India and China: The Freshwater Dispute Amongst the Two Thirsty Asian Giant's

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ABSTRACT

Today climate change and global warming have become hot topics in United Nations, and other organization's the global warming has adversely affected the ecosystem of earth and their various predictions that if not controlled it will cause adverse effect for the sustainability of entire human civilization. Due to the increase in the level of melting of glaciers water is going to be the most valuable treasure in the world. Tibet plateau is called the third pole as it is home to largest glaciers after first and second, they are also origin of lot of rivers flowing into south and southeast Asia. This paper analyses the freshwater dispute between India and China, form a neo-realist point of view. The papers speak about the past and present nature of the dispute it sheds light on the narratives of both the respective nations on the disputes and tries to recommend a possible solution or a way to manage this dispute.

KEYWORDS: India, China, Water Dispute, Brahmaputra, Yarlung Tsangpo, Water Diversion

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INRODUCTION

population China is the world's largest country by population (1.4 billion), followed by India (1.3 billion). The subsequent most-populous nations - the United States, Indonesia, Brazil, and Pakistan – collectively have less than 1 billion people. The increasing area under irrigated land and increase in various water-intensive industries, together with the demands of an ever-increasing population, have led to a severe struggle for more water in both countries. As water distress intensifies and global warming accelerates, local, national, and interstate disputes over water are likely to become ever more endemic in Asia, straining efforts to regulate competition through cooperative mechanisms. Access to water already epitomises the rich/poor divide in Asia While the poor struggle to get primary access to water for their daily consumption and household chores; the rich rely to a great extent on bottled drinking water. In this light, the quality and quantity of available freshwater have appeared as a critical component of Asian security-related challenges. Increasingly, dams built on transnational rivers are spurring inter-country friction. If water wars in the future are to be averted over these and other hydroengineering projects, Asian norms and rules on shared resources will need to evolve.

It is feared that rapid economic growth of last two decades could slow down in the face of scarcity of water and if the condition deteriorates further, it will turn both food-

China and India together have more than 1/3 of world 245 exporting countries into major importers resulting a global food crisis. Lester Brown, a prominent environmentalist, asserts that water scarcities in the two countries present the most significant threat to food security humanity has ever faced. (Vivek Kaul 2009) Hence fresh water is essential, for sustainable development of both these countries.

Analysis of the past and present situation of the Fresh Water Dispute

Tibet is the starting point of most of the major Indian rivers, especially in northern India. After the polar ice caps Tibetan plateau with its vast glaciers and massive underground springs is the largest freshwater repository. All of Asia's major rivers, excluding the Ganges, originate in the Tibetan plateau. Today China is trying to control this water and use it for its development. To keep its current pace of development, China needs water for which it has constructed a large number of dams in and around its various water bodies today it has over 50,000 large dams, i.e. more than half of the world combined. China, which is constructing multiple dams on all the major rivers running off the Tibetan plateau, is likely to arise as the ultimate controller of water for nearly 40% of the world's population, further it is financing and building mega-dams in Pakistan, Laos, Burma and has made agreements to take share of the power generated from this dams. Many western scholars have stated that China may use its control and may manipulate the flow of rivers as a pivot of its power and economic progress.

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China and India's long-standing evolving relationship will increasingly be subject to the availability of water. In the last two decades, India and China and have been inundated by drought and shortages of drinkable water in some parts whiling experiencing floods in other parts. To tackle this upcoming situation, fresh opportunities are being measured; hence tapping the Himalayan rivers is the need of the hour. At the same time, many investigations have also forecasted that those rivers may dry up as a corollary of dwindling glaciers. Both Chinese and Indian political leaders have recognised this issue and have pledged to resolve it. Chinese were swift to act first for example In 1998, then Chinese Vice Prime Minister Wen Jiabao had guantified that the "survival of the Chinese nation" was threatened by the shortage of water and water pollution has escalated the matter (Ted Plafker 2005). As a result, the Chinese started building a numbers dam's in the early 2000s on most of it rivers in south and western region.

Whereas though India was already feeling the heat it was in 2007, when then Indian Prime Minister Manmohan Singh remarked, "Dryland agriculture, fluctuating climate and water scarceness are the new-fangled challenges we are facing given the hazard of climate change and global warming, we face the real prospect of reduced supply of water. This threat is of particular concern to India as the Indian civilisation since immemorial times the on glaciers for water supply in this part of sub-continent" (Financial Express 2007). As all major northern Indian rivers have their origin in China, they constitute one-third of India's renewable water supplies. The incident that raised concerned of Indian Politicians and Intelligentsia towards Chinese construction of dams and other Infrastructure on the Brahmaputra river called as the Yarlung Tsangpo in arch a Source: Togni, Federico. (2014). Water grabbing in Tibet, and Yalu Zangbo in China was not for water shortage, Joon Himalayan Asia, the conflict over the Brahmaputra river but deadly flash floods. In 2000, hefty monsoon rain caused the Brahmaputra River to torrent its banks and caused? floods in large strips of land in northeast India killed many and left millions homeless (UNICEF 2000).

When the cause of the flood was studied, ineffective water management, and deforestation were acknowledged as essential reasons. Similarly, some reports also suggested that a landslide in the Chinese part of Brahmaputra river was also a significant cause of the flood, India's then-ruling B. J. P. (Bhartiya Janta Party) government asserted that India must mandate compensation from China (BBC World 2000). Since then a series of high-level meetings and discussion took place between India and China and finally in 2002 signed a memorandum for provision of hydrological information on the Brahmaputra river during the flood season, with a new memorandum signed in 2005 and 2008 respectively.

No country is more susceptible to China's re-engineering of river water flows than India. As it alone receives nearly half of the river waters that leave Chinese-ruled territory. According to United Nations statistics, a total of 718 billion cubic meters of surface water streams out of Chinese terrain annually, of which 347 billion cubic meters (or 48.3 per cent of the total) runs straight into India. China has a dozen dams in the Brahmaputra River Basin and has already built dams on the Chinese side of the Indus and the Sutlej rivers (Senge H. 2010). Further, it is funding two major dams in Pakistan Occupied Kashmir, Diamer-Bhasha which is said to generate 4,500 MW of electricity and Bunji Dam which will have a

capacity to generate 7,100 MW of electricity (Drazen J. 2017) (Dawn 2018). Electricity Producing capacity of Diamer-Bhasha itself is larger than the entire installed Hydropower projects in Jammu and Kashmir (Rashme Sehgal 2017).

China has constructed a major 510 MW hydropower dam on the Brahmaputra River which is also called as the Yarlung Tsangpo in Tibet. This project named as Zangmu in the Tibet Autonomous Region (TAR) began to be built in 2010 and started operation in late 2015. When India rose its concern over this dam, China assured that the Dam is a small run off the river project which will not have any impact on the river's downstream flow into north-east India. However, in January 2013 China gave the nod for three new dams on the Brahmaputra River, and one of the three approved new dams is understanding than the Zangmu Project. The following image gives a clear picture of the situation.

Image no1 Image title: Dams on Brahmaputra River



between China, India and Bangladesh. DOI. 10.13140/2.1.2146.0167.

A 640 MW dam is built in Dagu, which lies 18 km upstream of Zangum. Another 320 MW dam has been built at Jiacha, and the third dam has been built at Jiexu, 11 Km upstream of Zangmu. Further Langda Zhongda and Langzhen are the three new approved dams on the river.

China has also proposed but not approved two major dams in the Great Bend area of Brahmaputra Daduqia with a capacity of 43,800 MW and Motuo Dam with a capacity of 38,000 MW. Daduqia Dam is just 30 km from India's border.





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Source: South Asia Network on Dams, Rivers and People, Media Hype Vs Reality: India-China Water Information Sharing MoU of Oct 2013, 24-10-2013,

https://sandrp.in/2013/10/24/media-hype-vs-realityindia-china-water-information-sharing-mou-of-oct-2013.

Zhongda, Langzhen and Langda are the other new Dams which are being constructed or under consideration by the **Chinese Government**

Image no 3

Image title: Animated image of Dadugia and Motuo Dams.



become a significant issue in the Indian intelligentsia and political leaders.

In 2001, an artificial dam in Tibet collapsed and killed 26 people and damaged property of Rs 140 crore along the river Siang in Arunachal Pradesh (Panda R. 2016). After the Indian Government raised this issue with the Chinese Government, an MoU was signed in 2002 to share Hydrological pieces of information in respect of three stations, namely, Nugesha, Yangcun and Nuxia during the Flood Season 15ht May to 15th October (Amano K. 2015). Since then MoU has been renewed twice first in 2008 and 2013, and it had been extended till June 2018. India pays approximately 120,000 US \$ a year to cover the cost of this data collection (Central Water Commission 2014).

Image no 4





GV4ZhwBA6XnpCtc=s127 (2018)

https://lh3.googleusercontent.com/ryQNY8oHcch4-Source: Proposed(but not approved) dams on the Great fFBT5QkoJb5cs8lKf17JvwOuk YedcZa28_iI5nkzXl_

Bend of the Tsangpo, 2018, https://www.reddit.com/r/MapPorn/comments/88ityj/parch and

Note: (the Yarlung Tsangpo in Tibet) the Brahmaputra is the 24 highest river in the world, beginning at 5210 m above sea level and then voyaging for 3848 kilometres crossing India and Bangladesh in the Bay of Bengal.

On its ride to the eastern side of Tibet, the climbs into a 4,900metre and runs between two soaring snowcaps Mountains — Namcha Barwa (elevation 7782m) and Gyala Pelri (7294m). In a detachment of around 240km, the River plummets some 2,700 metres through what is known as the Yarlung Tsangpo Grand Canyon, the world's deepest gorge its depth reaches over 5,300m near the India-China border

As the canyon passes between the peaks of the Namcha Barwa (Namjabarwa) and Gyala Peri mountains, it reaches an average depth of about 16,000 feet (5,000 m) around Namcha Barwa. The canyon's average depth overall is about 7,440 feet (2,268 m), the deepest depth reaches 19,714 feet (6,009 m). This is the deepest canyon on land.

While stories about Chinese proposals of Dams on the Brahmaputra and the diversion of (Yarlung Tsangpo) Brahmaputra have circulated since the 1980s (Chellaney B. 2013). As China was cautious about the ill effect of the project on the natural environment, it spoke very little about the project in public. When Indian leaders asked about the dams, the Chinese leaders said no such projects going on the Brahmaputra. It took practically a decade for this Projects to

roposedbut_not_approved_dams_on_the_great_bend/velop An article published in 2003 titled "The massive diversion of the river to China's northwest would have even more devastating consequences," in which he highlighted the ecological effect on India and Bangladesh gather much attention. The Plan to divert water from the Brahmaputra to Yellow river has in a famous book titled 'Tibet's Waters Will Save China' (西蔵之水救中国). The book was published in 2005 and is written by Li Ling, a former officer of the People's Liberation Army (PLA) (Amano, K. 2015). Later on, various reports on the dams started coming up through Indian and International media. A fresh debate flare-up in the world about the largest water diversion plan in the world, the plan was to divert water from western and southern rivers in the dry northern region. The diversion project was segregated into three parts the eastern areas which diverted water from Yangtze river the central part which diverted water from the Han river and western part which diverted water from the Brahmaputra to the Yellow River (Samaranayake, N. Et al. 2016)

> When then-President of People's Republic of China Hu-Jintao visited India in November 2006, Both the countries corresponded to set up an Expert-Level Mechanism to address interaction and collaboration on provision of flood season hydrological data, crisis management, Flood forecasting, and other issues of trans-border rivers between the two countries. Consequently, the two sides set up the Joint Expert Level Mechanism (ELM) on Trans-border Rivers in 2006. Till 2019 twelve meetings of ELM have been held so far, though it has been proved as a successful tool to manage

the hydrological data sharing, nothing concrete has come out of it that can be called as a final solution.

Image no 5

Image Title: The Chinese grand project of diversion of water from East, West and South to North.



Sources: Seeger M. (2014) Tibetan Water to Save China? In: Nüsser M. (eds) Large Dams in Asia. Advances in Asian Human-Environmental Research. Springer, Dordrecht.)8-10-2013. https://doi.org/10.1007/978-94-007-2798-4_3

In an in-depth study of the geographical elevation profile of the area, it makes it clear that China may be planning to transfer water from the Brahmaputra river to north-west of the project site. The path shown in the figure shows the possible route of the underground tunnel route.

The height difference between the project site and the Taklamakan desert area indicates that the flow of water is naturally smooth and does not require the construction of additional large-scale wells. India, downstream of the Brahmaputra river, has full rights to water sources; any diversion from the river could damage Indian agriculture.

The Chinese Narrative on the diversion of the Brahmaputra River

Before to understand Chinese narrative, one should understand Chinese stand on international cooperation on transboundary river water distribution. When the United Nation Convention on the Law of the Non-Navigational Use of International Watercourses (UNWC), The UNWC is an international treaty adopted by the UN General Assembly in 1997. It is a framework convention governing international watercourses (UNGA 1997). Interestingly China voted against this convention in the united nation as China does not want to be dictated by international law on its own water resources (Zhang H. 2016).

The Chinese narrative is divided on the diversion of the Brahmaputra water. One school of thought says that water resource located within the territory of India indeed belong to India, and the water resources found in Chinese territory indeed belong to China (王德华 Chinese Article 2017). To give water to India is humane, but if we need that water for our survival similarly, China cannot guaranty water flow to the lower riparian state. (王德华 Chinese Article 2017). In 2005 Guo Kai a senior researcher with the Yellow River Water Conservancy Committee presented his ideas on the Brahmaputra river; similarly, there have been other Chinese scholars like He Zuoxio, Zhao Nanqi, Li Ning have proposed to divert Brahmaputra river (Holslag, J. 2011). Hence the advocates of this narrative speak of various ways to tap Brahmaputra water and utilise it (Chellaney, B. 2009) (Pak, J. H. 2016).

While the second school of thought, have been critical of the plan, for example, in 2000 then Minister of Water Resources Qian Zhengying opposed the diversion of the western route. His successor Wang Shusheng also echoed his stand and claimed Guo Kai's proposal as purely unprofessional and unscientific (Xinhua 2010). Similarly, other Chinese scholars and scientist like Qing Hui, and Wang Weilu showed the devastating effects of such a project on the ecology of the Tibetan Plateau (Qifg H. 2006). Official Chinese Government maintains that all the Dams on the Brahmaputra run of the river hydropower projects and will not affect or alter the volume of water downstream India.

The Indian Narrative on the diversion of the Brahmaputra River

Before to understand India's narrative, one should understand its stand on international cooperation on transboundary river water distribution. Though India has a water-sharing treaty with both of its lower riparian states of Pakistan (Indus Water Treaty) and Bangladesh (Ministry of External Affairs 1960). India remained abstained from voting during the United Nation Convention on the Law of the Non-Navigational Use of International Watercourses (UNWC), The UNWC is an international treaty adopted by the UN General Assembly in 1997 (Zhang, H. 2016).

Even the Indian Narrative is divided, one school feels that sooner or later when the need arises, China will give a green signal for the diversion of the Brahmaputra river. Scholars like U. K. Sinha China 's thirst for water is so intense that it will leave other lower riparian states thirsty (Mohd Abass Itoo, Kavita Agarwa 2019). Scholars like Bramha Chelleny who is one of the vocal scholars on India China water dispute has stated that today the question is not how will china divert the river but when? There are also some scholars like Ramaswamy Iyer, Lt Gen R. N. Sinha voice against the dams built on the Brahmaputra on the Chinese side as it is resulting in desalinisation, floods, loss of habitat and ill-effect on the river ecology. (Mahapatra, S.K. and Ratha, K.C. 2016)

While the other school of thought is full of optimistic scholars and scientists, who feel that Indian media's stand on the issue the . Romesh Bhattarcharji, a former Indian bureaucrat dismisses any diversion project currently being constructed in near further he also argues that the project will not severely impact agriculture and fishing (Sudha Ramachandran 2015). China scholar like professor Jabin Jacob points out that it is the tributary of the Brahmaputra river which has their origin in India Arunachal Pradesh provide 70 % per cent of water in the Brahmaputra. So even if China goes ahead with River diversion, it will not affect India severely (Jacob j. 2015, Nihar Gohkle 2017). Another Indian scholar Nilanjan Ghosh, claims that the water diversion project, on the Brahmaputra river, on the Chinese side will not have a substantial impact on the flow regime (Nilini Ghosh 2019). He further argues that "Brahma hypothesis" created by the Indian media is based on the perception that dam constructions on the upper stream always reduce downstream flow, which in this case is not true as 70 per cent of Brahmaputra river comes from its tributaries originating from Arunachal Pradesh (Sudha Ramachandran 2015).

Existing Ground Reality on the Issue

Though 70 per cent of the water that contributes to the volume of the Brahmaputra beginning in Assam comes from rainfall and tributary flows on the Indian side in Arunachal Pradesh (Sudha Ramachandran 2015). These dams are an alarming scenario for Indian side as these projects can have a significant impact on the ecological system of India's north-eastern region the dams will block the flow of minerals through water and block the fish migration. All this will adversely affect the ecology and led to an environmental imbalance of this region. One more critical issue in India is the lack of management of river water resources; thus, a vast hydropower potential remains un- or under-exploited on the Indian side if India utilises this then it would help India to capitalise its energy needs somewhat.

In November 2017 the river water of Brahmaputra called as Siang in Arunachal Pradesh became murky the Indian government had no answer to it, and there were speculations among the Indian media it was due construction of dams on the Chinese side. A committee was appointed to study the matter and gave it a report stating that it was due to an earthquake that occurred in Tibet and the landslide has caused the water to turn black. If that was the case, then the murkiness of the water should have reduced after few days or a month, but still, June 2018 the water has not shown any change crystal clear water of Siang has become past now, and Indian Government is clueless about it. According to some hydraulic engineers, resin adhesives are commonly used in large-scale construction projects but have never been used in water-related projects because these polymer resin adhesives are said to be harmful to humans and animals. The time of the flow of water from the project site to India is roughly estimated to be 15 to 20 days. According to media reports, the colour of the water in the turned black, possibly due to the use of these resin adhesives at the site of the project.

Hence India has raised its concerns on these dams. There are also speculations among some Indian scholars that during hostile conditions, China may even trigger floods in the north-eastern region by releasing a large amount of water from the dams.

A decade back when India asked about the construction of Dams on the Brahmaputra they denied it, but today they have come up with number of dams on the Brahmaputra, though the possibilities of diverting the water are negligible, as China is trying out other technological options including promoting desalination projects in coastal cities, water conservation strategies and recycling. Also, the water transfer projects involving the Brahmaputra may pose substantial technical challenges in addition to massive costs without necessarily providing commensurate benefits. However, the relation between India and China is surrounded by a lot of miss trust.

As per the research findings and understanding, though the Chinese government have not commenced the work on the diversion, they have still kept the options open, and if the need arises China may divert the course of the river in the North in future if succeeded, it can do the same with Sutlej and Indus. However, with the approvals of 6 new Dams under the energy plan, four hydropower projects will now be built- on the mainstream of the middle reach of the Brahmaputra which is enough to increase India's water crisis in near and midterm future (Ananth Krishnan 2013).

What makes the condition critical for the Indian Side is the fact that, though India has water-sharing accords with both the countries located downstream from it: the Indus pact with Pakistan and the Ganges accord with Bangladesh it has set a new principle in international water law by assuring Bangladesh an equivalent share of downriver streams in the dry season. India and China have no such agreement what they have are two Hydrological data sharing MoU's for Brahmaputra and Sutlej rivers along with the India-China Expert Level Mechanism (ELM) which does not have any legal bindings on it. As these MoU's do not have a legal binding the interpretation of them, some time can be tricky and highly depends on geopolitical relations between the two countries. Further Chinese willingness to adhere to those MoU's is by choice as India cannot force China to share hydrological data. For example, during the Doklam crisis, China refused to give the Hydrological data of the Brahmaputra river citing construction and repair going on its station, which collects data. As a result, when in 2017 sudden floods took place in Arunachal Pradesh, India suffered the loss of lives and property as there was no prior warning issued by the Indian government due to lack of data.

Conclusion

Diversion or no diversion the construction of the dams on the Brahmaputra have already started taking its course on the river and have started affecting the river regime, river morphology, and life cycle of the river.

If India wants to prevent such a situation, it should make use of advanced technology to enhance its capabilities for monitoring data rather than just relying on the hydrological data provided by China. On China's side, if it wants to exhibit its emergence at the world level as a responsible superpower, it should undertake the concerns of the lower riparian states while making changes in the course of the rivers as China holds control on ten transboundary rivers which flows into 11 different nations. India and China as the two largest Asian Powers should initiate to form an institutionalised cooperation treaty in trans-boundary basins that would co-opt all riparian neighbours in South Asia. These provisions should be concentrated on transparency, unconstrained information exchange, fair sharing, dispute resolution, pollution control and assurance to chorus from any developments that could substantially decrease trans-boundary flows.

REFERENCES

- [1] Amano, K. 2015, Analysis of Conflict and Cooperation between China and India on the Brahmaputra River Basin Water Resources. Asian Studies, 61(2), 55–68.
- [2] Ananth Krishnan, 30-01-2013, China gives go- ahead for three new Brahmaputra dams, The Hindu, https://www.thehindu.com/news /international/China-gives-go-ahead-for-three-new-Brahmaputra-dams/article12323702.ece
- [3] BBC World, 06-08-2000 "Flood Havoc in North-East India,".
- [4] Central Water Commission, & Bureau of Hydrology and Water Resources, 2014. Implementation Plan between the Central Water Commission, Ministry of Water

International Journal of Trend in Scientific Research and Development (IJTSRD) @ www.ijtsrd.com eISSN: 2456-6470

Development Resources, River and Ganga Rejuvenation, the Republic of India and the Bureau of Hydrology and Water Resources, Tibet Autonomous Region, the People's Republic of China upon Provision of Hydrological Information of the Yarlung Zanbgu/Brahmaputra River in Flood Season by China to India.

- [5] Chellaney, Brahma. 2009, Coming Water Wars. International Economy, Fall, The Magazine of International Economic Policy, Washington, D.C. 2009
- [6] Chellaney Brahma, 2013, Water: Asia's New Battleground, Georgetown University Press, P.154
- [7] Dawn, 09-10-2018, Construction of Diamer-Bhasha, Mohmand dams to begin in 2019, https://www.dawn.com/news/ 1437767
- Drazen Jorgic, 13-06-2017, Pakistan eyes 2018 start for [8] China-funded mega dam opposed by India, Reuters, https://www.reuters.com/article/us-china-silkroadpakistan-dam/pakistan-eyes-2018-start-for-chinafunded-mega-dam-opposed-by-india-idUSKBN1941P9,
- [9] Financial Express (Bangladesh) 12-09-2007 "India Cannot Subsidise Commercial Use of Water" www.thefinancialexpre ssbd.com/search_index.php?page=detail_news&news_i d= 11061
- [10] Holslag, J. 2011, Assessing the Sino-Indian water dispute. Journal of International Affairs, 64(2), pp19-35.
- [11] Jacob Jabin, Brahmaputra water diversion: India must in [24] UNICEF, UNICEF India Floods Situation Report 10 Aug go with the flow on this, Hindustan Times, 16-10-2015, https://www.hindustantimes.com/anal ysis/brahmaputra-water-diversion-india-must-gowith-the-flow-on-this/story jXcSMThmt5C99KK5HZLbCM.html
- [12] Nihar Gohkle, 10-02-2017 Ignore the scaremongering. China can't turn off Brahmaputra even if it wants, ,http://www.catchnews.com/india-news/china-can-tblock-brahmaputra-but-india-still-faces-a-threat-fromits-own-dams-1476452286.html
- [13] Mahapatra, S.K. and Ratha, K.C. 2016, –Brahmaputra River: A bone of contention between India and China, Water Utility Journal, E.W. Publication.
- [14] Ministry of external affairs, 19-09-1960Indus Waters https://mea.gov .in/bilateral-Treaty, documents.htm?dtl/6439/ Indus
- [15] Qifg Hui, "Da xixian diao xizang shui huche" [Southern Route Transfer of Water from Tibet Nonsense], Renmin rihao [People's Daily], 11-11-2006
- [16] Pak, J. H. 2016, China, India and War over Water, Challenges in Asia, Strategic Studies Institute, Parameters 46(2) Summer 2016. Pp-53-67
- Panda Rajaram, 26-11-2016 China using Brahmaputra [17] dam project as strategic weapon, Deccan Herald, ,

https://www.deccanherald.com/content/579726/chin a-using-brahmaputra-dam-project.html

- Rashme Sehgal, 18-05-2017, India's water security [18] concerns over China's dam building spree are legitimate, require action. First post, https://www.firstpost .com/india/indias-watersecurity-concerns-over-chinas-dam-building-spreeare-legitimate-require-action-3454406.html,
- Samaranayake, N., Limaye, S., & Wuthnow, J. (2016). [19] Water Resource Competition in the Brahmaputra River Basin: China, India, and Bangladesh. Arlington
- Senge H. Sering (2010): China Builds Dam on Indus [20] near Ladakh, Journal of Defence Studies, Vol. 4, No. 2, page 136.
- S.K. and Ratha, K.C. 2016, Brahmaputra River: A bone of [21] contention between India and China, Water Utility Journal, E.W. Publication. Sudha Ramachandran Water Wars: China, India and the Great Dam Rush, th Diplomat, 03-04-2015, https://thediplomat. com/2015/04/water-wars-china-india-and-the-greatdam-rush/
- [22] Mohd Abass Itoo, Kavita Agarwa, Indo-Chinese Water Relations: Issues and Concerns, RESEARCH REVIEW International Journal Volume-04, Issue-07, July 2019
- [23] Ted Plafker, "China, Parched and Polluted, Puts a Price on Water," New York Times (USA), 16 December 2005. www.nytimes.com/2005/12/16/business/worldbusin ess/16iht-rdevchin

2000, https://reliefweb.int/report/india/unicef-indiafloods-situation-report-10-aug-2000

- [25] United Nation General Assembly 1997, Convention on the Law of the Non-navigational Uses of International Watercourses 1997, Adopted by the General Assembly of the United Nations on 21 May 1997. Entered into force on 17 August 2014. General Assembly resolution 51/229, annex, Official Records of the General Assembly, Fifty-first Session, Supplement No. 49 (A/51/49).
- Vivek Kaul, 29-12-2009 "Melting of Flimalayan Glaciers [26] the Biggest Threat to Food Security," Daily News and Analysis (India).
- [27] Xinhua, 25-05-2010. China Won't Divert World's Highest River to Thirsty North: Ex Water Chief,"
- Zhang, Hongzhou, 2016, –Sino-Indian water disputes: [28] the coming water wars, Wiley Periodicals, Inc. Volume 3, March/April 2016.
- 印媒:卫星图片显示,中国用秘密隧道将雅鲁藏布江 [29] 的水转移到沙漠. 2017-12-17. http://mini.eastday.com/bdmip/171217182553369.ht ml#