangerous Products and Wastes: Report of the Secretary General*, U.N. GAOR, 44th Sess., U.N. Doc. A/44/362 (1989). See Okaru, *supra* note 27, at 138 (Italian company mislabeling Polychlorinated biphenyls(PCBs) as fertilizers, resulted in the death of nineteen villagers). See also *id.* at 139 (citing Jato Thompson, *Laying Africa Waste*, NEW AFRICAN, at 37 (1988) (explaining 625 bags of falsely labeled toxic wastes were found in the capital of Sierra Leone)).

109. Secretariat of the Basel Convention, *Enforcement, Technical Assistance Archive*, BASEL CONVENTION, <http://www.basel.int/Implementation/TechnicalAssistance/Archives/Enforcement/ta/bid/2555/Default.aspx> (last visited Feb. 12, 2020).

the Basel Convention should collaborate with the secretariats of other environmental agreements and international organizations, agencies, and programs. Together, they should focus their efforts on providing technical assistance to Southeast Asian countries who overtook China as the biggest importers of plastic waste.<sup>110</sup>

Moreover, many Southeast Asian countries are rethinking their import regulations on plastic waste and some have already sworn to place a total ban on plastic waste imports in the near future.<sup>111</sup> These policy changes will impact all parties of the Convention because Article 4 of the Basel Convention establishes “parties shall prohibit or shall not permit the export of hazardous wastes and other wastes to the parties which have prohibited the import of such wastes.”<sup>112</sup> If countries who announced a total ban on plastic imports, actually follow through with their promises, parties to the Convention will no longer have a legal destination for their plastic waste. Therefore, before placing a total ban on plastic waste imports, countries must consider a complete stop on the shipment of plastic waste overnight can result in an outgrowth of illegal markets and smuggling, and thus must take appropriate steps to prevent these possible side-effects.<sup>113</sup>

Even if complete bans on plastic waste imports are not imposed, the ASEAN region’s increased awareness of the environmental impacts of plastic waste trade still has positive momentum. This increased awareness will lead to setting higher standards for foreign plastic waste imports. The recent Bangkok Declaration on Combating Marine Debris in the ASEAN region marks an encouraging start in addressing the plastic waste problems in the region.<sup>114</sup> Consequently, Southeast Asia’s developments in domestic import regulations coupled with the Convention’s “notice and consent”

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110. GREENPEACE, SOUTHEAST ASIA’S STRUGGLE AGAINST THE PLASTIC WASTE TRADE, *supra* note 5.

111. See ARKIN ET AL., *supra* note 34, at 42-43, 11; GREENPEACE, SOUTHEAST ASIA’S STRUGGLE AGAINST THE PLASTIC WASTE TRADE, *supra* note 5, at 7-8, 11.

112. Basel Convention, *supra* note 49, at art. 4.

113. Ad Hoc Working Group of Legal and Technical Experts with a Mandate to Prepare a Global Convention on the Control of Transboundary Movements of Hazardous Wastes, Rep. of the Ad Hoc Working Group on the Work of its Fourth Session UNEP, 4th Sess., at 3, ¶7, U.N. Doc. WG.190/4 (Feb. 3, 1989).

114. See generally Association of Southeast Asian Nations, Bangkok Declaration on Combating Marine Debris in ASEAN Region (June 22, 2019), <https://asean.org/bangkok-declaration-combating-marine-debris-asean-region/>.

regime will make it increasingly difficult for exporting countries to ship hazardous plastic wastes to Southeast Asian countries.

#### IV. IMPLICATIONS OF THE NEW AMENDMENT TO THE UNITED STATES

Economic incentives and the advantage of avoiding potential liability under federal and state laws, on environmentally sound waste management, drives U.S. waste exportation to lower-income countries. As the cost of recycling and disposing of wastes in the United States increased—due to the enforcement of new environmental laws—generators of waste started to look for other countries where the cost of waste management was relatively cheaper.<sup>115</sup> The countries where waste was exported were mostly developing countries that had less stringent environmental laws, which further motivated the U.S. waste generators to consider such transboundary movement as an economically sound strategy.<sup>116</sup> Ironically, U.S. efforts to reduce environmental harms from waste disposal through new environmental laws resulted in the externalization of pollution to other countries. This also demonstrates establishing relevant laws on the international aspects of waste trade is as important as strengthening domestic environmental laws.

It was 1984 when the U.S. first realized the lack of regulation on the export of hazardous waste and amended the Resource Conservation and Recovery Act (RCRA) through the Hazardous and Solid Waste Amendments (HSWA).<sup>117</sup> HSWA established a monitoring system to assure international hazardous waste shipments comply with the standards in RCRA.<sup>118</sup> The amendments only allowed the export of hazardous waste under certain circumstances where the exporter notified the Environmental Protection Agency (EPA) and received importing countries' consents.<sup>119</sup>

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115. See Joseph LaDou, *The Export of Environmental Responsibility*, 49 ARCHIVES OF ENVTL. HEALTH 6, 6 (1994); see also Elizabeth S. Pope, *The Shadowy World of Hazardous Waste Disposal: Why the Basel Convention's Structure Undermines Its Substance*, 13 S.C. J. INT'L L. & BUS. 305, 312 (2017).

116. Stephen Johnson, *The Basel Convention: The Shape of Things to Come for United States Waste Exports?*, 21 ENVTL. L. 299, 306 (1991).

117. William N. Doyle, *United States Implementation of the Basel Convention: Time Keeps Ticking, Ticking Away*, 9 TEMPLE INT'L & COMP L.J. 141, 147 (1995).

118. *Id.*

119. See 42 U.S.C. § 6938 (a)(1) (A)-(D) (1988).



However, the HSWA was limited in its application. It applied only to the wastes that the United States defined as hazardous.<sup>120</sup>

Without any substantive regulations or checks on the export of plastics, U.S. exports of plastic waste grew, and the United States quickly became one of the world's largest exporters of plastic waste. In 2018, the United States exported 1.1 billion kg of plastic waste, and 78% of it was sent to developing countries with inadequate waste management systems, including Thailand, Malaysia, and Vietnam.<sup>121</sup> A 2019 Greenpeace report also found U.S. plastic waste exports to Southeast Asian countries significantly increased after the new Chinese policy on foreign waste was passed.<sup>122</sup>

Despite heavy responsibilities to address the waste trade issue, the U.S. has not yet ratified the Convention. It is one of the only two countries that has signed the Convention but have not ratified it.<sup>123</sup> President George H.W. Bush signed the Convention and the Senate gave its advice and consent to the ratification in August 1992, but the implementation of legislation is required before the President can ratify the treaty.<sup>124</sup> The implementing legislation is expected to include specific, measurable criteria to evaluate the U.S. waste export system and its compliance with the "environmentally sound management" standards of the Basel Convention.<sup>125</sup>

There are many reasons behind the current state of the Basel Convention in the U.S. These include political dysfunctions concerning environmental issues, legal problems that arise out of the gaps between the Convention and the RCRA, the U.S. law presiding the Convention that also addresses waste exports, and concerns about EPA's authority to control the

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120. Doyle, *supra* note 117, at 148.

121. Jan Dell, *157,000 Shipping Containers of U.S. Plastic Waste Exported to Countries with Poor Waste Management in 2018*, PLASTIC POLLUTION COALITION (Mar. 6, 2019), <https://www.plasticpollutioncoalition.org/blog/2019/3/6/157000-shipping-containers-of-us-plastic-waste-exported-to-countries-with-poor-waste-management-in-2018>.

122. GREENPEACE, DATA FROM THE GLOBAL PLASTICS WASTE TRADE, *supra* note 12, at 1.

123. Secretariat of the Basel Convention, Status of Ratifications, <http://www.basel.int/?tabid=4499> (last visited Feb. 14, 2020) (The only non-ratifying countries are the US and Haiti).

124. Rebecca A. Kirby, *The Basel Convention and The Need for United States Implementation*, 24 GA. J. INT'L & COMP. L. 281, 282 (1994).

125. Kratz, *supra* note 100, at 331-34.

activities of waste exports.<sup>126</sup> More than two decades have passed since the adoption of the Basel Convention, but the U.S. has not made substantial progress in overcoming these difficult issues.

However, considering the rapidly changing definition of hazardous waste in the international arena, this Article argues that the new amendment on plastic waste has important implications for the U.S. regardless of its current status as a non-party to the Convention. These implications are (a) the emergence of customary international law on the hazardous waste classification of plastic waste, (b) the conflicts between U.S. domestic laws and international standards, and (c) the consequent development of waste management infrastructure and technology in other developed countries. As a leading generator and exporter of plastic wastes, these three implications altogether present a greater need for the U.S. to ratify the Basel Convention or comply with the new amendments through other means such as modifying domestic export controls or establishing separate agreements with the major importing countries.

*A. The Emergence of Customary International Law on the Hazardous Waste Classification of Plastic Waste*

According to the text of Article 38(1) of the Statute of the International Court of Justice, customary international law is one of the three principal sources of international law formed by evidence of state practice and *opinio juris*. The other two sources are treaties and general principles of law. It is a traditional understanding that customary international law is created by consistent conduct of states “coupled with the belief that they are acting out of legal obligation or *opinio juris*.”<sup>127</sup> Examples of customary international law include the doctrine of non-refoulement<sup>128</sup> and the granting of immunity

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126. Tseming Yang & C. Scott Fulton, *The Case for U.S. Ratification of the Basel Convention on Hazardous Wastes*, 25 N.Y.U. ENVTL. L. J. 52, 75-79 (2017).

127. Roozbeh (Rudy) B. Baker, *Customary International Law: A Reconceptualization*, 41 BROOK. J. INT'L L. 439, 444 (2016).

128. Guy S. Goodwin-Gill, *Non-Refoulement and the New Asylum Seekers*, 26 VA. J. INT'L L. 897, 901 (1986) (principle of non-refoulement obliges a state not to “expel or return a refugee in any manner whatsoever to the frontiers of territories where his life or freedom would be threatened”).

for visiting heads of state.<sup>129</sup> All states are bound by customary international law unless the state publicly and consistently objects to the rule.<sup>130</sup>

The recent Basel Convention's decision to classify certain plastic wastes as hazardous waste can become a new customary international law provided that enough states act in conformity with the new amendment, especially considering the current plastic crisis. However, investigating the formation of a new customary international law takes a long time and requires a large number of resources. Formation of a new customary law involves examining the states' conduct in diverse forms ("including diplomatic acts, statutes, judicial decisions, [and] official statements") over a substantial period of time.<sup>131</sup> Furthermore, many scholars are skeptical about the legal bindingness of customary international law, given there is no agreement on the amount or consistency of practice that is required.<sup>132</sup>

Despite the controversy over its conceptual flaws, customary international law has been a commonly cited source in both international and domestic judicial decisions. Customary international law plays an essential role in consolidating newly emerging norms into a "custom" that international or domestic tribunals may choose or choose not to apply.<sup>133</sup> The focus of this section lies on this functional side of customary international law, specifically the influencing of the U.S. federal court decisions and the consequent circumventing of the formal ratification process, as well as the employing of the "naming and shaming" strategy as a means to alter the behavior.

One way the new Basel Convention amendment on plastic waste, as a potential customary international law, can influence the U.S. is through federal courts. U.S. courts often cite treaties—including those establishing when the U.S. is not a party—and the citation patterns analyzed by a study suggest courts do not apply customary international law in any strict doctrinal sense and rarely consider direct evidence of foreign state

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129. Andrew T. Guzman, *Saving Customary International Law*, 27 MICH. J. INT'L L. 115, 136 (2005).

130. *See id.* at 142.

131. Ryan M. Scoville, *Finding Customary International Law*, 101 IOWA L. REV. 1893, 1896 (2016).

132. Anthony A. D'Amato, *The Concept of Special Custom in International Law* 212, 216 (Northwestern Univ. Sch. of Law Scholarly Commons, Working Paper No. 116).

133. Paul B. Stephan, *Disaggregating Customary International Law*, 21 DUKE J. COMP. & INT'L L. 191, 192 (2010).

practice.<sup>134</sup> Consequently, arguments for the classification of certain types of plastic waste as hazardous waste can be brought to the U.S. courts, and, if successful, court decisions can directly influence the relevant authorities and the legislative to apply more stringent environmental standards to the import, export, and domestic handling of plastic waste.

For the advocates of the environment, the new amendment can be used as a valuable tool to accuse the U.S. government of not following international standards. “Naming and shaming” strategies are not only vehicles for enforcing international law but can also serve as building blocks for its creation, because “[a]ccusations—and responses to them—may comprise the requisite evidence of state practice and/or *opinio juris* for the construction of customary international law.”<sup>135</sup> Therefore, regardless of the legal status of the new amendment as a customary international law, environmental advocates and non-governmental organizations (NGOs)<sup>136</sup> can pressure the U.S. to comply with the new classification of particular plastic wastes as hazardous wastes. This process can potentially lead to altering the behavior of the state as well as contributing to the formation of customary international law.

### *B. Conflicts Between U.S. Domestic Laws and the New Basel Classification*

There are some immediate conflicts likely to occur following the entry into force of the new amendment. The EPA regulations<sup>137</sup> implementing the

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134. Scoville, *supra* note 131, at 1918.

135. Martha Finnemore & Duncan B. Hollis, *Beyond Naming and Shaming: Accusations and International Law in Cybersecurity*, EUR. J. INT’L LAW (forthcoming 2020) (manuscript at 7) (available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3347958](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3347958)).

136. *List of Non-Governmental Organization Accredited to the Conference of States Parties*, UNITED NATIONS, <https://www.un.org/development/desa/disabilities/conference-of-states-parties-to-the-convention-on-the-rights-of-persons-with-disabilities-2/list-of-non-governmental-organization-accredited-to-the-conference-of-states-parties.html> (last visited Oct. 29, 2020).

137. 40 C.F.R. § 261 (2012); *see also* Defining Hazardous Waste: Listed, Characteristic and Mixed Radiological Wastes, available on <https://www.epa.gov/hw/defining-hazardous-waste-listed-characteristic-and-mixed-radiological-wastes#listed> (“A waste is determined to be a hazardous waste if it is specifically listed on one of four lists (the F, K, P and U lists”).

RCRA and the U.S. law defining hazardous waste<sup>138</sup> do not classify plastic wastes as hazardous but as solid; hence, they are treated equally to food scraps or grass clippings.<sup>139</sup> Therefore, the U.S. may permit the export of plastic waste pursuant to the RCRA, but the importing country may refuse to receive the plastic waste or send it back because it is prohibited to import hazardous waste or other waste from a non-party.<sup>140</sup> Only uncontaminated recyclable plastic that meets the conditions of non-hazardous waste is allowed to be imported by the parties to the Convention.<sup>141</sup>

Furthermore, although the RCRA establishes an export process similar to the prior informed consent mechanism of the Basel Convention, the process only applies to EPA-defined hazardous wastes, which exclude plastic wastes.<sup>142</sup> Therefore, under existing regulations, the EPA is not mandated to require the exporters of plastic waste to provide detailed information about the waste or get consent from the importing country before shipping. As a result, exporters who are unaware of the new requirements imposed by the amendment will likely continue shipping plastic wastes to importing countries without realizing the burdens they are imposing on them. For example, importing countries may be forced to sort the plastic waste according to the new classification and to apply the required compliance mechanisms to those wastes that are covered by the

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138. See 42 U.S.C.S § 6903(5)(A)-(B) (LEXIS through Pub. L. No. 116-163) (“The term ‘hazardous waste’ means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics” can either “cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness” or “pose a substantial present or potential hazard to human health or the environment when improperly treated, sorted, transported, or disposed of, or otherwise managed.”)

139. See Chelsea M. Rochman et. al., *Classify plastic waste as hazardous*, 494 NATURE 169 (2013); see also EPA, *RCRA Orientation Manual*, at II-5 (2014), available at [https://www.epa.gov/sites/production/files/2015\\_07/documents/rom.pdf](https://www.epa.gov/sites/production/files/2015_07/documents/rom.pdf) (last visited Oct. 17, 2020) (describing plastic products as a subset of solid waste that is not a hazardous waste regulated under Subtitle C of RCRA).

140. See Basel Convention, *supra* note 49, at art. 4, ¶5; see also *id.*, at art. 11, ¶1 (explaining a party shall not permit hazardous wastes or other wastes to be imported from a non-Party unless there is a separate agreement between the involved States).

141. See Amendments, *supra* note 9.

142. See generally Thomas R. Munteer, *Codifying Basel Convention Obligations into U.S. Law: The Waste Export Control Act*, 21 ENVTL. L. REP. NEWS & ANALYSIS 10085, 10086 (1991).

Convention. These situations will cause confusion among trading partners and create administrative burdens for importing countries who are parties to the Basel Convention and are thereby obligated to comply with the new amendment.<sup>143</sup>

These potential consequences which reinforce the notion that “the responsibility for ensuring exported goods are being properly enforced relies mainly on customs authorities of the exporting countries.”<sup>144</sup> Therefore, the U.S. should cooperate closely with the major importers of U.S. plastic waste to help avoid confusion and ensure the effective implementation of the new amendment.<sup>145</sup> One way to do this is to establish separate agreements with individual countries. While Canada, Mexico, Costa Rica, Malaysia, and the Philippines have separate agreements with the United States to import and export hazardous waste, these agreements only concern hazardous waste as defined by the EPA and therefore do not cover plastic waste.<sup>146</sup> In light of

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143. *See Drastic drop in exports outside EU & performance downgrade of recycling in EU to be expected from new trade rules for plastic waste*, EUR. FED’N OF WASTE MGMT. AND ENVTL. SERVICES (May 20, 2019) (“[T]o prepare for the implementation of these new rules in 2021, it is crucial that public authorities responsible for shipments put in place strengthened controls against illegal trade” and that “[t]hese controls must be quick, based on the same interpretation, and legally certain in order to provide a predictable frame for export operators”); *see also Basel Convention Proposal to Classify Plastic as a Hazardous Waste*, INST. OF SCRAP RECYCLING INDUSTRIES, INC., <https://www.isri.org/news-publications/news-details/2018/09/19/basel-convention-proposal-to-classify-plastic-as-a-hazardous-waste> (last visited Oct. 17, 2020) (arguing that the new plastic amendment will be an administrative burden for plastic scrap traders worldwide, and especially troubling for U.S. companies given that United States is not a party to the Basel Convention).

144. International Solid Waste Association, *ISWA Position Paper on The Proposal to Amend the Basel Convention Regarding the International Movement of Plastic Waste*, INT’L SOLID WASTE ASS’N, [https://www.iswa.org/fileadmin/galleries/News/2018-11/2018-11-14\\_ISWA\\_Position\\_on\\_The\\_Proposal\\_to\\_amend\\_the\\_Basel\\_Convention\\_regarding\\_plastics.pdf](https://www.iswa.org/fileadmin/galleries/News/2018-11/2018-11-14_ISWA_Position_on_The_Proposal_to_amend_the_Basel_Convention_regarding_plastics.pdf) (last visited Oct. 17, 2020).

145. ARKIN ET AL., *supra* note 34 (explaining that, by weight, the largest importers of U.S. plastic waste in 2018 were Malaysia (200,022 tons), Canada (123,579 tons), India (121,907 tons), Hong Kong (115,310 tons), Thailand (101,632 tons), Vietnam (74,496 tons), and Taiwan (50,685 tons)).

146. *See generally International Agreements on Transboundary Shipments of Hazardous Waste*, ENVTL. PROTECTION AGENCY, <https://www.epa.gov/hwgenerators/international-agreements-transboundary-shipments-hazardous-waste#Costa> (last visited Feb. 18, 2020) (explaining that under the agreements established with Costa Rica, Malaysia and Philippines, U.S. may

the emerging evidence on the environmental impacts of plastic waste and the current situation in Southeast Asia, the U.S. should actively communicate with importing countries about how those countries are preparing for the effects of the new amendment. Based on this communication, the U.S. should also establish procedural and substantive controls for the export of plastic waste with these countries.

In light of the RCRA, the U.S. Code ensures hazardous waste exports conform to an international agreement if both the U.S. and the government of the receiving country have agreed to such terms.<sup>147</sup> In other words, international agreements the U.S. establishes with other countries are reinforced by the RCRA as it is codified in the U.S. Code. Therefore, once the U.S. enters into separate agreements with the major importers of plastic waste in which they agree to classify certain types of plastic waste as hazardous, in accordance with the new amendment does, the EPA will have to adjust its regulations accordingly.<sup>148</sup>

### *C. Consequent Development of Waste Management Infrastructure and Technology In Other Developed Countries*

The new Basel Convention amendment also has important economic implications for the U.S. and the rest of the world. For example, as export regulations on plastic wastes tighten, it will become increasingly difficult for waste generators to export their waste to foreign countries. This will have the effect of decreasing the overall quantity of plastic exports. In preparation for similar upcoming changes to the waste management market, various developed countries have begun taking steps towards creating circular economies by developing plans to increase their capacities for waste disposal and recycling.<sup>149</sup> For example, the European Union is considering to support the new amendment,<sup>150</sup> and the global plastics industry has followed by

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receive waste for recycling or disposal from Costa Rica, Malaysia, and the Philippines, but may not export waste to these countries).

147. 42 U.S.C.S. §§ 6938(a)(2), (f) (LEXIS through Pub. L. No. 113-108).

148. *See id.*

149. *See generally* SCI. AND TECHNICAL ADVISORY PANEL, *supra* note 30 (explaining that circular economy approaches aim “to keep resources in use for as long as possible, to extract the maximum value from them whilst in use, and to recover and regenerate products and materials at the end of their service life”).

150. Council Decision (EU) 2019/638 of Apr. 15, 2019, *supra* note 70, at art. 1.

announcing a series of ambitious targets and initiatives aimed at transforming Europe into a more circular and resource-efficient economy.<sup>151</sup> Another example can be found in Japan which is stepping up its efforts to recycle plastic wastes and reduce the use of single-use plastics.<sup>152</sup>

The efforts mentioned above are intended to help developed countries reduce plastic use and ensure high rates of plastic re-use and recycling. As a result, developed countries will experience an increase in investments in sustainable packaging solutions and technologies related to waste sorting and recycling.<sup>153</sup> In today's fast-changing global economy, countries that quickly invest in the research and development of emerging green technologies will obtain advantages over competing countries. Therefore, it is crucial for every country—including the U.S.—to closely monitor global trends in waste management and incorporate them into their national plans and strategies. This is important not only for environmental reasons but also to “drive employment, innovation, and economic growth.”<sup>154</sup>

The U.S. also shares the responsibility with other developed countries to accelerate the transition to a circular economy and lead global markets towards a more sustainable future. However, in recent years, the U.S. has distinguished itself from other developed countries by becoming the only OECD country to not ratify the Basel Convention.<sup>155</sup> Moreover, the U.S. objected OECD's decision to incorporate the new Basel Convention amendments into the OECD rules on waste imports and exports.<sup>156</sup>

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151. *See generally* PLASTICSEUROPE, PLASTICS 2030: PLASTICSEUROPE'S VOLUNTARY COMMITMENT TO INCREASING CIRCULARITY AND RESOURCE EFFICIENCY (2018), [https://www.plasticseurope.org/application/files/6115/1700/8779/PlasticsEurope\\_Voluntary\\_Commitment\\_16012018.pdf](https://www.plasticseurope.org/application/files/6115/1700/8779/PlasticsEurope_Voluntary_Commitment_16012018.pdf).

152. *See Redouble efforts to reduce plastic waste*, JAPAN TIMES (May 16, 2019), [https://www.japantimes.co.jp/opinion/2019/05/16/editorials/redouble-efforts-reduce-plastic-waste/#.Xk\\_8LWhKg2w](https://www.japantimes.co.jp/opinion/2019/05/16/editorials/redouble-efforts-reduce-plastic-waste/#.Xk_8LWhKg2w).

153. *See* PLASTICSEUROPE, *supra* note 151, at 5.

154. THE WORLD BANK, BUILDING COMPETITIVE GREEN INDUSTRIES: THE CLIMATE AND CLEAN TECHNOLOGY OPPORTUNITY FOR DEVELOPING COUNTRIES 16 (2014), <https://www.infodev.org/infodev-files/green-industries.pdf>.

155. *See* OECD, GUIDANCE MANUAL, *supra* note 93, at 8; *see also infra* note 156.

156. *BAN Press Release: US Objects to New Global Rules to Better Control Exports of Contaminated and Mixed Plastic Waste*, IPEN (July 15, 2019), <https://ipen.org/news/ban-press-release-us-objects-new-global-rules-better-control-exports-contaminated-and-mixed>.



Therefore, the recent U.S. responses to the new amendments, in addition to its withdrawal from the Paris Agreement, raises doubts about the country's commitment to the global environmental agenda.<sup>157</sup> With respect to plastic waste and the global efforts to develop a circular economy, recent actions taken by the U.S. also disharmonize global efforts to curb single-use plastics.<sup>158</sup>

In spite of the concerns mentioned above, there is reason to be optimistic. The private sector knows no limits, which means U.S. companies are continually innovating despite the Trump Administration's lack of political will.<sup>159</sup> For example, the New Plastics Economy Global Commitment is a private sector-led initiative related to plastic waste management. The initiative launched in October 2018 and brought together over 450 businesses, policymakers, investors, NGOs, academics, citizens, and industry organizations under a shared vision of a circular economy for plastic.<sup>160</sup> Together with the new amendments on plastic exports, this initiative can help create a global momentum for shifting plastics and waste management industries towards a new direction. Ideally, this will result in positive outcomes for countries in which those companies operate.

Ultimately, despite the fact the U.S. has not ratified the Basel Convention, its economy will nevertheless be affected by the new amendments. This will happen because of policy developments and

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157. Jennifer Huang, *Climate Justice: Climate Justice and the Paris Agreement*, 9 J. ANIMAL & ENVTL. L. 23, 56 (2017).

158. Marcial Nava, *Fighting Ocean Plastic Pollution*, BBVA RESEARCH, at 4-5 (2018), [https://www.bbva.com/wp-content/uploads/2018/10/181010\\_US\\_PlasticPollution.pdf](https://www.bbva.com/wp-content/uploads/2018/10/181010_US_PlasticPollution.pdf) (“[T]he U.S. did not endorse the G7 Ocean Plastics Charter that sets objectives toward 100% reusable or recoverable plastics by 2030 and 100% recycling of plastic packaging by 2040.” In August 2017, the Trump administration “reversed a 2011 ban on the sale of plastic water bottles in some of the most famous national parks in the country.”).

159. *Id.*

160. ELLEN MACARTHUR FOUND. ET AL., NEW PLASTICS ECONOMY GLOBAL COMMITMENT: COMMITMENTS, VISION AND DEFINITIONS 3 (2020), [https://www.newplasticseconomy.org/assets/doc/Global-Commitment\\_Definitions\\_2020-1.pdf](https://www.newplasticseconomy.org/assets/doc/Global-Commitment_Definitions_2020-1.pdf); *See generally* ELLEN MACARTHUR FOUND., THE NEW PLASTICS ECONOMY: CATALYSING ACTION 23 (2017), [https://www.ellenmacarthurfoundation.org/assets/downloads/New-Plastics-Economy\\_Catalysing-Action\\_13-1-17.pdf](https://www.ellenmacarthurfoundation.org/assets/downloads/New-Plastics-Economy_Catalysing-Action_13-1-17.pdf) (explaining the three main ambitions of the New Plastics Economy are to create an effective after-use plastics economy, “drastically reduce the leakage of plastics into natural systems and other negative externalities,” and “decouple plastics from fossil feedstocks.”).

technological innovations that will occur in other developed countries and the private sector's efforts to help establish global standards.

## V. RECOMMENDATIONS FOR THE FUTURE

Following China's ban, most plastic waste exports were destined to specific Southeast Asian countries. This outcome raised serious environmental concerns, which led to the adoption of the new Basel Convention amendments to add plastics to the list of "hazardous waste" and "other waste." Both parties and non-parties to the Convention are affected by Convention changes, including the United States. Although more preparation is necessary to ensure effective implementation, the new amendment is certainly a major step in the right direction.

The next section investigates what is missing from the new amendments and focuses on three specific areas needing to be further addressed. To make meaningful progress in environmentally sound management of plastic waste, future international legal developments should place greater emphasis on marine plastic pollution in Southeast Asia, the special circumstances or vulnerabilities of the developing countries, and reducing the generation of plastic waste especially at the production and consumption levels.

### A. Addressing Marine Plastics Pollution in Southeast Asia

A sobering statistic highlights the issue at the heart of this analysis. Only five countries account for originating over half of land-based plastic waste leakage: China, Indonesia, the Philippines, Thailand, and Vietnam.<sup>161</sup> Accordingly, addressing marine plastics pollution in Asia, and these five countries in particular, is far more critical than for any other region. Due to China's ban on the import of most plastic waste, this Article focuses on the four remaining Southeast Asian countries.<sup>162</sup> Studies prove mismanaged plastic waste enters the ocean through numerous river systems in Southeast Asia.<sup>163</sup> For these reasons, Southeast Asian countries are often blamed for

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161. OCEAN CONSERVANCY, *STEMMING THE TIDE: LAND-BASED STRATEGIES FOR A PLASTIC-FREE OCEAN* 7 (2015), <https://oceanconservancy.org/wp-content/uploads/2017/04/full-report-stemming-the.pdf>.

162. *Id.* at 21.

163. Laurent C.M. Lebreton et al., *River plastic emissions to the world's oceans*, 8 NAT. COMMUN. 15611 (June 7, 2017).

littering plastic in the ocean and labeled as the most significant contributors to marine plastic debris.<sup>164</sup>

However, this commonly-cited statement does not reflect the fact that some of the plastic wastes leaking into the ocean from these countries originate from those developed countries that avoid the burden of waste management by exporting their wastes.<sup>165</sup> The exact quantity of western-originated plastic waste in the marine plastic inputs has not yet been calculated, but the long history of plastic waste trade among different countries is enough for us to conclude that it is not one single region or country that can be held responsible for ocean pollution. Southeast Asia's marine plastic pollution can be attributed to many domestic factors such as poor waste management infrastructure and institutional capacity.<sup>166</sup> Additionally, shipping more plastic waste to the Southeast Asian region only makes it worse. Therefore, marine plastic pollution, even though it occurs mainly in Asia, can only be addressed through the participation of all countries involved in plastic waste trade.

A primary driver of the new plastic amendment was a common understanding marine plastic litter is a rapidly-increasing and serious issue that requires an urgent global response. Despite the importance of collectively addressing marine pollution as an international community, the new Basel amendments fall short of expectations and lack substantive regulatory control over plastic waste in the oceans. The result is a disappointing outcome. The Convention's original text also states in Article

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164. See Patpicha Tanakasempipat, *Southeast Asian countries need tougher plastic policies to curb pollution: U.N.*, REUTERS (Nov. 13, 2019), <https://www.reuters.com/article/us-asia-plastic/southeast-asian-countries-need-tougher-plastic-policies-to-curb-pollution-u-n-idUSKBN1XN1QL>; see also Kate Wheeling, *The EPA Blames Six Asian Nations that the U.S. Exports Plastic Waste to for Ocean Pollution*, PAC. STANDARD (Jul. 15, 2019), <https://psmag.com/environment/the-epa-blames-six-asian-nations-that-the-u-s-exports-plastic-waste-to-for-ocean-pollution>.

165. See YOUNA LYONS ET AL., A REVIEW OF RESEARCH ON MARINE PLASTICS IN SOUTHEAST ASIA: WHO DOES WHAT? 13 (May 2019), [https://cil.nus.edu.sg/wp-content/uploads/2019/07/A-review-of-research-on-marine-plastics-in-Southeast-Asia\\_Final28June2019.pdf](https://cil.nus.edu.sg/wp-content/uploads/2019/07/A-review-of-research-on-marine-plastics-in-Southeast-Asia_Final28June2019.pdf).

166. OLHA KRUSHELNYTSKA, *SOLVING MARINE POLLUTION: SUCCESSFUL MODELS TO REDUCE WASTEWATER, AGRICULTURAL RUNOFF, AND MARINE LITTER*, 6-9 (Sept. 2018), <http://documents.worldbank.org/curated/en/651521537901259717/pdf/130154-WP-PUBLIC-SolvingMarinePollution.pdf>.

15 that the “[p]arties at their first meeting shall consider any additional measures needed to assist them in fulfilling their responsibilities with respect to the protection and the preservation of the marine environment.”<sup>167</sup> Still, the new amendment does not include any specific measures to address plastic waste in the ocean. The amendments only add plastic to the lists of wastes in Annex II, VIII, and IX without making changes to the Convention’s control system or defining the scope of environmentally sound plastic waste management.

Under the new amendments, plastic waste classified as hazardous waste and other waste will be subject to the Convention’s control system (including prior informed consent). However, the information required from the disposer under Annex V A includes only basic information (reason for waste export, country of export and import, means of transport, description of waste, quantity, method of disposal, etc.) and a confirmation that “there was no reason to believe that the wastes will not be managed in an environmentally sound manner in accordance with the laws and regulations of the country of import.”<sup>168</sup> Ensuring the importing country disposer identifies marine pollution risks throughout waste disposal processes and takes steps to address those risks is important. As such, the Convention needed to establish additional mechanisms by amending Annex V A to include preventive measures of marine pollution, or to clarify the scope of environmentally-sound management in a separate guideline.

With this legal framework in place, the implementation of any viable solution to prevent exported plastic waste from leaking into the ocean should be supported by sufficient evidence. Specific action plans can be developed only after the sources of marine plastic are identified, and the disposer in the importing country has acquired the necessary capacity to identify the leakage points, assess the risks, and make plans to prevent further leakages into ocean. Currently, uncertainties exist about the prime origins of marine plastics pollution.<sup>169</sup> Specifically, the data in Southeast Asian marine pollution is rudimentary and insufficient to draw specific policy recommendations.<sup>170</sup> Therefore, further research is needed before discussing

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167. Basel Convention, *supra* note 49, at art. 15.

168. *Id.* at Annex VA, ¶ 20.

169. Bethanie Carney Almroth & Hakan Eggert, *Marine Plastic Pollution: Sources, Impacts, and Policy Issues*, 13 REV. OF ENVTL. ECON. & POL’Y 317, 318 (2019).

170. LYONS ET AL., *supra* note 165, at 14.

additional measures to address the marine plastics problem under the Basel Convention. The capacity building of disposal and recycling facilities in Southeast Asian states should go hand in hand with further research, of which capacity building programs (such as voluntary recording and reporting) can provide valuable information.

*B. Special and Differential Treatment for Developing Countries*

The new amendments on plastic waste equally apply to developed and developing countries, which means both must go through the Convention's control system before exporting their wastes. The same treatment of developed and developing countries does not reflect the realities of plastic waste trade, thus resulting in negative consequences. Therefore, this Article suggests the Basel Convention should apply more flexible standards and processes to the export of plastic waste from developing countries to developed countries. The core purpose of the Convention is to support developing countries rather than make it more difficult for them to manage their wastes.

First of all, the additional procedures can unintentionally make it more difficult for developing countries to export wastes to developed countries and can result in increased mismanagement of plastic waste, which is especially the case for the small island developing countries who are vulnerable to marine litter and often lack the resources to transport, recycle, or dispose plastic wastes.<sup>171</sup>

Moreover, considering the limited capabilities of developing countries to manage wastes,<sup>172</sup> the trade of plastic from developing countries to developed countries should not be discouraged and should be encouraged when the amount of plastic waste exceeds the country's waste management capacities. For example, the sharp increase in plastic exports to Southeast Asian countries following the new Chinese policy presents a situation where exporting plastic waste to developed countries would be a more

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171. FLORINA LACHMANN ET AL., SWED. INST. FOR THE MARINE ENV'T, REP. NO. 2017:4, MARINE PLASTIC LITTER ON SMALL ISLAND DEVELOPING STATES (SIDS): IMPACTS AND MEASURES5 (2017), [https://havsmiljoinstitutet.se/digitalAssets/1641/1641020\\_sime-2017-4-marine-plastic-litter.pdf](https://havsmiljoinstitutet.se/digitalAssets/1641/1641020_sime-2017-4-marine-plastic-litter.pdf) ("SIDS are also especially vulnerable to impacts of marine plastic litter because such litter might lead to lower revenues from the tourism and fishing industries that their economic largely depend on.").

172. Basel Convention, *supra* note 49, at preamble.

environmentally sound choice because developed countries in Europe and North America have better waste management infrastructures and fewer chances of land-based plastic leakages into the ocean.<sup>173</sup> Therefore, it would be appropriate to treat transboundary movements from developing to developed countries differently than those movements from developed to developing countries. The Convention should apply simplified procedures and less stringent standards to developing countries. To achieve the goal of applying less stringent standards to developing countries, the Convention should preliminarily classify countries into different categories according to each country's vulnerabilities to plastic wastes or wastes in general. Criteria for these categories may include the following factors: technical capacity to dispose and recycle wastes, the status of either small island developing countries or least developed countries, and the likelihood of plastic leakage into the ocean.

The measures for differential treatment will be especially helpful for the Southeast Asian states dealing with unprecedented amounts of plastic waste imports after China's ban. Additionally, plastic exports for these same countries decreased drastically because they were also exporting plastic waste to China before China's ban. For instance, Indonesian statistics shows a 141% import increase (283,152 tons) of plastic waste and scrap, while exports decreased 48% (98,450 tons) in 2018 alone. This change in imports and exports created an additional 184,702 tons of additional plastic waste burden on domestic waste.<sup>174</sup> Furthermore, this increase in waste suggests the new Chinese policy resulted in both increased imports and decreased exports in Southeast Asian developing countries. In this situation, differential

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173. See Woldemar d'Ambrieres, *Plastics Recycling Worldwide: Current Overview and Desirable Changes*, 19 FIELD ACTIONS SCI. REP. 12, 14-15 (2019) (demonstrating that developed economies tend to have good waste management infrastructure (landfill, energy recovery), whereas developing economies are generally characterized by inadequate waste management infrastructure); see also Jambeck, *supra* note 26, at 769 (According to a measurement of the total mismanaged waste by populations within 50km of the coastline, and therefore defined as high risk of entering the oceans, East Asia and Pacific region accounts for 60 percent of the world total).

174. *Export and Import of Plastic Waste Situation in Indonesia: Implications of National Sword China Policy*, ALLIANCE OF ZERO WASTE INDON. (Mar. 21, 2019), <https://www.aliansizerowaste.id/single-post/2019/03/21/Export-and-Import-of-Plastic-Waste-Situation-in-Indonesia-Implications-of-National-Sword-China-Policy>.

treatment measures<sup>175</sup> will greatly contribute to reducing the overall amount of plastic waste in Southeast Asian countries.

The classification of countries into different categories, and resulting differential treatment, is consistent with Article 4, Paragraph 9, of the Convention. Article 4, Paragraph 9 states that

“[P]arties shall take appropriate measures to ensure that the transboundary movement of hazardous wastes and other wastes [will] only be allowed if: (a) the State of export does not have the technical capacity and the necessary facilities, capacity or suitable disposal sites in order to dispose of the wastes in question in an environmentally sound and efficient manner . . .”<sup>176</sup>

In other words, the Convention permits transboundary movements of wastes when the exporting country lacks technical capacity to efficiently manage the wastes in question.

The legal basis for differential treatment can also be found in many multilateral environmental agreements—such as the United Nations Framework Convention on Climate Change (UNFCCC)—and the multilateral trade rules established under the World Trade Organization (WTO). In the text of the UNFCCC, common but differentiated responsibilities places a greater burden on developed countries to address the adverse impacts of climate change.<sup>177</sup> Based on this principle, the Kyoto Protocol exempted developing countries from the obligation to achieve mitigation targets.<sup>178</sup> Similarly, the WTO grants special and differential

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175. These measures will be in the forms of simplified procedures for prior informed consent and technical assistance, with the intention to help waste exporters find new trading partners in other countries.

176. Basel Convention, *supra* note 49, at art. 4, ¶ 9.

177. United Nations Framework Convention on Climate Change, art. 3.1, May 9, 1992, 1771 U.N.T.S. 107.

178. *See generally* Kyoto Protocol to the United Nations Framework Convention on Climate Change, U.N. Doc. FCCC/CP/1997/L.7/Add.1 Dec. 11, 1997, (Kyoto Protocol is an international agreement adopted in 1997 as the first addition to the United Nations Framework Convention on Climate Change that established legally binding obligations for developed countries to reduce their greenhouse gas emissions).

treatment to developing countries, with particular attention to the least developed ones.<sup>179</sup>

### *C. Reducing the Generation of Plastic Waste*

Any long-term solution for the plastic waste problem must include both regulating the current trade flows and reducing the volume of such transboundary movement. Ideally, if the plastic waste is minimally generated and each party can manage its own waste within its jurisdictions, it will be possible to put an end to transboundary movements of plastic wastes. Even though the Basel Convention mentions the importance of reducing the generation of waste several times in its text,<sup>180</sup> the matter is left largely to the discretion of the parties. The Convention itself does not provide any substantive measures to reduce the generation of waste.

To establish a better framework for reducing global plastic waste under the Basel Convention, we should first determine what it means to reduce the generation of plastic waste and identify the available strategies. To start with, reducing the generation of plastic waste means addressing the plastic problems arising throughout the entire life-cycle of plastics including the production and consumption levels which take place before waste disposal.<sup>181</sup> Based on the existing scholarship, solutions to reduce plastic consumption include regulatory and economic policy instruments such as bans, plastic charges, other types of economic incentives, and psychological intervention strategies to increase awareness and encourage behavior change.<sup>182</sup> At the production level, plastic use can be reduced by using alternative materials, improving the product design, and banning certain

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179. Paola Conconi & Carlo Perroni, *Special and Differential Treatment of Developing Countries in the WTO*, 16 *WORLD TRADE REV.* 67, 67 (2015).

180. Basel Convention, *supra* note 49, at art. 4, ¶ 2, art. 13, ¶ 3.

181. See Joana C. Prata et al., *Solutions and Integrated Strategies for the Control and Mitigation of Plastic and Microplastic Pollution*, 16 *INT'L J. OF ENVTL. RESEARCH AND PUB. HEALTH*, at 6 (2019) (“Waste management is based on the hierarchy of the four R’s: Reduce, Reuse, Recycle, and Recover. Even though the priority is to reduce and reuse, intervening in production and consumption, some waste will be produced and should be properly managed as a resource through a Suitable Integrated Waste Management System.”).

182. Lea Marie Heidbreder et al., *Tackling the Plastic Problem: A Review on Perceptions, Behaviors, and Interventions*, 668 *SCI. OF THE TOTAL ENV'T* 1077, 1083-86 (2019).



types of single-use plastics.<sup>183</sup> In addition to these strategies at the production and consumption levels, an efficient waste management system can contribute to further reduction in plastic waste through recycling and waste-to-energy operations instead of resorting to landfilling or incineration.<sup>184</sup>

The Basel Convention partially addresses the waste disposal stage through the application of environmentally sound management standards to imported/exported waste, but it does not address the production and consumption components of plastic waste. This Article acknowledges the primary objective of the Basel Convention is to control the transboundary movement of waste. Nevertheless, in the absence of a binding international legal framework specifically designed for plastic pollution,<sup>185</sup> the Basel Convention may be able to fill the gaps by utilizing the available resources and its nearly universal membership. The recently created Plastic Waste Partnership may be a central resource for the Convention's point of discussion. The Plastic Waste Partnership, which was created at the same time as the 2019 amendment, is especially relevant to addressing production and consumption levels of plastic waste. The Plastic Waste Partnership is open to not only parties to the Convention, but also intergovernmental organizations, industry, academia and civil society, that are either dealing with or impacted by the different aspects of the prevention, minimization and management of plastic waste.<sup>186</sup> At this present time, the Partnership is only in its early stage, so the action areas are loosely defined.<sup>187</sup> In the future, a systemic approach to the plastic problem needs to be developed, which must involve identifying diverse issues arising from each stage of plastic waste's life-cycle and developing pilot projects specifically aimed at production and consumption levels. In addition to encouraging participation of the private sector in the new Plastic Waste Partnership, the Convention should help parties create national plans on plastic waste from a holistic

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183. Prata, *supra* note 181, at 3.

184. *Id.* at 6.

185. See Giulia Carlini & Konstantin Kleine, *Advancing the International Regulation of Plastic Pollution Beyond the United Nations Environment Assembly Resolution on Marine Litter and Microplastics*, 27 *RECIEL* 234, 236 (2018).

186. Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal Fourteenth meeting, *Terms of reference for the Basel Convention Partnership on Plastic Waste for the biennium 2020-2021*, at 2, UNEP/CHW.14/INF/16/Rev.1 (June 11, 2019).

187. *Id.* at 8-9.

perspective by providing technical assistance and promoting knowledge-sharing.<sup>188</sup>

## CONCLUSION

Beginning with the history of global trade in plastic waste, and the current plastic crisis in Southeast Asia following China's import ban, this Article surveyed how the Basel plastic amendment came into being. Furthermore, this Article surveyed the contents of the Convention's 2019 amendment and its expected legal consequences. Based on the examination of the diverse effects of the new amendment outside of the traditional legal sphere, the Article argued the new amendment poses significant implications for the U.S. even though it is not a party to the Convention.

Although the new Basel Convention amendment applies only to the trade aspect of the broader plastic problem, the Convention is an important step in reversing the existing plastics trade between developed and developing countries. Developing countries are disadvantaged by their inadequate waste management infrastructure and less stringent environmental regulations, yet the status quo allows developed countries to easily transfer the burden of managing their wastes onto developing countries. The 2019 amendment aims to rectify this cycle by reducing trade volume and placing most plastics under the Convention's control system.

However, there are significant weaknesses that may hinder good intentions. Future activities in preparation for the entry into force of the new amendment should include, among others, the following: clarifying the scope of "environmentally sound management" and "contamination" in the non-hazardous waste classification of plastic waste, ensuring the establishment of comprehensive national implementing legislation, and promoting the harmonization of plastic waste export standards by customs authorities. Any improvements in these areas will be instrumental in effectively implementing the new amendment ahead of its 2021 effective date.

The final section presented some recommendations on the future policy options under the Basel Convention. The Article argued the Basel plastic

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188. Sarah J. Morath, *Our Plastic Problem*, 33 NAT. RESOURCES & ENV'T 45, 49 (2019) ("As a result, a multimodal approach is necessary; no single method will solve our plastic problem. Innovation, entrepreneurship, and collaboration should be encouraged and part of a broader strategy to solve our plastic problem—a plastic strategy that considers design, end-of-life, and everything in between.").

amendment does not address the marine plastic pollution effectively. Further, the amendment still needs to establish additional mechanisms specifically aimed at identifying the sources of marine plastic litter in Southeast Asia and preventing plastic leakages into the oceans. At this time, more research is needed to understand the sources of marine plastic pollution. In addition, the current state of imbalance between the developed and developing countries presents a need to re-assess the control mechanisms of the Convention. Given the vulnerabilities of certain countries to plastic waste and the relatively advanced waste management infrastructure and recycling capability in the developed countries, applying special or differential treatment for developing countries can help effectively manage global plastic waste. Lastly, the Basel Convention can be used to address the broader plastic problem—beyond the transboundary movement of plastic waste—by putting more efforts into reducing the generation of plastic waste at the production and consumption levels, thus accounting for the entire life cycle of plastics.