

# THE UN GLOBAL WATER CONVENTIONS AND RIVERINE PLASTIC REGULATION: THE ROLE OF ASIAN STATES

ABID HUSSAIN<sup>1\*</sup>, CHEN HAISONG<sup>2</sup>, DANIEL F. AKROFI<sup>3</sup>, BUSHRA BIBI<sup>4</sup>, AAMIR SOHAIL<sup>5</sup>

<sup>1</sup>Ph.D. Candidate, Research Institute of Environmental Law (RIEL), School of Law, Wuhan University, China

<sup>2</sup> Professor, Research Institute of Environmental Law (RIEL), School of Law, Wuhan University, China

<sup>3</sup> Ph.D. Candidate, Lincoln Centre for Ecological Justice (LinCEJ), Lincoln Law School, University of Lincoln, United Kingdom

<sup>4</sup>Ph.D. Candidate, Research Institute of Environmental Law (RIEL), School of Law, Wuhan University, China

<sup>5</sup>Ph.D. Candidate, Research Institute of Environmental Law (RIEL), School of Law, Wuhan University, China

*Corresponding Author:* \*abid@whu.edu.cn

*Abstract:* Research shows that ten major river systems transport a significant percentage of plastics into the oceans and seas, most of which have their source in Asia. Interestingly, none except one of the States from which these river systems originate or traverse are Party to the UN global water conventions. This paper, therefore, explores reasons why these States have been slow to join or are not Party to these Conventions, and the potential impacts they could have if they were. The paper concludes that the role of Asian States is critical to implementing the UN global water conventions, as well as, to any future multilateral environmental agreements, such as the soon-to-be-negotiated global plastic treaty. It also argues that the proposed plastic treaty will have a crucial relationship with the UN global water conventions because of the number of plastics churned out into the marine environment by key river systems in Asia.

**Keywords:** UN global water conventions, plastic treaty, plastic regulation, river systems, Asia.

## Table of Contents

### Introduction

1. The UN global water conventions and their Contracting States in Asia
  - 1.1. The UN Watercourses Convention
  - 1.2. UNECE Water Convention
  - 1.3. Signatories and Contracting States in Asia
2. Why are Asian States not Party to the UN global water conventions?
  - 2.1. Text of the Convention
    - 2.1.1. Scope
    - 2.1.2. Perceived disparities in the substantive rules
    - 2.1.3. Contention over procedural rules
  - 2.2. Other contentious State-centric and regional instability issues
    - 2.2.1. Shared water vulnerabilities within Asia
    - 2.2.2. Unreliable institutional structures for transboundary waters
    - 2.2.3. Low priority by Asian States
3. Potential impacts on riverine plastic regulation if Asian States were to be Parties to the UN global water conventions
  - 3.1. Roles as 'key countries for action'
4. Conclusion and Recommendations

### Introduction

Plastic pollution has become one of the contemporary environmental crises,<sup>1</sup> emerging as a significant environmental hazard to inter alia land, air, marine, and, most importantly, freshwater environments,<sup>2</sup>

<sup>1</sup> The United Nations Environment Programme (UNEP) termed climate change, biodiversity loss and pollution “three planetary crises,” which are reinforcing each other and causing unprecedented environmental damage.

<sup>2</sup> CM Rochman, and others, ‘Classify plastic waste as hazardous’ (2013) 7436 Nature 494, 169-171.

which comprise only 2.5% of the total global water system.<sup>3</sup> Plastic pollution of freshwater environments, particularly rivers is interlinked with the marine environment as the former ultimately discharge into the latter.<sup>4</sup> Still, riverine plastic transport has received far less attention, especially in regions that contribute the largest quantity of plastics to the marine environment.<sup>5</sup> Research models have indicated that land-based plastics are one of the primary sources of marine plastic pollution, contributing around 80% of the plastics into the marine environment.<sup>6</sup> River systems play a significant role in transporting these land-based plastic materials to the marine environment. An assessment of the export of plastic pollution from land-based sources to the marine environment concludes that 10 rivers transport 88-95% of the global plastic load into the sea; 8 of these river systems have their source from Asia.<sup>7</sup> Similarly, another assessment of the plastic emissions to the marine environment suggests that approximately 1.15-2.41 million tons of plastic flows from the global river system into the marine environments annually, and 15 of the top 20 polluting rivers are in Asia.<sup>8</sup> It is pertinent to note that although these rivers cover only 2.2% of the continental surface area and 21% of the global population yet, they account for almost 67% of the global input of plastic waste into the marine environments.<sup>9</sup>

Geographically, there is a high concentration of plastic within the river systems of Asia, primarily due to its population,<sup>10</sup> tourism influx,<sup>11</sup> mismanaged plastic waste,<sup>12</sup> plastic production,<sup>13</sup> plastic trade dynamics,<sup>14</sup> and poor waste management.<sup>15</sup> One of the pioneer assessments of plastic inputs from land to oceans concluded that 83% of the 4.4-12.7 million tons of land-based plastic waste that ends up in the marine environments originate from just 20 countries, and over half of the land-based plastic waste comes from just five Asian countries.<sup>16</sup> Similarly, the same assessment also concluded that 8 of the top 10 countries ranked by mass of mismanaged plastic waste are located in Asia.<sup>17</sup> Even though

<sup>3</sup> IA Shiklomanov, 'World Water Resources: A New Appraisal and Assessment for the 21<sup>st</sup> Century' (1998) United Nations Educational, Scientific and Cultural Organisation.

<sup>4</sup> C Schmidt, T Krauth, and S Wagner, 'Export of plastic debris by rivers into the sea' (2017) 21 *Environmental science & technology* 51, 12246-12253.

<sup>5</sup> MCM Blettler and others, 'Freshwater plastic pollution: Recognizing research biases and identifying knowledge gaps' (2018) *Water research* 143: 416-424.

<sup>6</sup> JR Jambeck and others, 'Plastic waste inputs from land into the ocean' (2015) 347 *Science* 6223:768-771; WC LI, HF Tse, and L Fok, 'Plastic waste in the marine environment: A review of sources, occurrence and effects' (2016) *Science of the total environment* 566-567, 333-349.

<sup>7</sup> See Schmidt, Krauth and Wagner, above n. 4 - 8 of these river systems, i.e., Yangtze, Indus, Yellow, Hai He, Ganges, Pearl, Amur and Mekong rivers, have their source from Asia.

<sup>8</sup> L Lebreton and others 'River plastic emissions to the world's oceans' (2017) 8 *Nature communications* 15611. 15 of these river systems, i.e., Yangtze, Ganges, Xi, Huangpu, Brantas, Pasig, Irrawaddy, Solo, Mekong, Dong, Serayu, Tamsui, Pearl, Han and Progo either originate or traverse through Asia.

<sup>9</sup> Ibid.

<sup>10</sup> The Asia and the Pacific region are home to around 60% of the world's population [UNFPA, 2022].

<sup>11</sup> Asia and the Pacific attracted some 249 million international tourists in 2013, 23% of the world total. This was more than double its 2000 count that reflects strong growth in international tourism demand. [World Tourism Organization and Global Tourism Economy Research Centre (2014), UNWTO/GTERC Annual Report on Tourism Trends, UNWTO, Madrid.].

<sup>12</sup> In Asia, an estimated 1.2 billion tons of municipal solid waste was generated in 2016, and this figure is anticipated to increase to 1.5 billion tons by 2030 [World Bank. 2018. *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050*. Washington, DC: World Bank].

<sup>13</sup> East Asia is producing plastic waste faster than any other region in the world, contributing 60% of global plastic waste. See L Gong and JCI Trajano, 'Tackling East Asia's New Environmental Challenge Marine Plastic Pollution' (2019); China is the regional leader, accounting for about 20% of global plastics production. [GIZ/AIT RRC. AP, 'Managing Packaging Waste in the ASEAN Region, From linear to circular packaging value chains' (2018) Online: [https://www.giz.de/de/downloads/giz2018\\_ASEAN-Packaging-Waste\\_web.pdf](https://www.giz.de/de/downloads/giz2018_ASEAN-Packaging-Waste_web.pdf).].

<sup>14</sup> China's ban on import of waste plastics for recycling 2017 has resulted in an ongoing restructuring of trade in waste plastics in the region. The recycling routes for plastic scrap have shifted from China to Southeast and East Asian countries, and the rapid increase in the volume of imported plastic scrap from 2018 has become problematic for Southeast and East Asian countries. See Y Morita and S Hayashi, 'Proposals to strengthen Japan's domestic measures and regional cooperation on stable and environmentally sound plastic scrap recycling: response to China's ban on imports of plastic scrap' (2018) IGES Policy Br. Hayama, Japan. Online: <https://www.iges.or.jp/en/pub/proposals-strengthen-japan%E2%80%99s-domestic-measures/en>. Some reports also indicate that averagely 35% of Chinese plastic recyclers are now engaged in transnational trade with close to 1000 recyclers setting up new business in neighboring Thailand. See L Hook and J Reed, 'The \$280b Crisis Sparked by China Calling Time on Taking in "Foreign Trash"' (2018) *Financial Review*. Online: <https://www.afr.com/politics/the-280-billion-crisis-caused-when-china-called-time-on-foreign-trash-20181031-h17cfw>; Hope Johnson and others, 'Conceptualising the Transnational Regulation of Plastics: Moving Towards a Preventative and Just Agenda for Plastics' (2021) *Transnational Environmental Law*.

<sup>15</sup> [World Bank, 2018] The region's large populations rely on poor, and sometimes non-existent, waste management systems, and managing municipal solid waste remains a low priority for most Asian cities.

<sup>16</sup> Above n. 6 - These countries include China, Indonesia, the Philippines, Vietnam, and Sri Lanka.

<sup>17</sup> Jambeck and others, above n. 6 - This ranking, i.e., China, Indonesia, the Philippines, Vietnam, Sri Lanka, Thailand, Malaysia, and Bangladesh, is based on waste estimates for the year 2010. Total mismanaged plastic waste is calculated for populations within 50 km of the

some commentators suggest that the current scientific models are still in their infancy to authenticate these statements,<sup>18</sup> the research findings provide essential input about the significance of the Asian river systems in global plastic transportation and the nexus between the freshwater and marine environment. The origin, fate, transport, and distribution of riverine plastic litter in Asia, the transboundary nature of the Asian river systems,<sup>19</sup> and the significant influx of mismanaged plastic from this region require urgent international response involving all relevant actors at different levels, particularly States from this region. This means that the solution to the marine plastics problem needs to be extended beyond the marine environment by exploring options within the riverine systems, particularly those of Asian countries, through the lens of the UN global water conventions and their influence on some bilateral water agreements.

### The rationale of the research

The existing international legal water framework calls for international cooperation and lay on States a fundamental obligation to protect and sustainably manage international watercourses (elaborated further in the later sections). But, interestingly, none except one of the States from which these river systems originate or traverse are Party to the UN global water conventions. Even though Vietnam (a State where the Mekong River traverses) has acceded to the UN Watercourses Convention, it has not yet ratified the Convention because the period for signature, which must predate ratification, has ended (May 21, 2000). Although becoming a Party to these Conventions needs an evaluation of the national benefits of accession, experiences in implementing the UN global water conventions suggest that countries can significantly benefit by becoming Parties to them.<sup>20</sup>

At the same time, just like other complex environmental issues such as climate change and ecosystem deterioration, depending on legal instruments alone may not solve the problem of riverine plastic pollution. Still, considering the transboundary nature of riverine plastic pollution, international law and by extension, international institutional law could be a vital element of the larger governance and cooperation arrangements needed to manage marine plastic pollution adequately.<sup>21</sup> To that end, an increased understanding of the contribution of the key river systems and countries in global plastic pollution calls for effective international regulation and cooperation to tackle the issue of riverine plastic pollution. Therefore, understanding the dynamics of non-ratification of the UN global water conventions by the Asian States and its potential impacts on the effectiveness of these Conventions is an important input for global plastic governance and associated challenges and opportunities.

Consequently, this paper is categorized into five sections structured as follows. After the introduction and rationale of the study in part one, part two gives a brief overview of the UN global water conventions and their status concerning the Asian States. Part three will then analyse why Asian States are not Party to the UN global water conventions. Based on the preceding analysis, part four will discuss the potential impact on riverine plastic regulation if these Asian States were to be Parties, which will inform their roles as *key countries for action*. Some general conclusions and recommendations are presented in part five to conclude the paper.

---

coast in the 192 countries considered. The leading country China is one of the very few States in the world that uses coal as a raw material to produce virgin plastic feedstock making them the world's leading producer of propylene thereby contributing to Asia's status as the leading plastic producing region in the world. See also M Wright and others, 'The stark truth about how long your plastic footprint will last on the planet' (2018) The Telegraph. Online: <https://www.telegraph.co.uk/environment/2018/01/10/stark-truth-long-plastic-footprint-will-last-planet/#:~:text=But%20we%20are%20also%20unwittingly,over%20400%20years%20to%20biodegrade>.

<sup>18</sup> T van Emmerik and A Schwarz, 'Plastic debris in rivers' (2020) 7(1) WIREs Water, e1398.

<sup>19</sup> Some of these rivers are the Indus (China, India Pakistan), Ganges (India, Bangladesh), Amur (China, Russia) and Mekong (China, Myanmar, Laos, Thailand, Cambodia, Vietnam) are transboundary river systems/international watercourses.

<sup>20</sup> UN-Water, 'UN-Water Policy Brief on the United Nations global water conventions: Fostering sustainable development and peace.' (2020) Geneva, Switzerland.

<sup>21</sup> A Trouwborst, 'Managing marine litter: exploring the evolving role of international and European law in confronting a persistent environmental problem' (2011) 27 Mercurius-Utrecht J. Int'l & Eur. L.: 4.

### Research Question(s)

Considering that countries (referred to in this paper as the ‘*key countries for action*’)<sup>22</sup> with major river systems (referred to in this paper as the ‘*key river systems for action*’)<sup>23</sup> are not Party to the UN global water conventions, the question(s) remain: Why the Asian States have been slow to join or are not Party to the UN global water conventions, and what are the potential impacts they could have if they were? How critical is the role of Asian States in implementing the UN global water conventions as well as in any future multilateral environmental agreements, such as the soon-to-be-negotiated global plastic treaty? And finally, what is the potential relationship between the UN global water conventions and the proposed plastic treaty?

### Aim(s) and objective(s)

This paper aims to inform the roles of ‘*key countries for action*’ in regulating plastic pollution via any future multilateral agreement, such as the proposed plastic treaty, by drawing lessons from the UN global water conventions. The paper will analyse the reasons why Asian States are not Party to or are slow to join the UN global water Conventions and the consequent potential impacts such actions may have on the implementation of the UN global water conventions and the proposed plastic treaty.

## 1. The UN global water conventions and their Contracting States in Asia

The two UN global water conventions are the UN Convention on the Law of the Non-Navigational Uses of International Watercourses [UN Watercourses Convention]<sup>24</sup> and the Convention on the Protection and Use of Transboundary Watercourses and International Lakes [UNECE Water Convention].<sup>25</sup> The ensuing paragraphs give a brief overview of these Conventions.

### 1.1. The UN Watercourses Convention

The UN Watercourses Convention was adopted in 1997. It came into force in 2014 as a framework convention to ensure that international watercourses are protected, conserved, and developed appropriately through sustainable utilization to meet current needs with posterity in mind.<sup>26</sup> UN Watercourses Convention applies to all international watercourses defined in the Convention as ‘a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus’ parts of which are situated in different States.<sup>27</sup> The UN Watercourses Convention was drafted to guide riparian States through the codification of customary principles of international water law and, by so doing, allow the Contracting States to develop the fine details according to the peculiar attributes of the watercourses in question.<sup>28</sup> These general principles are espoused in the 37 articles<sup>29</sup> of the UN Watercourses Convention and include the principle of equitable utilization; obligation not to cause harm to other riparian States from actions on international watercourses; obligation to notify and inform other States on planned activities on shared

<sup>22</sup> The “**key countries for action**” include China, Indonesia, the Philippines, Vietnam, Sri Lanka, Thailand, Malaysia, Bangladesh, India and Pakistan. These countries are categorized based on the comprehensive studies cited and discussed in the aforementioned sections(s) for the following reasons; 1. Top ranked countries for mismanaged plastic waste in the world. 2. Over half of the global land-based plastic-waste leakage into the sea comes from these countries. 3. Some of the most populous and biggest plastic producers. 4. None of these countries are Party to the United Nations global Water Conventions. 5. Some of the biggest and most polluted river systems originate or traverse from these countries. 6. Relatively poor waste management systems in place. 7. Host to some of the biggest coastlines. 8. Some of the biggest plastic trading countries. 9. Witness significant influx of the tourism. 10. Share borders, transboundary rivers, and international watercourses.

<sup>23</sup> The “**key river systems for action**” include, Yangtze, Indus, Yellow, Hai He, Ganges, Pearl, Amur, Mekong, Xi, Huangpu, Brantas, Pasig, Irrawaddy, Solo, Dong, Serayu, Tamsui, Han, and Progo. These river systems are categorized based on following reasons; 1. Top ranked rivers in the world which transport around 95% of the global plastic load into the sea. 2. Majority of them are the most polluted rivers in the world. 3. Some of them are transboundary river systems/international watercourses which traverse through different countries. 4. Majority of these river systems support large coastal populations who rely on poor, and sometimes non-existent, waste management systems.

<sup>24</sup> Convention on the Law of the Non-navigational Uses of International Watercourses (adopted 21 May 1997, entered into force 17 August 2014) 36 ILM 700 (Watercourses Convention).

<sup>25</sup> Convention on the Protection and Use of Transboundary Watercourses and International Lakes (adopted 17 March 1992, entered into force 6 October 1996) 1936 UNTS 269 (UNECE Water Convention).

<sup>26</sup> Above n. 24, art 1(1).

<sup>27</sup> Ibid, art 2 (a) and (b).

<sup>28</sup> For more extensive commentary on the history of the UN Watercourses Convention See SMA Salman, ‘The United Nations Watercourses Convention ten years later: why has its entry into force proven difficult?’ (2007) 32(1) *Water International*, 1-15.

<sup>29</sup> The 37 Articles fall under 7 broad parts of the UN Watercourses Convention.

watercourses that may affect them; obligation to exchange hydrologic and other relevant water-resources data regularly; the principle of participation in the spirit of cooperation in managing international rivers; and obligation to peacefully resolve all disputes without force.<sup>30</sup> Sections relevant to pollution are in part IV of the Convention, which is on the environmental protection of international watercourses. This includes Articles 20 - 26 and is titled “Protection, Preservation and Management” of international watercourses.<sup>31</sup> The Articles generally obligate States to inter alia protect and preserve ecosystems; protect and preserve the marine environment, including estuaries; and prevent, reduce and control pollution.<sup>32</sup> The UN Watercourses Convention defines pollution of an international watercourse to be ‘any detrimental alteration in the composition or quality of the waters of an international watercourse which results directly or indirectly from human conduct.’<sup>33</sup> By the term ‘human conduct,’ the Convention broadens the scope to include, among others, plastic pollution, which is a result of anthropogenic activities. Article 6 also addresses the issue of significant transboundary harm that may be caused by one Watercourse State to the other.<sup>34</sup> For example, harm to estuaries from the accumulation and subsequent transport of plastics from upstream States to downstream, and in some cases, vice versa.<sup>35</sup>

## 1.2. UNECE Water Convention

The foundation of the UNECE Water Convention dates back 40 to 50 years ago when Europe decided to have a framework water convention drawing on different existing non-binding instruments,<sup>36</sup> which one could argue was a contributory factor that resulted in a shorter timeframe for the drafting of the text compared to the UN Watercourses Convention.<sup>37</sup> Senior Advisers to the Economic Commission for Europe Governments on Environmental and Water Problems adopted the UNECE Water Convention as a regional agreement for Europe in Helsinki in March 1992. It entered into force on October 6, 1996.<sup>38</sup> The UNECE Water Convention was, however, amended in 2013 to allow all States belonging to the United Nations to become Party to it.<sup>39</sup> The Convention stresses the importance of environmental protection in its preamble, by drawing attention to the need for both domestic and international measures to prevent, control, and reduce inter alia the release of harmful substances into the aquatic environment and minimize pollution from land-based sources into the marine environment.<sup>40</sup> Article 2(6) of the Convention makes provision for the protection of transboundary waters by mandating Contracting States to come up with policies, programmes, and strategies that ensure the transboundary impact of waters is prevented, controlled, and reduced through cooperation among member States as enshrined in Article 9(4).<sup>41</sup> Contracting parties are obligated to cooperate, particularly with the existing institutions of coastal States, to ensure synergy in terms of action plans and policies as well as foster information sharing in protecting the marine environment from transboundary impact.

<sup>30</sup> PH Gleick, ‘Water and Conflict: Fresh Water Resources and International Security’ (1993) 18(1) *International Security*, 79-112.

<sup>31</sup> Above n. 24, art 20 to 26.

<sup>32</sup> *Ibid* n. 24, art 23.

<sup>33</sup> *Ibid* n. 24, art 21(1).

<sup>34</sup> *Ibid* n. 24, art 6; See also ILC ‘Yearbook of the International Law Commission 1994, Vol. II Part 2’ UN Doc A/CN.4/SER.A/1994/Add.1 (1994) 124.

<sup>35</sup> In addressing the concerns of upstream States, the International Law Commission explains that downstream States can also cause harm to upstream States and therefore upstream States should not think that downstream States are excluded from the Article 6.

<sup>36</sup> See A Rieu-Clarke and R Kinna, ‘Can Two Global UN Water Conventions Effectively Co-exist? Making the Case for a ‘Package Approach’ to Support Institutional Coordination’ (2014) 23 (1) *Review of European, Comparative & International Environmental Law [RECIEL]* 15-31, at 17.

<sup>37</sup> *Ibid*.

<sup>38</sup> Above n. 25.

<sup>39</sup> UNECE ‘Amendment to the Water Convention’ UN Doc ECE/MP.WAT/14 (12 January 2004).

<sup>40</sup> Above n. 25, preamble.

<sup>41</sup> Above n. 25, art 2(6) and 9(4).

### 1.3. Signatories and Contracting States in Asia

Ever since the UN Watercourses Convention was adopted 25 years ago, only one country from Asia has been Party to it.<sup>42</sup> Regarding the *key countries for action*, only Vietnam has acceded to the Convention, which happens to be the most recent accession after Ghana.<sup>43</sup> In contrast, since its adoption 30 years ago, the UNECE Water Convention has only four contracting States from Asia. A majority (three) of these States are from Central Asia, while the other is Azerbaijan from Western Asia, the first State among the 4 to have acceded to the Convention at the beginning of the 21<sup>st</sup> century (2000). The most recent accession, however, was from Turkmenistan in 2012. The final voting records of the UN Watercourses Convention show that 103 States voted in favour of the Conventions, with 26 abstentions and three votes against it.<sup>44</sup> Interestingly, 10 States in Asia voted in favour of the UN Watercourses Convention, with five abstentions and one vote against it from China.<sup>45</sup> This shows that many Asian countries were not active participants in the working groups leading up to the adoption of the text. This may explain in part the question as to why many Asian States are not Party to the UN Watercourses Convention; however, more on that is discussed in the next section.

## 2. Why are Asian States not Party to the UN global water conventions?

In answering this question, a review of relevant academic documents on the subject was conducted in addition to official records of the 62<sup>nd</sup> Meeting of the Sixth Committee, where delegates from different States expressed their views on different draft articles of the UN Watercourses Convention. Based on the analysis, the reason why Asian States are not Party to the UNECE Water Convention is that they were not part of the negotiation process. The same can also be said for UN Watercourses Convention broadly, as most Asian countries were not part of the working group in drafting the Convention. However, several reasons were given for those countries who were part of it and contributed to the working group.<sup>46</sup> We broadly categorise these reasons into the *Text of the Convention* and *Other contentious State-centric and regional instability issues*.

### 2.1. Text of the Convention

#### 2.1.1. Scope

The scope of the draft UN Watercourses Convention was seen as an impediment to the cooperation among the Asian States as it set out the spatial<sup>47</sup> and substantive boundaries of the treaty and its applicability in terms of the watercourse in question. UN Watercourses Convention uses the term ‘international watercourses,’ and the issue that arose was how to reconcile how riparian States use their water resources within their jurisdiction and the obligation not to cause harm to the water resources of the riparian States and how far international law comes into play here. The term “watercourse”, as enshrined in the UN Watercourses Convention is meant to be ‘a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus.’<sup>48</sup> Commentators such as Patricia and colleagues revealed in their analysis of Asian water treaties that China seems to favour the ecosystem approach adopted by the UNECE Water Convention in its use of the term ‘transboundary waters’ as opposed to ‘watercourses’ as seen in the UN Watercourses Convention.<sup>49</sup> UNECE Water Convention, however,

<sup>42</sup> According to the UN system of Classification, Vietnam is the only Asian country which is a Party to the UN Watercourses Convention. The UN system, particularly the UN Watercourses Convention has classified the Middle East countries as a separate group of countries and not as part of Asia.

<sup>43</sup> United Nations Treaty Collection: Status of the Convention on the Law of the Non-Navigational Uses of International Watercourses as at 28-02-2022 10:15:40 EDT. Online: [https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtmsg\\_no=XXVII-12&chapter=27&clang=en](https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtmsg_no=XXVII-12&chapter=27&clang=en).

<sup>44</sup> Sixth Committee of the United Nations General Assembly, Summary Record of the First Part of the Sixty-Second Meeting (UN Doc. A/C.6/51/SR.62, 29 August 1997), at. 2; 7 & 8. 103 countries voted in favour of the Convention. Two countries indicated after the vote that they had intended to vote for the Convention but have not done so; however, that does not change the final official tally of 103 countries.

<sup>45</sup> Ibid.

<sup>46</sup> See e.g., Gleick, above n. 30.

<sup>47</sup> This delineates the geographical, hydrographical and/or hydrological topologies of a watercourse.

<sup>48</sup> Above n. 24, art 2(a).

<sup>49</sup> Some examples include the 1994 Sino-Mongolian Water Agreement; 2001 Sino-Kazakh Agreement; and the 2008 Sino-Russian Agreement where the term ‘transboundary river or waters’ is used to represent all rivers, lakes, streams, marshes, and other river flows and does not always include groundwaters. For further details see P Wouters and H Chen, ‘China’s ‘Soft-Path’ to Transboundary Water Cooperation Examined in the Light of Two UN Global Water Conventions – Exploring the ‘Chinese Way’ (2013). *Water Law*, 22; See also A Tanzi, ‘The Relationship

defines the term 'transboundary waters' as 'surface or ground waters which mark, cross or are located on boundaries between two or more States.'<sup>50</sup> To eliminate any uncertainties that may arise from using the more comprehensive term 'international watercourses' as witnessed during the drafting of the UN Watercourses Convention, some argue that using the term 'transboundary' may be more receptive to Parties.<sup>51</sup>

### 2.1.2. Perceived disparities in the substantive rules

The substantive rules established in the draft UN Watercourses Convention are the principles of equitable and reasonable use and the obligation not to cause significant harm, which proved to be an unsettled matter for many States, including Asian States like China and India.<sup>52</sup> To these States, the draft Convention seemed to tilt in favour of upstream States over downstream States and vice versa.<sup>53</sup> Even though some commentators, upon taking a closer look at the UN Watercourses Convention have argued otherwise, indicating that it is actually balanced and favours all States, be it upstream or downstream.<sup>54</sup> Interestingly, the UNECE Water Convention also espouses similar substantive rules<sup>55</sup> even though it appears the UN Watercourses Convention provides more details.<sup>56</sup> If the Asian States still hold this opinion, then it could be said that convincing them to be Contracting parties could prove to be an exercise in futility. It is, however, worth noting that China, for instance, supports the general principle of 'equitable and reasonable utilisation' as a similar provision is enshrined in the Chinese treaties (see, for example, the 1994 Sino-Mongolian Water Agreement), but it is not detailed like the provisions of UN Watercourses Convention as there is no guidance on the implementation strategy of the 'equitable and reasonable utilisation' rule raising concerns with interpretation, application, and enforcement.<sup>57</sup> This may explain why China, for instance, is not a Party to the UN global water conventions. This has a replica effect on downstream riparian States like Thailand, Myanmar, Laos, Vietnam, and Cambodia, which will suffer from negative externalities<sup>58</sup> in this case in the form of upstream plastic pollution on, for example, the Mekong River Basin, which happens to be the largest international river basin in Southeast Asia.<sup>59</sup>

### 2.1.3. Contention over procedural rules

Asian States such as China, in observance of the principle of limited territorial sovereignty, is generally not in support of the procedural rules of 'planned measures' such as 'notification' as seen in the UN Watercourses Convention, which has detailed procedural obligations for Contracting parties to follow<sup>60</sup> and has none of these in its 50 bilateral water agreements with its neighbours. China is known to adopt

---

between the 1992 UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the 1997 UN Convention on the Law of the Non Navigational Uses of International Watercourses Report of the UN/ECE Task Force on Legal and Administrative Aspects.' (2000). Online: [https://unece.org/DAM/env/water/publications/documents/conventiontotal\\_Eng\\_final.pdf](https://unece.org/DAM/env/water/publications/documents/conventiontotal_Eng_final.pdf).

<sup>50</sup> Above n. 25, art. 1.1.

<sup>51</sup> See the discussion of the terms, 'shared', 'international' and 'transboundary' in: International Law Commission, Fifth Report on Shared Natural Resources: Transboundary Aquifers (UN Doc. A/CN.4/591, 21 February 2008), at 5

<sup>52</sup> UNGA 'Summary Record of the Second Part of the 62nd Meeting Fifty-First Session, 6th Committee' UN Doc A/C.6/61/SR.62/Add.1 (4 April 1997).

<sup>53</sup> UNGA '99th Plenary Meeting, Fifty-First Session' UN Doc A/51/PV.99 (21 May 1997) as cited in DJ Devlaeminck and X Huang, 'China and the global water conventions in light of recent developments: Time to take a second look?' (2020) 29(3) *Review of European, Comparative & International Environmental Law*, 395-405.; See also Y Zhong and others, 'Rivers and Reciprocity: Perceptions and Policy on International Watercourses' (2016) 18 *Water Policy* 803.; G Eckstein, 'The Status of the UN Watercourses Convention: Does It Still Hold Water?' (2020) 36 *International Journal of Water Resources Development* 1, 12.

<sup>54</sup> Above n. 51; S McCaffrey, *The Law of International Watercourses* (3rd edn, Oxford University Press 2019) 444–466.

<sup>55</sup> Rieu-Clarke and Kinna above n. 36.

<sup>56</sup> UN Watercourses Convention offers a full list of relevant factors to consider in order to determine the equitable and reasonable use'. For more details see A Tanzi, 'The Relationship between the 1992 UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the 1997 UN Convention on the Law of the Non Navigational Uses of International Watercourses Report of the UN/ECE Task Force on Legal and Administrative Aspects' (2000).

<sup>57</sup> P Wouters and H Chen, 'China's 'Soft-Path' to Transboundary Water Cooperation Examined in the Light of Two UN Global Water Conventions – Exploring the 'Chinese Way'' (2013). *Water Law*.

<sup>58</sup> A Rieu-Clarke and A Lopez, 'Factors that could limit the effectiveness of the UN Watercourses Convention upon its entry into force.' (2013) In: Rieu-Clarke, Alistair and Loures, Flavia Rochers *The UN Watercourses Convention in Force: Strengthening International Water Law for Transboundary Water Management*. United Kingdom: Routledge. 77-94.

<sup>59</sup> K Onishi, 'Interstate negotiation mechanisms for cooperation in the Mekong river basin' (2007) 32(4) *Water international*, 524-537.

<sup>60</sup> Above n. 24, part III.

broadly two procedural rules in the form of data and information sharing and cooperation by consultations with mutual agreement at its core.<sup>61</sup> The UNECE Water Convention takes a path that is almost identical to the UN Watercourses Convention and has even more detail to it,<sup>62</sup> which obviously will be an obstacle to the ratification process of most Asian States. Another controversial issue under the procedural rules was how the draft Watercourses Convention dealt with existing water agreements, national or regional. Some Asian States such as Bangladesh, China, India, and Japan were not in favour of Article 3, which sort to demonstrate in a practical sense the framework nature of the Convention as Contracting parties are required to harmonise where necessary existing agreements by adjusting its provisions in relation to the peculiar properties of any specific international watercourses.<sup>63</sup> Therefore, Article 3, in their view, did not fully embrace existing agreements due to the suggestion of some form of harmonization between existing agreements and the basic principles of the Convention.<sup>64</sup> In addition, the draft Convention indicated that in cases where some watercourse States are Party to an agreement concerning a particular international watercourse, such a future agreement would not override the obligations set out in UN Watercourses Convention, which in their view implied that existing agreements did not receive the needed recognition.<sup>65</sup> Other riparian States who weren't parties to over 3600 existing water agreements were also of the opinion that all these agreements should have been subjected to the provisions of the UN Watercourses Convention. This stalemate resulted in States abstaining from the Convention.<sup>66</sup> Even though some commentators opine that the UN Watercourses Convention acknowledges the concerns raised.<sup>67</sup> The UNECE Water Convention, however, is clear, stating emphatically that existing agreements should adapt to it where necessary to avoid contradictions<sup>68</sup> and, therefore, would probably suffer the same faith in terms of ratification by the Asian States.

## 2.2. Other contentious State-centric and regional instability issues

### 2.2.1. Shared water vulnerabilities within Asia

Feng propounds that in identifying 'transboundary shared water resources vulnerability,' three things must be considered, i.e., the present situation(s), future development trends, and lastly, the exact geopolitical circumstances of the transboundary water in relation to its peculiar international river region.<sup>69</sup> International waters traversing Western, Southern and Central Asia have been reported to exhibit a lot of vulnerabilities due to inter alia, political unrest, uncertainty in water availability, and failure of many Asian States to reach an agreement on water-related issues which may fuel water disputes in the near future.<sup>70</sup> For example, China has eschewed the '1992 Agreement on the Joint Utilization and Protection of Transboundary Watercourses' concluded between Kazakhstan and Russia.<sup>71</sup> Likewise, the 'Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin' was ignored by China and has also refused to be a member of the Mekong River Commission (MRC) which acts as an inter-governmental body.<sup>72</sup> Some commentators have maintained that the complexity in managing the Mekong,<sup>73</sup> which sees its first share of contamination by upstream States, has already received angry criticisms from downstream States and may lead to what seems to be 'preventable disputes' breaking forth.<sup>74</sup> Considering that less than 1% of China's freshwater

<sup>61</sup> See Sino-Kazakh Agreement 2001, art 6-7; 1994 Sino-Mongolian Water Agreement, art 5, 7-8.

<sup>62</sup> Above n. 25, art 9-16.

<sup>63</sup> Sixth Committee of the United Nations General Assembly, Summary Record of the First Part of the Sixty-Second Meeting (UN Doc. A/C.6/51/SR.62, 29 August 1997), at 6.

<sup>64</sup> Ibid.

<sup>65</sup> Ibid.

<sup>66</sup> Ibid; Above n. 36 at 21.

<sup>67</sup> Gleick, above n. 30.; A Tanzi, 'Comparing the 1992 UNECE Helsinki Water Convention with the 1997 UN New York Convention on international watercourse: harmonization over conflict.' (2014) QIL, Zoom-in 8, 19-33.

<sup>68</sup> Above n. 25, art 9.; This means in areas where the UNECE Water Convention is more robust than UN Watercourses Convention, a Contracting State will have adopted measures to implement those which obviously may not be supported by some if not all Asian States.

<sup>69</sup> Y Feng and D He, 'Transboundary water vulnerability and its drivers in China.' (2009) 19 J. Geogr. Sci. 189-199.

<sup>70</sup> Fresh water resources are increasingly being influenced by the natural environment, regional political systems and socio-economic development which stems from localized human activities. See Above n. 67.

<sup>71</sup> EW Sievers, 'Water, Conflict, and Regional Security in Central Asia' (2002) 10 NYU Env'tl LJ 356. at 386.

<sup>72</sup> Above n. 61.

<sup>73</sup> The Mekong River is known in Chinese as the Lancang jiang River.

<sup>74</sup> Above n. 67.



resources originate from outside its boundaries, it plays a crucial role in sharing water resources with other Asian States like Kazakhstan, Afghanistan, Tajikistan, Pakistan, Mongolia, Myanmar, North Korea, Laos, Nepal, Vietnam, and India.<sup>75</sup> Therefore, many Asian States are affected directly and indirectly by China's activities. It, therefore, makes the road to Asian States ratifying the UN global water conventions murky if the main regional player is not interested.<sup>76</sup>

### 2.2.2. Unreliable institutional structures for transboundary waters

As shown above, the main regional player in this region is China, and the myriad of institutions in Asia responsible for managing freshwater resources cannot enforce any stringent measures on China. This is because China is either not part of such cooperation or is not a Party to any of such regional treaties that can do so. China does not have an autonomous institution responsible for transboundary water affairs. It has decided to share this duty among governmental organizations such as the Ministry of Foreign Affairs and the Ministry of Water Resources. Regional water bodies, therefore, have little influence over the activities of China, thereby allowing China to maintain its soft law approach to international water management. Hence, other riparian States may not be encouraged to ratify the UN global water conventions unless international institutional law is used to establish cooperation and harmony among the UN global water regime and other regional and/or national bodies in charge of water affairs;<sup>77</sup> as well as opening up more avenues for non-State actor participation.<sup>78</sup>

### 2.2.3. Low priority by Asian States

In the grand scheme of concluding international environmental law, 1990 - 2000 was very significant as several multilateral environmental agreements (both binding and non-binding) were developed as the world geared up towards the prospects of the new century.<sup>79</sup> Some commentators say that this might have created a so-called 'treaty congestion,'<sup>80</sup> which could have led to States not giving the UN global water conventions the needed attention, especially UN Watercourses Convention. Increasingly, over the years, lack of awareness coupled with lack of capacity building and the level of commitment required to implement the provisions seemed to have rendered UN Watercourses Convention a white elephant when Asian States are concerned save for the advocacy work of World Wide Fund for Nature (WWF) that resulted in at least one State from Asia in the form of Vietnam signing on to UN Watercourses Convention.<sup>81</sup>

## 3. Potential impacts on riverine plastic regulation if Asian States were to be Parties to the UN global water conventions

From the introduction, one could identify the contribution Asian States make to the global plastic value chain in terms of the production of plastics as well as the generation and movement of plastics from land to the marine environment. One could therefore argue that if '*key countries for action*'<sup>82</sup> were to devote at least half of the same momentum and zeal they use in economizing and trading plastics to the UN global water conventions, riverine plastic pollution could have seen a turn for the better. Suppose all Asian States and, most importantly, '*key countries for action*' were to be

<sup>75</sup> Onishi, above n. 59.

<sup>76</sup> Some commentators have observed that China's transboundary agreements dealing with water are generally categorised in two i.e., boundary treaties and transboundary water treaties. Patricia and colleagues therefore conclude that China has adopted diverse agreements in regulating its international transboundary waters with limited ones focusing on international watercourses – See Wouters and Chen, above n. 57.

<sup>77</sup> See for e.g.,: Louis J. Kotzé, and Rakhyun E. Kim, 'Towards planetary nexus governance in the Anthropocene: An earth system law perspective.' (2022) *Global Policy*, 13(Suppl. 3), 86–97, at 93.

<sup>78</sup> Daniel F. Akrofi, Peixuan Shang and Jakub Ciesielczuk, 'Reconsidering Approaches Towards Facilitating Non-State Actors' Participation In The Global Plastics Regime' (2023) *European Journal of Legal Studies*, 14(2), 121-140.

<sup>79</sup> Here, we give just six examples of multilateral environmental agreements between 1990 – 2000. These include binding instruments such as the 1992 CBD, 1998 Rotterdam Convention, and 1994 UNCCD as well as non-binding instruments such as the 1992 UNFCCC, 1995 Washington Declaration on Protection of the Marine Environment from Land-based Activities, and 1992 Agenda 21.

<sup>80</sup> A Rieu-Clarke and FR Loures, 'Still not in Force: Should States Support the 1997 UN Watercourses Convention?' (2009) 18(2), *Review of European Community & International Environmental Law*, 185-197.

<sup>81</sup> F.R. Loures and others, 'Everything you need to know about the UN Watercourses Convention' (2009) WWF. Online: [https://wwf.eu.awsassets.panda.org/downloads/wwf\\_un\\_watercourses\\_brochure\\_for\\_web\\_july2009\\_en.pdf](https://wwf.eu.awsassets.panda.org/downloads/wwf_un_watercourses_brochure_for_web_july2009_en.pdf); See also *ibid* (n 25) at 10. The posture of most Asian States still looks like the UN water Conventions are not a priority at the moment.

<sup>82</sup> See Above n. 22.

Contracting parties to the UN global water conventions. In that case, the framework nature of the Conventions could have guided, to a large extent, States in terms of inter alia setting standards for mitigating (plastic) pollution to riverine systems and its interconnection with the marine environment. The current lack of accountability among upstream and downstream riparian States leads to actions that are done in bad faith without a lot of consideration to others which could have been mitigated if they were to be parties as provisions enshrined in the UN global water conventions will have obligated States to take reasonable action in dealing with the problem. Obviously, many of the reasons espoused above as to why most Asian States are not a Party to the UN global water conventions, if resolved and properly aligned with for example the proposed plastic treaty, will lead to a positive impact. However, their being parties will not mitigate riverine plastic pollution if not tackled.

Furthermore, even though the UN global water conventions have directly or indirectly influenced some bilateral and regional water agreements,<sup>83</sup> Asian States would have benefitted more and could have developed more robust (present and future) bilateral and regional agreements devoid of potential vagueness if provisions in the UN global water conventions obligated them. Thus, the framework nature of the UN global water conventions would have created the common ground needed for negotiations and to innovatively identify what each Party can bring to the table or what each Party needs to do to limit if not completely mitigate riverine plastic pollution. By so doing, potential gaps and inconsistencies in riverine plastic governance could be identified and tackled appropriately by the right parties to strengthen global plastic governance.<sup>84</sup> Hence, the negotiation and adoption of the proposed global plastics treaty could take up much quicker and easier if Asian States were to be parties to the UN global water conventions as most of the issues identified in section three of this paper would have been thrashed out already so that the proposed global plastic treaty will not suffer the faith of the UN Watercourses Convention where over 100 countries voted in favour but few become Contracting parties.

### 3.1. Roles as 'key countries for action'

In light of the commencement of the negotiations for a global plastic treaty, it is imperative that the pathway<sup>85</sup> through which most plastics find their way into the marine environment be given much-needed attention. For this to be done, the buy-in of key countries<sup>86</sup> is crucial. After all, what is the purpose of a global plastics treaty if States that produce and pollute the most are not Party to it? Therefore, to mitigate riverine plastic pollution, key countries must take the first step in ratifying the UN global water conventions. In other words, the proposed global plastic treaty could be drafted to enable Asian States to ratify the existing UN global water conventions in order to prevent fragmentation within international law. Even though the Conventions may not necessarily be a panacea to tackling the complex nature of transboundary waters and international watercourses,<sup>87</sup> that level of commitment will surely be a step in the right direction. Although the UN global water conventions are far from perfect as issues around whether a single secretariat should implement both Conventions, like the Basel, Rotterdam, and Stockholm Conventions, continue to linger on - we are of the view that it is these issues, among others, that should foster cooperation and consensus-building. As Rieu-Clarke and Loures rightly point out - other multilateral environmental agreements, such as the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), and the United Nations Convention to Combat Desertification (UNCCD), stand to benefit greatly from the coming into force of the UN Watercourses Convention.<sup>88</sup> We must also add that the coming into force of the UN global water conventions will also be beneficial to other agreements such as the

<sup>83</sup> For example, the 2001 Sino-Kazakh Agreement; the 2008 Sino-Russian Agreement; Water pollution by hazardous substances (1994); Licensing of wastewater discharges (1996); Guide to Implementing the Water Convention (2013); Words into action: Implementation Guide for Addressing Water-Related Disasters and Transboundary Cooperation (2018).


<sup>84</sup> Kotzé, and Kim, above n. 77

<sup>85</sup> Which we refer to in this paper as *key river systems for action*, see above n. 23.

<sup>86</sup> Above n. 22.

<sup>87</sup> B Sriganesh, 'Compliance with UN Watercourses Convention: Half Full or Half Empty?' (2017) E-International Relations, 1-6, ISSN 2053-8626.; L Finska and JG Howden, 'Troubled waters – where is the bridge? Confronting marine plastic pollution from international watercourses.' (2018) 27 RECIEL; 245–253.

<sup>88</sup> Rieu-Clarke and Loures, above n. 80.



Ramsar Convention on Wetlands,<sup>89</sup> Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention),<sup>90</sup> United Nations Law of the Sea (UNCLOS)<sup>91</sup> and most importantly, a potential global plastics treaty. Therefore, coordination (which could be initiated by leveraging on international institutional law) between the UN global water conventions and the proposed global plastic treaty is of the essence.

#### 4. Conclusion and Recommendations

The paper commenced with a brief overview of the UN global water conventions and their status as far as the Asian States are concerned. This was followed by an analysis of why Asian States are not Party to the UN global water conventions, particularly *key countries for action* who have key river systems originating and/or traversing them. Apart from the fact that the Asian States had several challenges with the content/text of the Conventions, as well as other state-centric and regional instability issues, tension over water resources persists in the region, which retards peaceful and progressive cooperation among States. This has, in some cases, resulted in bilateral and regional agreements not being fully signed by all relevant States. Furthermore, this paper showed that Asian States play a critical role in mitigating riverine plastic pollution but are currently not living up to expectations and stand a chance of playing a more critical role in the advent of a potential global plastic treaty given the plastic freshwater nexus. Therefore, to ensure riverine plastic pollution is mitigated effectively, Asian States must build consensus among themselves and play their roles by showing the much-needed commitment, political will, and support to the UN global water conventions in earnest as no other region is geographically positioned to contribute massively to mitigating riverine plastic pollution as Asian States.

---

<sup>89</sup> Convention on Wetlands of International Importance especially as Waterfowl Habitat, opened for signature 2 February 1971, (entered into force 21 December 1975) ('Ramsar Wetlands Convention').

<sup>90</sup> Convention on the Conservation of Migratory Species of Wild Animals (CMS) (entered into force 1 November 1983) UNTS Volume Number 1651.

<sup>91</sup> United Nations Convention on the Law of the Sea opened for signature 10 December 1982, [1994] (entered into force 16 November 1994) ('Law of the Sea Convention').