

# THE RESPONSIBLE WATER HEGEMON? CHINESE TRANSBOUNDARY RIVER AGREEMENT WITH KAZAKHSTAN AND RUSSIA AND ITS IMPLICATIONS FOR FUTURE SINO-INDIAN WATER RELATIONS

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*Recent Chinese hydroelectric power projects on the Sino-Indian-Bhutan Transboundary River, Yarlung Zangbo or Brahmaputra River, continue to receive skeptical backlash from Indian media and academics. Indian and American security analysts argue that China's internal water security problem will force the country to use the Himalayan River to their advantage, which could spark regional conflict. Chinese scholars have not shared similar concerns. The purpose of the essay is to understand the nature of Chinese water practice and the possibility of a Sino-Indian Transboundary Water Agreement. By scrutinizing the development of Sino-Russian and Sino-Kazakh Transboundary River Agreements, the essay will argue that Chinese transboundary river agreements are a reactive result of long-term lobbying conducted by neighboring countries. The main argument is theoretically supported when observing recent development of Sino-Indian cooperation regarding the Yarlung Zangbo or Brahmaputra River. However, continuing disputes of the status of South Tibet or Arunachal Pradesh will significantly affect and delay the process of future water cooperation between the two Asian powerhouses.*

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Access to water supply and the reality of water scarcity is one of the emerging non-traditional threats to the global community. Rapidly growing economies consume more water usually at an artificially lower price, resulting in overconsumption. Environmental degradation and inadequate public policy threaten contamination of both surface water and aquifers.<sup>1</sup> It is unquestionable that water is the new gold. Some countries are naturally blessed with more bodies of water than others, while many share these valuable resources that cross borders. The People's Republic of China consists roughly a third of the world's transboundary waters in the world, amounting

up to 3.2 million km<sup>2</sup> of land.<sup>2</sup> It is an upper-stream country in relation to Russia, Kazakhstan, Mongolia, North Korea, India and Southeast Asia countries. The extensive amount of water flowing out of China raises environmental concerns for its neighbors: the possibility that current Chinese domestic problems and policies could negatively affect water flow.

Starting in October 2015, China operationalized the Zangmu Dam for hydroelectric power.<sup>3</sup>

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<sup>2</sup> Yanmei He, "China's Practice on the Non-navigational Uses of Transboundary Waters: Transforming Diplomacy through Rules of International Law," *Water International* 40.2 (2015): 313.

<sup>3</sup> Saibal Dasgupta, "China operationalizes biggest dam on Brahmaputra in Tibet," *The Times of India*, last modified on October 13, 2015, accessed on June 28, 2017, <http://timesofindia.indiatimes.com/world/china/China-operationalizes-biggest-dam-on-Brahmaputra-in-Tibet/articleshow/49335741.cms>.

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<sup>1</sup> "Liquidity Crisis," *The Economist*, last modified on November 5, 2016, accessed on May 29, 2017, <http://www.economist.com/news/briefing/21709530-water-becomes-ever-more-scant-world-needs-consume-it-use-it-more-efficiently-and>.

Although the dam is located within Chinese territory, India has raised concerns over Chinese intentions. Leading Indian news agencies warn against the dam's effects on lower-stream ecology of Yarlung Zangbo or Brahmaputra River, a transboundary river shared among China, India, Bangladesh and Bhutan. In fact, in October 2016, it was reported that China blocked the water flow of the Xiabuqu River, a tributary of the contested river, for their hydropower Lallo project.<sup>4</sup> Indian and American academics have raised concerns over possible future conflicts over water sources. Chinese scholars simply do not share the same concern.

In light of Indian and American academic publications, the purpose of this paper is to investigate the nature of Chinese water practice and the validity of a Sino-Indian treaty for the Yarlung Zangbo or Brahmaputra River. The paper will first review China's domestic water problems and critiques against China's perceived water hegemony. Afterwards, the paper will examine current Chinese international water practice and transboundary river agreements and memorandums with Russia, Kazakhstan and India. Based on observation of Sino-Russian, Sino-Kazakh and Sino-Indian development of cooperation on river agreements, in practice Chinese transboundary river agreements are reactive and will only be established if neighboring states lobby towards China on a long-term basis. The paper will conclude with a comprehensive analysis and comments of the future Sino-Indian water relations.

### **Chinese Domestic Water Problems**

China's water problem received international attention after the 1997 dry-up of the Yellow

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<sup>4</sup> Sutirtho Patranobis, "China blocks Brahmaputra tributary, impact on water flow in India not clear," *Hindustan Times*, last modified on October 1, 2016, accessed on May 31, 2017, <http://www.hindustantimes.com/india-news/china-blocks-brahmaputra-tributary-impact-on-water-flow-in-india-not-clear/story-QVAYbO2iOBFUSynwpyneN.html>.

River. Lester Brown, one of the first environmentalists to write on Chinese domestic water problems before China's major dry-up, argued that China couldn't continue its current self-sustained production of food due to the growing population and limited water and land resources.<sup>5</sup> While China needs to feed roughly a quarter of the world's population, the countries possess merely 7 percent of the world's arable land.<sup>6</sup> China's commercial usage of water is also problematic. The agricultural sector consumes 75 percent of all water sources in the North China Plain and the demand continues to increase. With hopes of further development, water consumption will naturally increase. While water reduction technology does exist, increased efficiency ironically results in greater water usage.

The quality of water is equally troublesome. According to Chinese state media, in 2014, approximately 60 percent of China's underground water is polluted.<sup>7</sup> Although two-thirds of polluted underground water could be drinkable with proper treatment, the process is expensive. Two years later, the number of polluted underground water increased to 80 percent.<sup>8</sup> Roughly 33 percent of wells could only be used for industrial purpose, while roughly 47 percent of the wells are in worse condition. In addition to underground water, "According to statistics provided by the Ministry of Environmental Protection, in 2009 approximately 43% of the water in the main rivers in China was unfit for human

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<sup>5</sup> David A. Pietz, *The Yellow River: The Problem of Water in Modern China* (Cambridge: Harvard UP, 2015), 287.

<sup>6</sup> *Ibid.*, 310.

<sup>7</sup> Jonathan Kaiman, "China Says More than Half of Its Groundwater Is Polluted," *The Guardian*, last modified on April 23, 2014, accessed on May 23, 2017, <http://www.theguardian.com/environment/2014/apr/23/china-half-groundwater-polluted>.

<sup>8</sup> Chris Buckley and Vanessa Piao, "Rural Water, Not City Smog, May Be China's Pollution Nightmare," *The New York Times*, last modified on April 11, 2016, accessed on May 25, 2017, [http://www.nytimes.com/2016/04/12/world/asia/china-underground-water-pollution.html?\\_r=0](http://www.nytimes.com/2016/04/12/world/asia/china-underground-water-pollution.html?_r=0).

consumption.”<sup>9</sup> Water quality is unquestionably at risk.

While difficult, water quantity and quality can be controlled to a certain degree. However, global warming remains a factor that could exacerbate China’s current problems and future plans. Climate change could accelerate the melting of the Himalayan glaciers, resulting in an increase water volumes in the South.<sup>10</sup> According to China’s First National Census of Water, more than 28,000 rivers have disappeared.<sup>11</sup> Twenty years ago, China had roughly 50,000 rivers, each covering at least 60 square miles. A mixture of excessive and irresponsible usage of water resource can further be exacerbated by climate change. While China is usually criticized for its air pollution, China’s water problem is a greater peril for the Communist Party. The government has addressed water as a major concern in its recent Thirteenth Five Year Plan. Water will continue to receive attention, especially as demand for consumption is expected to rise. Even if excessive water consumption were to be discouraged, it is likely to spark domestic contestation and slow economic growth. State initiatives such as the South-North Diversion Project have mixed results, mostly negative.<sup>12</sup>

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<sup>9</sup> Yu Su, “Contemporary Legal Analysis of China’s Transboundary Water Regimes: International Law in Practice,” *Water International* 39.5 (2014): 705.

<sup>10</sup> Elisa C. Lai, “Climate Change Impacts on China’s Environment: Biophysical Impacts,” *Wilson Center*, last modified on July 7, 2011, accessed on May 25, 2017, <https://www.wilsoncenter.org/publication/climate-change-impacts-chinas-environment-biophysical-impacts>.

<sup>11</sup> Angel Hsu and William Miao, “28,000 Rivers Disappeared in China: What Happened?,” *The Atlantic*, last modified on April 29, 2013, accessed on May 23, 2017, <http://www.theatlantic.com/china/archive/2013/04/28-000-rivers-disappeared-in-china-what-happened/275365/>.

<sup>12</sup> Jonathan Kaiman, “China’s Water Diversion Project Starts to Flow to Beijing,” *The Guardian*, last modified on December 12, 2014, accessed on May 23, 2017, <http://www.theguardian.com/world/2014/dec/12/china-water-diversion-project-beijing-displaced-farmers>.

In order to mitigate domestic concerns and constraints, China observers and skeptics believe the country must enforce their unique status of upper-stream hegemony.

### **The Narrative of Water Wars and Its Problems**

With growing concerns over China’s domestic water security and its projects, Indian and American observers believe that China will be forced to abuse their upper-stream hegemony and block water resources from neighboring countries. Their concern is bolstered by China’s refusal to adopt the 1997 United Nations Convention on the Law of the Non-navigational Uses of International Watercourses (hereinafter referred as the UN Watercourses Convention).<sup>13</sup> While involved in negotiations during the drafting of the resolution, China vetoed due to the lack of recognition for territorial sovereignty and an imbalance of responsibility between the upstream and downstream countries.<sup>14</sup> As mentioned in the beginning of the paper, China is an upstream country to a third of all major transboundary rivers in the world. The excessive amount of water flow worry critics that China may change the course of rivers or use up the water before flowing into neighboring countries.

Another major concern of critics is China’s Five Year Plans. The country’s Twelfth Five Year Plan specifically mentioned developing projects on the Mekong and Yarlung Zango or Brahmaputra River.<sup>15</sup> In 2013, the government approved the construction of three additional hydropower projects on the Yarlung Zango River. As result, downstream countries vocalized concerns over China’s damming and diverting projects.<sup>16</sup> The recently adopted Thirteenth Five Year Plan may increase the fear

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<sup>13</sup> He, 315.

<sup>14</sup> Ibid..

<sup>15</sup> Xiuli Han, “Approaches to Investment in Chinese Transboundary Waters,” *Water International* 40.1 (2014): 72.

<sup>16</sup> Obja B. Hazarika, “Riparian Relations between India and China: Exploring Interactions on Transboundary Rivers,” *International Journal of China Studies* 6.1 (2015): 67

held by skeptics. The Communist Party announced its shift from heavy reliance on fossil fuels and heavy industry towards renewable and clean energy.<sup>17</sup> In order to increase clean energy, it is likely that new dam projects will be approved in the near future. While the plan did not mention specific rivers, the plan called for expanding the number of hydropower projects in the Southwest region of China, which is where the Himalayans are located. Other than hydroelectricity, the plan addressed China's water scarcity problem and promoted continuing its large-scale water diversion and dam creations. Chinese rejection of the UN Watercourse Convention and obscurity in recent plans has fostered criticism abroad.

Kenneth Pomeranz, professor of modern Chinese history at the University of Chicago, argued that rather than cutting down on consumption, China would utilize the rich water sources in the Himalayans, which may possibly affect lower-stream states. Currently, China is considering creating a dam that has twice the capacity of the Three Gorges Dam on the Yarlung Zangbo or Brahmaputra River.<sup>18</sup> He also mentioned Chinese intention to create a dam located at the great bend at Metog/Motou. If China experiences continued water shortage, then the country may be propelled to move the river's direction towards the North, which would threaten its Southern neighbors.<sup>19</sup> Due to China's upstream privilege and lack of transparency, the academic concluded that conflict may breakout if China continues to

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<sup>17</sup> Beth Walker, "China Plans More Dams and Mega Infrastructure in Tibet," *The Third Pole*, last modified on March 21, 2016, accessed on May 25, 2017, <https://www.thethirdpole.net/2016/03/21/china-plans-more-hydro-projects-and-mega-infrastructure-in-tibet/>.

<sup>18</sup> Kenneth Pomeranz, "Drought, Climate Change, and the Political Economy of Himalayan Dam Building," in *New Security Challenges in Asia*, ed. Michael Wills and Robert M. Hathaway (Washington, DC: Woodrow Wilson Center Press, 2013), 28.

<sup>19</sup> *Ibid.*, 30.

create dams without increased transparency and information sharing.

One of the leading critics against China's water supremacy is Indian strategist Brahma Chellaney, the author of *Water, Peace and War* and *Water: Asia's New Battleground*. Although droughts come and go, Chellaney argued that China's irresponsible usage of water also contributes to the lower-stream countries' droughts, resulting in the overall damage to the ecosystem. China possesses latent power to exploiting water resources: the majority of Asian dams are located in China, amounting up to 90,000 dams.<sup>20</sup> While China provides water flow information to downstream countries, Chellaney argued that shared water information reminds downstream countries of their dependence on a stronger counterpart.<sup>21</sup> Hence, China's natural blessing empowers the country with strategic and political leverage over lower-stream countries.<sup>22</sup> The Indian strategist believes China will continue to exert power over their usage of water. As a solution, he argued that China should abandon its current unilateral approach and adopt an integrated multilateral institution.

Critics have presented pertinent facts to support their concern of China's possible water grab. It is true that China's domestic water problem constrains governmental action. China vetoing the UN Watercourses Convention encourages skepticism and the plan to further advance their

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<sup>20</sup> Brahma Chellaney, "Water Likely to Be the Most Contested Resource in Asia," *Hindustan Times*, last modified on May 17, 2016, accessed on May 25, 2017,

<http://www.hindustantimes.com/analysis/water-likely-to-be-the-most-contested-resource-in-asia/story-B7Ge5iCDLcNa4VnLLVKJBI.html>.

<sup>21</sup> Brahma Chellaney, "China's Water Hegemony in Asia," *The Washington Times*, last modified on April 26, 2016, accessed on May 25, 2017, [http://www.washingtontimes.com/news/2016/apr/26/brahma-chellaney-chinas-water-hegemony-in-asia/?utm\\_source=RSS\\_Feed&utm\\_medium=RSS](http://www.washingtontimes.com/news/2016/apr/26/brahma-chellaney-chinas-water-hegemony-in-asia/?utm_source=RSS_Feed&utm_medium=RSS).

<sup>22</sup> Sebastian Biba, "Desecuritization in China's Behavior towards Its Transboundary Rivers: The Mekong River, the Brahmaputra River, and the Irtysh and Ili Rivers," *Journal of Contemporary China* 23.85 (2013): 24.

hydropower on transboundary rivers is worrisome. According to critics, China will naturally be compelled to indirectly harm neighboring countries by addressing its own domestic problem via water grab. State sovereignty naturally allows China to conduct any project without the obligation of concerning what would happen to their surroundings. Despite the potential ramifications and concerns, critics are wrong to conclude Chinese willingness to risk conflicts over transboundary waters. The greatest flaw of critics is the failure to acknowledge China's water practice. China has established multiple transboundary watercourse agreements, amounting to a total of 110 treaties related to international watercourses by 2014.<sup>23</sup> Out of the multiple agreements, the water-specific treaties with neighbors such as Russia, Mongolia, and Kazakhstan are the most important and strongest agreements upheld by China: the 1994 Agreement on the Protection and Utilization of Border Water between China and Mongolia; the 2001 Cooperation Agreement on the Utilization and Protection of Transboundary Waters between China and Kazakhstan; and the 2008 Agreement on Reasonable Utilization and Protection of Transboundary Waters between China and Russia (hereinafter all major agreements will be referred as 20xx China-country Agreement).<sup>24</sup> The fact that China has established agreements with its Northern, Eastern and Western neighbors bolster the argument that China will not spark "water wars" with its neighbors. Current Chinese water practice also makes it hard to believe that China would divert the river flow of the Brahmaputra River for its own interest. While debated in the past, the Chinese government concluded that river diversion would be futile and declined a proposed diversion plan.<sup>25</sup> The Chinese nature to establish transboundary watercourse agreements and unlikelihood of river diversion suggest that

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<sup>23</sup> Su, 706.

<sup>24</sup> He, 317.

<sup>25</sup> Hongzhou Zhang, "Sino-Indian water disputes: the coming water wars?," *WIREs Water* 3 (2016): 158-9.

China would not risk conflict regarding shared water resources.

Another common argument against upper-stream states is their ability to destroy the ecosystem of the lower-stream states. For example, INGOs, NGOs, and scientists have presented data-supported arguments that Chinese dam constructions have affected the water level and sedimentation of the Mekong River.<sup>26</sup> However, using the same data set, there are scientists who argued the contrary.<sup>27</sup> This suggests that the creation of dams may not be as harmful as believed. The fact that contradictory results and conclusions derive from the same data set should be taken into consideration by both sides of the argument.

Both American and Indian arguments deserve attention. Unfortunately, most critics dismiss current Chinese practice with neighboring countries and rather focus on China's refusal of establishing a multilateral forum. In order to understand whether China is abusing their upper-stream hegemony or not, it is important to analyze current Chinese water practice in comparison to the UN Watercourse Convention and China's past established memorandums and agreements.

### **United Nations Watercourse Convention and Chinese Practice**

The UN Watercourse Convention was concluded on 21 May 1997. Watercourses were defined 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."<sup>28</sup> In addition to "equitable and reasonable utilization and participation," states are responsible to

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<sup>26</sup> Claudia Kuenzer et al., "Understanding the Impact of Hydropower Developments in the Context of Upstream-downstream Relations in the Mekong River Basin," *Sustainability Science Sustain Sci* 8.4 (2012): 574-575.

<sup>27</sup> Ibid., 581-582.

<sup>28</sup> Stephen C. McCaffrey, "Convention on the Law of the Non-Navigational Uses of International Watercourses," *United Nations*, last modified in 2016, accessed on May 25, 2017, <http://legal.un.org/avl/ha/clnuiw/clnuiw.html>.

provide information to other their riparian states and to prevent harming the watercourses.<sup>29</sup> Conflict reduction was addressed by recommending negotiations and transparency when creating projects on transboundary rivers. Two decades after its conclusion, the Convention came into force on 17 August 2014.<sup>30</sup>

As already mentioned in the previous section, China was involved in the negotiations yet vetoed against the Convention due to the lack of recognition and respect towards territorial sovereignty. While critics love utilizing the veto to portray an irresponsible China, actual practice suggests the opposite; China's bilateral agreements on transboundary watercourses are more or less in line with the agreed UN Watercourse Convention. This section of the paper will analyze Chinese law practice in the order of the presented five core elements: scope, substantive rules, procedural rules, institutional mechanisms and dispute settlement.<sup>31</sup>

### *I. Scope*

Scope is defined as the “geographical and hydrological limits of the legal regime.”<sup>32</sup> Although limited, current Chinese transboundary water treaties incorporate the Convention's geographical scope. For example, the 2008 China-Russia Agreement covers all transboundary waters, which include rivers, lakes, streams and swamps.<sup>33</sup> The Chinese definition of transboundary waters has broadened since the 1990s. In the 1994 China-Mongolia Agreement, the treaty only covered water types. In later treaties such as the 2001 China-Kazakhstan and 2008 China-Russia Agreement, the treaties referred to water movement rather than boundary waters. Unlike the UN Watercourse Convention, the Chinese agreements only cover the protection and usage of surface water and not underground waters, i.e. aquifers. While the Chinese scope is limited

and specific, both water movement and visible surface waters are within Chinese scope.

### *II. Substantive Rules*

The substantive rules of the UN Watercourse Convention are “rules that set out the substantive, or material, rights of the riparian states.”<sup>34</sup> In Article 5 and 6 of the UN Watercourse Convention, equitable and reasonable usage of water sources has not been specifically defined.<sup>35</sup> Regardless of the omission of specific rules, during the negotiations for the Convention, “China endorsed the primacy of rule of equitable and reasonable use.”<sup>36</sup> Despite the excessive outward flowing rivers, the country has abided by the no-harm principle. The only clear reference and commitment of no harm responsibility was clearly stated in the 2008 China-Russia Agreement.<sup>37</sup> In other cases, China has obligated to reasonable utilization of water sources in treaties such as the 2001 China-Kazakhstan Agreement, 1994 China-Mongolia Agreement, 2008 China-Russia Agreement and 2009 China-Vietnam Agreement.<sup>38</sup> Another substantive rule is obligated environmental protection. Although it is commonly assumed that China disregards its obligation towards environmental protection, China was active in addressing this factor during the drafting of the UN Convention. For example, in regards to Article 20 of the Convention, China proposed replacing the terminology “ecosystem” with “ecological balance” due to the ambiguity of the former term. The strongest Chinese commitment to protecting the environment is evident in the

<sup>29</sup> Ibid..

<sup>30</sup> He, 315.

<sup>31</sup> Su, 707.

<sup>32</sup> Ibid..

<sup>33</sup> Ibid., 708.

<sup>34</sup> Ibid., 707.

<sup>35</sup> Huiping Chen, Alistair Rieu-Clarke, and Patricia Wouters, “Exploring China's Transboundary Water Treaty Practice through the Prism of the UN Watercourses Convention,” *Water International* 38.2 (2013), 220.

<sup>36</sup> Ibid..

<sup>37</sup> Sergei Vinogradov and Patricia Wouters, *Sino-Russian Transboundary Waters: A Legal Perspective on Cooperation* (Stockholm: Institute for Security and Development Policy, 2013), 37.

<sup>38</sup> Su, 710.

2008 China-Russia Agreement. As seen in the Russian case, commitment to reasonable and responsible usage is part of Chinese water practice.

### *III. Procedural Rules*

Procedural rules refer to regular cooperation with transboundary rivers-related issues, such as notification of planned measures and cooperation in emergency situations.<sup>39</sup> Article 8 of the UN Watercourse Convention calls for cooperation between states and Article 9 urges watercourse states to exchange relevant data and information.<sup>40</sup> In all of its water-specific agreements, China has adhered to Article 9 by exchanging hydrological information on a regular basis. As expected, the definition of cooperation remains vague or limited depending on treaties. For example, while the 2008 China-Russia Agreement included cooperation regarding planned measures, the procedures were not specified in the treaty itself.<sup>41</sup> In both the 2001 China-Kazakhstan and 1994 China-Mongolia Agreement, planned measures were not included. Surprisingly, China lacks cooperation in emergency situations. The only exception would be the 2006 Agreement on Cooperation on the Prevention and Mitigation of Emergency Situation between China and Russia. The agreement “legally binding [the two countries to] dedicate [sic.] to emergency management procedures.”<sup>42</sup> Procedural rules may not be China’s forte, given that the notification to other parties will constrain state sovereignty of determined projects. Regardless, China has shown efforts to cooperative for the good of the two parties.

### *IV. Joint bodies*

The UN Watercourse Convention did not provide any mechanism for joint body cooperation. Instead, states agreed to include guidelines if riparian states were to create joint

commissions.<sup>43</sup> In general, China and its counterparts have agreed on establishing joint commissions. While the Chinese agreements with Kazakhstan and Mongolia use broad language for joint commission supervision, the 2008 China-Russia Agreement includes meticulous guidelines on tasks and functions.<sup>44</sup> Since establishment, joint commissions have held several meetings. China and Kazakhstan has held annual meetings since the adoption of the 2001 agreement and as of 2011, China-Russia Joint Commission on the Use and Protection of Transboundary Waters as held four meetings.<sup>45</sup> Multilateral institutions may not be a preference for China, but the country has established active joint commissions.

### *V. Dispute Settlement*

In case of conflict between states of different interests, Article 33 of the UN Watercourse Convention requires peaceful settlements on conflicts regarding transboundary watercourses.<sup>46</sup> While China has rejected any attempt to settle disputes multilaterally, dispute settlements have been agreed in bilateral agreements. China’s major treaties refer to negotiation as the preferred methodology. In this aspect, China falls short of the Convention. One of the reasons for China’s veto was the inclusion of compulsory fact-based dispute settlements.<sup>47</sup> Rather than binding itself to a decided set of rules for dispute settlement, China prefers to negotiate conflict case by case. Unfortunately, the lack of availability for quantitative data makes it difficult to have a thorough insight into Chinese practice. Existing literature lack reference to scientific data and practice, thus making observers solely relying on Chinese provided information, joint agreements or memorandums and official statements from neighboring countries. To scientifically justify Chinese responsibility is difficult given the lack of accessible

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<sup>39</sup> Ibid., 711.

<sup>40</sup> Chen, Rieu-Clarke and Wouters, 222.

<sup>41</sup> Su, 711.

<sup>42</sup> Ibid., 712.

<sup>43</sup> Chen, Rieu-Clarke and Wouters, 223.

<sup>44</sup> Su, 713.

<sup>45</sup> Chen, Rieu-Clarke and Wouters, 224.

<sup>46</sup> Ibid..

<sup>47</sup> Su, 713.

information. However, as seen in this section and the upcoming comparisons, the evolution of agreements between China and its neighbors provides insights in Chinese action and nature of water practice.

Overall, from observing mutually understood agreements and memorandums, it can be concluded that China has followed the UN Watercourse Convention, although in a limited and reserved manner. While the scope of China's agreements lack reference to underground waters, a variety of surface waters are agreed upon. Substantive and procedural rules have been developed as well. Regardless, observers desire for China to release further information and transparency regarding planned measures. Joint commissions have also been in operation for over a decade. Although dispute settlement lacks clear guidance, China agreed to negotiate over disagreements rather than freezing relations or breaking into conflict. Finally, China has preferred bilateral over multilateral dialogues. This characteristic to solve disputes bilaterally is commonly seen in Chinese foreign affairs, as the continuing South China Sea dispute between China and the Philippines is a recent manifestation.<sup>48</sup> For China to further exert responsibility, it is in their interest to commit to multilateral agreements.

If the general pattern for China is to adopt similar policies to the international agreement, then theoretically the Asian country should be able to treat all neighboring countries equally. The paper will now look into three different agreements between China and Russia, Kazakhstan, and India.

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<sup>48</sup> Benjamin Kang Lim, "China, Philippines to start South China Sea talks: ambassador," *Reuters*, last modified on May 14, 2017, accessed on June 28, 2017, <http://www.reuters.com/article/us-china-silkroad-southchinasea-idUSKBN18A07P>; Liao Jia, "China is right to favour bilateral talks to resolve South China Sea rows," *South China Morning Post*, last modified on May 20, 2016, accessed on June 28, 2017, <http://www.scmp.com/comment/insight-opinion/article/1028305/china-right-favour-bilateral-talks-resolve-south-china-sea>.

## **China-Russia Transboundary River Agreements**

Russia and China share one of the longest borders in the world. Waters bodies form up to 80 percent of the Sino-Russian border.<sup>49</sup> The two share multiple rivers, the important ones being the Argun, Amur, Ussuri and Irtysh River.<sup>50</sup> After flowing for roughly 950 km, the Argun River merges with the Amur River, making the river the "fourth-longest river in Russia and the tenth-longest river in the world."<sup>51</sup> Additionally, the Argun River is the "only major river that has no dams or reservoirs on the main stem."<sup>52</sup> Most rivers, such as the Tumen and Irtysh River, cross into other countries as well, including North Korea, Mongolia, and Kazakhstan. Due to the numerous amounts of shared rivers between the two countries, both China and Russia have been working with each other since the 1950s. Sino-Russian cooperation began with the Sino-Soviet Treaty of Friendship of 1950. The earliest agreement on transboundary rivers between the two countries was established during August 1956, which focused on the economic and potential of the Amur and Argun River.<sup>53</sup> This treaty focused on the construction of dams and reservoirs, hoping to control floods by regulating water flow. Due to the political freeze between the two countries during the 1960s and 70s, the next major step in the two countries' watercourse agreements occurred during the late 1980s and early 1990s. In 1986, local authorities in the USSR called for the central government to build at least one hydropower station with China "to better control periodic devastating floods on the watercourse."<sup>54</sup> In order to create the joint hydropower station, a joint commission was established. By 1990, the two countries were able to reach an agreement to create a dam on

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<sup>49</sup> Vinogradov and Wouters, 27.

<sup>50</sup> *Ibid.*, 10.

<sup>51</sup> *Ibid.*

<sup>52</sup> *Ibid.*

<sup>53</sup> *Ibid.*, 14.

<sup>54</sup> *Ibid.*, 15.

the Amur main stem. Unfortunately, the plan was suspended due to local contestation. The 2004 Treaty of Good-Neighborliness was the largest step towards a cohesive transboundary agreement. Both countries pledged to jointly monitor the water quality of the rivers and protect the environment around these bodies of water. While this agreement brought great change, China would further commit itself after the 2005 Sungari River Incident. On November 13, 2005, chemical pollutants were accidentally dumped into the Sungari River, which reached the Amur River in Russia.<sup>55</sup> Although Russia did not request to for financial compensation, China admitted full responsibility and provided drinking water and equipment necessary to clean the pollution. This particular incident encouraged China to further commit to environmental protection, which is evident in the 2006 Agreement on Cooperation on the Prevention and Mitigation of Emergency Situation and the 2008 China-Russia Agreement.

The 2008 China-Russia Agreement committed the two countries to be responsible in the usage and protection of the rivers. The recent treaty includes all transboundary surface water bodies between the two states.<sup>56</sup> The 2008 agreement focuses on 'no significant harm' and procedural rules. Although China and Russia has further enhanced commitment to the 'no significant harm' clause, their agreement falls short when compared with the 2010 Russian-Kazakhstan Water Agreement, which clearly includes the necessity for one country to recognize their responsibility and compensate for the disaster.<sup>57</sup> As seen in the evolution of the treaties between China and Russia, agreements strengthened post-2005 due to obvious Chinese negligence. Since then, China agreed to establish its only joint emergency response agreement with Russia. Despite the two countries long history of relations, dialogue regarding transboundary rivers lasted for roughly thirty years and finally

reached agreement a decade ago. This suggests that friendly diplomatic history alone is not the sole factor for further Chinese commitment. Given the demand to further clarify and strengthen the current agreement exists, increased cooperation with Russia would most likely occur in the near future.

### **China-Kazakhstan Transboundary River Agreements**

China and Kazakhstan share more than twenty rivers, most of them originating from China's Xinjiang Province.<sup>58</sup> The largest rivers between the two countries are the Irtysh, Ili, Talas and Korgas. The Irtysh River flows into Russia's Ob River and the Ili River flows into Kazakhstan's Lake Balkhash. Both of these rivers are vital for Kazakhstan. In addition to Kazakh independence, Chinese efforts to develop in Xinjiang during the 1990s pushed the two governments to make an agreement. The Irtysh River served as an important water source for China's Karamay oil field and Beijing also announced its plan to "divert water from the Irtysh to Lake Ulungur."<sup>59</sup> Growing concerns led to official negotiations, resulting as the 2001 China-Kazakhstan Water Agreement. The agreement established the essential framework of international waters between the two countries, which includes the basic principles of transboundary water usage.<sup>60</sup>

The 2001 agreement did not satisfy Kazakhstan. China's desire to further develop Xinjiang meant greater consumption of water, particularly from the Irtysh and Ili River. As result, "Kazakh environmental activists and governmental officials have become more active in emphasizing the potential negative consequences of China's hydro-political behavior for their country."<sup>61</sup> After a decade of increased negotiation and awareness, the two governments bolstered their previous treaty.

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<sup>55</sup> Ibid., 11.

<sup>56</sup> Chen, Rieu-Clarke and Wouters, 218.

<sup>57</sup> Vinogradov and Wouters, 37.

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<sup>58</sup> Assem Mustafina, "Trans Boundary Water Issues between Kazakhstan and China." *IOSR Journal Of Humanities And Social Science* 19.1 (2014): 91.

<sup>59</sup> Biba, 40.

<sup>60</sup> Vinogradov and Wouters, 54.

<sup>61</sup> Biba, 41.

The 2011 Agreement on Water Quality Protection of Transboundary Waters extended to water quality protection and regulated distribution of water consumption on the shared transboundary rivers. Overall, treaties with Kazakhstan are similar with the agreements between China and Russia, although the agreements with China's western state still lacks clarity and omit the Irtysh and Ili River from negotiation.

In addition to the above two agreements, the 2005 Agreement between the Ministry of Agriculture of Kazakhstan and the Ministry of Water Resources of China established an agreement to exchange hydrological and hydrochemical data and to establish a joint research cooperation.<sup>62</sup> Another important development between the two is the joint creation of the Horgos Dam, which was designed by Kazakhstan and constructed by China from April 2011 to July 2013.<sup>63</sup> In areas other than the Irtysh and Ili River, China and Kazakhstan have been engaging in successful cooperation.

While multiple agreements were established, due to the vague language and lack of transparency of Chinese measures regarding Kazakhstan's main rivers, the Irtysh and Ili, Kazakhstan has continually shared its concerns with China. Fortunately, Kazakhstan is able to do so due through the Joint Commission created from the above two agreements. River relations between the two countries will most likely be bolstered, as representatives have been working on drafting the Agreement on Water Distribution of Cross-Border Rivers since 2015.<sup>64</sup> Despite a lack of agreement on Kazakhstan's main rivers, China has certainly taken Kazakh concerns into consideration, which resulted as the 2001 and 2011 agreement.

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<sup>62</sup> Mustafina, 91.

<sup>63</sup> Han, 80.

<sup>64</sup> Selina Ho, "China's transboundary river polices towards Kazakhstan: issue-linkages and incentives for cooperation," *Water International* 42.4 (2017): 158.

### **China-India Transboundary River Memorandums**

The main river between China and India is the Yarlung Zangbo or Brahmaputra River. This river is one of the many that originate from the Himalaya-Tibet region. This region is also known as Asia's water tower, providing up to 47% of the world's population with water.<sup>65</sup> Nine out of the ten Asia's largest rivers can be found in Chinese territory. After flowing for 1,700 kilometers on Chinese territory, the Brahmaputra River flows into India for 760 kilometers and into Bangladesh for 227 kilometers before reaching Bhutan.<sup>66</sup> This particular river is important for India; the Brahmaputra provides approximately 29% of the total runoff of India's rivers and roughly 44 percent of all Indian hydropower potential is concentrated on this river.<sup>67</sup> It is not an over exaggeration to claim that this particular transboundary river is an important water source for India.

Indian trauma over the 2000 flash floods led to the establishment of the 2002 Memorandums of Understandings on the Provision of Hydrological Information of Yarlung Zangbo or Brahmaputra River in Flood Season by China to India, which China agreed to provide hydrological data during the annual flood season.<sup>68</sup> This was the first time the two governments made an agreement on water issues. Specific concerns over the Brahmaputra River emerged four years later when local Indian governments addressed lingering problems, which eventually reached the national parliament.<sup>69</sup> Due to increasing concerns by Indian politicians, former Indian Prime Minister Mianmohan Singh shared the case with his counterpart former Chinese President Hu Jintao. As a result, in 2008, the 2002 memorandum was

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<sup>65</sup> Kenneth Pomeranz, 24-25.

<sup>66</sup> Yang Liu, "Transboundary Water Cooperation on the Yarlung Zangbo/Brahmaputra – a Legal Analysis of Riparian State Practice," *Water International* 40.2 (2015): 335.

<sup>67</sup> Biba, 37.

<sup>68</sup> Ibid..

<sup>69</sup> Ibid., 38.

revised to include the sharing of overall hydrological information. When the same memorandum was extended in 2013, the new version included China's commitment to share all historical information about the river, including data on previous floods, natural disasters, and water levels.<sup>70</sup>

In addition to the hydrological information memorandums, during the same year, China and India agreed upon the Memorandum of Understanding on Strengthening Cooperation on Trans-border Rivers. Unlike the previous memorandums, this was the first memorandum that covered all transboundary rivers existing between the two countries.<sup>71</sup> Unfortunately, the memorandum did not entail procedural rules when dealing with transboundary rivers and simply reaffirmed past cooperation. The greatest achievement of this memorandum was the creation of common definition from international waters to transboundary rivers, excluding any other bodies of waters.

The agreed memorandums between the two Asian powers have not committed both sides to protect the quality or quantity of water flow in the Brahmaputra River. India has received further commitment from China by confronting its northern neighbor with concern. For example, in 2013, in response to former Indian Prime Minister Mianmohan Singh, President Xi assured him that he was aware of China's responsibilities towards lower-stream states and a possibility of establishing a joint mechanism between the two.<sup>72</sup> Rather than being simply pessimistic of the two country's relations, observers should realize that the two countries are slowly yet steadily creating a common understanding on the shared river.

### **The Future of Sino-Indian Water Relations?**

As seen in the previous section, China has conducted responsible water practice. China and Russia have been engaged in water agreements for an extensive period of time. Regardless of

remaining issues over the two major rivers, China's relation with Kazakhstan is stable. Contrary to mainstream belief, China and India have been cooperative. While observers may conclude that China has the ability to establish an agreement with India, there are multiple hurdles that prevent the establishment of a treaty. Such factors include remaining border disagreements, nascent concern and Chinese interest.

The greatest impediment in creating a coherent agreement between India and China is the current border disputes. After several decades, China and Russia finally agreed upon disagreements, thus ending their border disputes in 2008.<sup>73</sup> If India desires to create a coherent transboundary river agreement with China, it would have to engage in concrete border agreements rather than maintaining the current status quo. Such agreement is important because the Brahmaputra River flows into disputed border territory of India's Arunachal Pradesh or China's South Tibet.<sup>74</sup> Although the desire of border dispute resolutions was revealed by both Indian Prime Minister Narendra Modi and Chinese Premier Li Keqiang in 2015 and "halfway" compromise reemphasized by the Chinese Foreign Ministry in 2016, the Sino-Indian relations continues to experience turbulence as India recently boldly claimed that the region is integral to their territory.<sup>75</sup> Despite recent efforts of mutual

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<sup>73</sup> "The Cockerel's Cropped Crest," *The Economist*, last modified on July 24, 2008, accessed on May 23, 2017, <http://www.economist.com/node/11792951>.

<sup>74</sup> "Fantasy Frontiers," *The Economist*, last modified on February 8, 2012, accessed on May 23, 2017, [http://www.economist.com/blogs/dailychart/2011/05/indian\\_pakistani\\_and\\_chinese\\_border\\_disputes](http://www.economist.com/blogs/dailychart/2011/05/indian_pakistani_and_chinese_border_disputes).

<sup>75</sup> "India-China border dispute: Li and Modi seek resolution," *BBC News*, last modified on May 15, 2015, accessed on May 31, 2017, <http://www.bbc.com/news/world-asia-china-32747667>; "Should meet halfway to resolve Sino-India border dispute: China," *The Indian Express*, last modified on April 22, 2016, accessed on May 31, 2017,

<http://indianexpress.com/article/india/india-news-india/should-meet-halfway-to-resolve-sino-india-border-dispute-china-2765924/>; Lucy Hornby and Aliya Ram, "China and India renew war of words

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<sup>70</sup> Liu, 360-361.

<sup>71</sup> *Ibid.*, 62.

<sup>72</sup> He, 316.

cooperation, recent contradictory language suggests that it is highly unlikely for the two to make an agreement in the near future. Current political disagreement on territory will definitely hinder the process of creating an agreement rather than a memorandum.

In addition, Indian concern over the Brahmaputra is only a recent phenomenon. In order to establish an agreement, Indian politicians would have to engage with China on a longer basis or experience a Chinese caused accident. As seen in the case studies, the Sungari Incident accelerated Sino-Russian agreement on stronger cooperation. As for Kazakhstan, the Central Asian country has been persistently sharing concerns with China regarding the Irtysh and Ili River. In return, China has been cooperative in other rivers, such as the Horgos River. If Kazakhstan has been lobbying towards China since 2001 and still has more to achieve, it would be naive to believe that India and China would be able to solve the disagreement on the Brahmaputra River in a short period of time.

Finally, Chinese interest may prevent the establishment of bold treaties. The overall reserved nature of Chinese water practice reveals the country's intension to maintain state sovereignty. The yet to be concluded Irtysh and Ili River agreements prove that China may be hesitant to establish agreements on major rivers that are equally important for China. Even if the conclusion that Chinese interests prevent the establishment of strong treaties is unconvincing, it is evident that China is slow in establishing water treaties. Fast action was only seen after the Sungari Incident. Given the above three reasons, it is unlikely that India can persuade China to establish a treaty in the near future. In regards with the argument, it was proven that China's attitude towards India is not peculiar and that Chinese actions are reactive. Long-term negotiations between China and Russia and the Sungari Incident led to the creation of the 2006

Joint Emergency Cooperation and the 2008 China-Russia Agreement. Indian concerns have led to the revision of the 2002 Memorandum, which eventually led to the 2013 Memorandum on strengthening cooperation on transboundary river. This similar pattern of improved agreements is seen with Russia and Kazakhstan. Both of the factors prove that China will establish agreements in a responsive manner. India would have to continue lobbying towards China to create a stronger agreement.

The unresolved border issue between the two Asian powerhouses will definitely prevent any treaty to be established, although memorandums may be agreed upon. Before focusing on water wars between the two countries, India would have to engage in the stagnant disagreement on the borders. Another factor that has unprecedented evidence is the role of global warming. If both parties acknowledge that global warming is a threat to the Brahmaputra River and the Himalayan Basin, dialogue may accelerate. For future research, it may be interesting to study both China and India's perception of global

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over Tibet," *Financial Times*, last modified on April 20, 2017, accessed on May 31, 2017, <https://www.ft.com/content/e5d141b0-2584-11e7-8691-d5f7e0cd0a16>.

warming and its effects on water flow. If both governments acknowledge the effects of global warming on water consumption, it may be possible to establish a relatively strong memorandum, if not a treaty that transcends border conflicts.

### **Conclusion**

Both Indian and American scholars have expressed concerns over a water conflict between India and China. They believe that Chinese domestic water problems and future plans result in pessimism of future Sino-Indian relations. Contrary to the water war narrative, Chinese practice, regardless of the veto, reveals that the emerging superpower has been in line with the UN Watercourse Convention. When scrutinizing relations between China and Russia and Kazakhstan, it is clear that agreements are heading towards further cooperation. It can be concluded that the Chinese will act responsibly if lower riparian states continue to lobby towards China. While the same is applicable for India, continuous border disputes can hamper progress.

Transboundary rivers will continue to gain attention as climate change would naturally affect water flows. Rather than simply accusing one party for abnormality in water flow, it would be in the best interest of both parties to establish agreements. Academics should not foster the belief of water wars. Conflicts over natural resources can be avoided by not rushing towards threatening the opponent. Instead, countries should establish cooperation, which would not only respect sovereignty but also protect national interests.

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