



Water Resource Sharing between India and China

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ABSTRACT Five rivers, belonging to the two major river systems, the Indus and Brahmaputra, originate in Tibet, China before flowing into India. There are reports that China is considering diversion of its southern rivers including the Yarlung Zangbo to provide water to its northern regions. A comparative account of China's behaviour as upper riparian state based on the principle of 'unbridled sovereignty' and of India's record as upper riparian with respect to Pakistan under the Indus Waters Treaty has been given. While there are several internationally accepted principles of sharing of international waters as yet there is no binding international law on the subject as the 1997 UN Convention on International Water Courses does not enjoy universal support. Given its record with other co-riparian states China appears unlikely to agree to a bilateral river waters treaty with India on the Yarlung Zangbo. The paper includes a review of the current status of international law on the subject. Various approaches, national, bilateral and international, to deal with any future diversion of transboundary waters by China have been outlined.

Introduction

In the latter half of the 20th century, China realized that it was in the midst of an acute water crisis. The land of the dragon was quickly turning into the land of the thirsty dragon.¹ While China's water reserves, estimated at around 280,000 bcm, accords it the sixth rank in the world in terms of fresh water reserves, due to its huge population it ranks as low as 121st in terms of per capita availability. Compared to the world average of 10,900 m³ per capita per annum (1997 figures), China's per capita availability, estimated at 2,220 m³, is less than 1/5th of the world's average.² According to water experts, a state which has less than 1,700 m³ of water per capita is considered desperately short of water resources. China is coming perilously close to that mark.

Arguably, the worst affected area in China is the north east region particularly the Huabei region. The Huabei region includes four provinces (Hebei, Shanxi, Shandong and Henan), two cities (Beijing, Tianjing) and one municipality of Inner Mongolia. This region is the Chinese centre of politics, economy and culture besides being an important source of food supplies.

Water Diversion Projects in China

Much of China's water is utilized for irrigation. Apart from inefficient use of water for agricultural purposes, rampant urbanization and industrialization have also contributed to the water scarcity. As per one estimate by 2002, as many as 110 Chinese cities were suffering from severe water shortages. In large cities, the problem was exacerbated by water pollution.

In general, it may be noted that China has lower levels of precipitation compared to many developed countries. For instance, even in the water abundant areas the precipitation is only 2/3rds that of Japan. However, even if we take into account these low figures, the Huabei region is a cause for concern. While the national average rainfall is registered at 2.9 m³/100 acres in the Huabei region it is 1/5th or 1/6th that of the national average. Thus, in the Huabei region the per capita water availability is only 200 m³ compared to the national per capita availability of water is 2200 m³.

While China has 7 % of the world's arable land, it has to support 21% of the world's population. With the Chinese government laying emphasis on maintaining a 'basic' (i.e. at least 95%) grain self-sufficiency, this means that the water utilization for agricultural purpose would continue to be high. Since grains, particularly rice, play a dominant role in the Chinese diet paddy cultivation, which is water intensive, will drain the bulk of available water. As it is, flood

irrigation has led to a major problem of alkalisation of arable land and other related problems in China. A lot of irrigation water is lost due to evaporation and leakages in transit. A clear linkage has been made by observers between depletion of water resources in the North China plain to the increased resort to rice cultivation in the area.³

1. Proposals for Water Transfer - Over the years, a number of proposals were put forward in China to augment water availability through transfer of water from the relatively water abundant south to the water scarce areas of the north. Three were eventually approved for implementation in 2002: the Eastern Route, the Central route and the Western Route which basically involve the transfer of waters of the Yangtze river to the Huang He (the Yellow River) in the north. The Great Western Route or the Great Western River Diversion Project (also referred to as the Big Western Line in some literature) is the one which has attracted the greatest controversy both within and outside China and is of concern to India. There are two plans regarding the Western Route; both involve transferring of the waters of the rivers in the south to northern China. It is in the details that they differ. The Government plan is to take waters from the Yalong, the Dadu and Jinsha Rivers, tributaries of the Yangtze River, haul them northwards to flow down the 3000 mile long Yellow River. The Government plan is estimated to cost US\$ 62 billion. There is an alternate plan devised by hydrologist Guo Kai (which has the backing of 16 Chinese generals) which will cost about US\$ 25 billion, use fewer tunnels and, significantly, involves the transfer of waters from the Yarlung Zangbo (tributary of the Brahmaputra) from the Great Bend.

2. National Tradition of Water Diversion - In China, the building of water conservancy infrastructure has long been an important measure for stabilising the country, developing production and extending territory.⁴ In fact, 4000 years ago, a major water conservancy project contributed to the establishment of the first dynasty in Chinese history, the Xia dynasty. Around 2100 B.C, before the dynasty was established in the Yellow River Basin, the area was ravaged by floods. The tribal chief Gun tried for nine years to harness the flood waters but failed. His son, the Great Yu, decided to control the waters not by blocking them but by dredging and diversion of the waters of the Yellow River thereby avoiding floods after 13 years of efforts. Due to his grand success in taming the flood waters he was made the tribal chief and thereafter founded the Xia dynasty, thus indicating the importance of water management as a prerequisite for political leadership. The ancient masterpiece on Chinese geography, the 'Yugong' is said to comprehensively record the legend of water regulation by Great King Yu.

Over centuries many canals and dykes were built in China. Of these, the Grand Canal links up four major north and south water systems of the Yangtze River, the Huaihe River, the Yellow River and the Haihe River, during the Sui dynasty period (6th century A.D), contributing to making the southern Yangtze river basin an economic zone, was the most famous. Inland navigation developed and with increase in commerce, ship-building centres as well as port cities were built along the Grand Canal. Ancient China was well versed in hydraulic engineering techniques. During the Tang dynasty (i.e late 9th century A.D) the "Shuibishi" or the Rules of the Water Department were codified.

3. Water Diversion Projects in Modern China - Since the 1950s there has been talk in China of diverting waters from the south to the water-scarce north. In 1952, Chairman Mao Zedong proposed the idea of diversion of waters of the Yangtze river to the Yellow River to ease water shortages in the cities of Beijing and Tianjin and the northern provinces of Hebei, Henan and Shandong⁵. In 1972, Prof He Zuoxiu of the Chinese Academy of Sciences (CAS) proposed a plan to divert waters of the Yarlung Zangbo and the Yangtze rivers to the Tarim basin in southern Xinjiang through tunnels in the Kunlun and the Altun mountains on the Xinjiang-Qinghai border. He Zuoxiu, a physicist involved in China's nuclear weapons development programme in the 1960s, advocated the use of Peaceful Nuclear Explosions (PNE) technology in boring tunnels through the mountainous terrain.⁶

4. China as Upper Riparian State - The Qinghai-Tibetan plateau in south west China is the home of six of Asia's largest rivers. The Indus (Gar) and the Sutlej drains the southwest, the Yarlung Tsangpo (which later becomes the Brahmaputra after it enters India) drains the southern and southeastern area, the Salween (Nu), Mekong (Lancang) and Yangtze (Jinsha) drain the central and eastern areas, and Yellow (Huang) river drains the northeastern area.

China is unique in that it is an upper riparian in respect of all major rivers (there are some rivers which originate in Mongolia and Russia and flow into China) that flow through its territory and on to that of its neighbours. From this advantageous position, China has consistently invoked the principle of absolute sovereignty, in utter disregard of its neighbours, while formulating its policy on Transboundary Rivers. It may be recalled that during the voting which took place in the UN General Assembly to adopt the 1997 Convention on the Law of Non-navigable uses of International Watercourses, China was one of the three States (others were Turkey and Burundi) which voted against the Convention. China has refused to join the Mekong River Commission (MRC). However, it is an observer state of the MRC.

India and the Indus Waters Treaty of 1960

The Indus River and its tributaries dominates the north western part of the Indian sub-continent. The Indus river rises in Tibet, China near Lake Manasarovar and traverses a distance of 2900 kms through Tibet, India, Pakistan Occupied Kashmir (PoK) and Pakistan before draining into the Arabian Sea, south of Karachi. It is fed by several mighty tributaries: the most important of them are the Beas, Sutlej, Ravi Chenab and Jhelum. These tributaries, along with the Indus main are covered by the Indus Waters Treaty (IWT) of 1960 between India and Pakistan, which is examined below. Western tributaries such as the Swat, Kurram, Gomal, Zoab and Kabul which are not covered by the Indus Waters Treaty are not dealt with in this chapter.

1. The Indus River and its Tributaries - The Indus River's main tributary is the Sutlej, which also originates near Mt Kailash in Tibet, China and thereafter enters India through Himachal Pradesh and flows through Indian Punjab into Pakistan. The Sutlej is the easternmost tributary of the Indus and traverses 1550 kms, first joining with Beas in Punjab and, after entering Pakistan, joins with Chenab and becomes the Panjnad river south of Multan.⁷ At the

merger of Sutlej and Beas in Indian Punjab is the Husseinwala headworks, the closure of which in April 1948 by the Punjab Government triggered the crisis over the Indus waters with Pakistan. Thus, India controls the headwaters of the Sutlej.

2. The legacy of Partition - While most of the Indus river system (except for the Indus and the Sutlej), originated in erstwhile Punjab (later Himachal Pradesh) and Jammu & Kashmir, the British built a complex network of canals in the entire Indus river basin. During partition, the headworks of the canal system located in Ferozepur (on the Sutlej) and Madhopur (on the Ravi) situated in eastern Punjab were awarded to India. Thus, Pakistan realized, to its dismay, that the control levers of the Indus system which was Pakistan's lifeline were held by India. To find a lasting solution to the issue, the two governments entered into a Standstill Agreement on 30 December, 1947 freezing the water turn systems at Ferozepur and Madhopur until 31 March, 1948 and an Arbitral Tribunal (AT) was established to resolve the dispute. However, persisting differences led to an impasse and with both the AT and the Standstill Agreement lapsing in end March, the Government of Indian Punjab ordered the stoppage of waters from the Madhopur headworks on 1 April, 1948. Talks resumed between engineers of West and East Punjab in the middle of April 1948 and two Standstill agreements until October 1948 were signed under which West Punjab agreed to pay seigniorage charges to East Punjab and share the maintenance costs to East Punjab (in its defence, the Government of India cited that such charges had been levied by Punjab on the princely state of Bikaner during the British period. However, West Punjab refused to ratify the agreements. Finally after a meeting at the level of Finance Ministers of India and Pakistan, India agreed to resume release of waters but making it clear that Pakistan could not lay a claim to the waters as a matter of right and that it would have to pay seigniorage charges.

Soon, Pakistan claimed that it had been coerced into signing the Agreements; hostilities between India and Pakistan over Jammu & Kashmir further exacerbated the situation. In November 1949, after Pakistan's suggestion to take the matter to the International Court of Justice in The Hague was rejected by India, Pakistan unilaterally abrogated the Agreement and stopped paying seigniorage charges to India. However, India continued to release the waters.

3. The Indus Waters Treaty - In 1951, David Lilienthal, former Chairman of the Tennessee Valley Authority in US who had also served as a former Chairman of the Atomic Energy Commission of the US, after a visit to India and Pakistan, suggested utilising the offices of a neutral body such as the World Bank to work out a programme to jointly develop and operate the Indus River basin system. The proposal was taken up by Eugene R Black, then World Bank president, who proposed a meeting of engineers to work out a solution which was accepted by both India and Pakistan. Finally after a series of meetings from 1952, the Indus Waters Treaty was concluded and signed on 19 September 1960.

Under the water sharing formula of the treaty the three western rivers, the Jhelum, the Chenab and the Indus were allocated to Pakistan and the three eastern rivers, i.e Ravi, the Beas and the Sutlej were allocated to India. Certain restrictions were placed on India as the upper riparian. Fewer restrictions were placed on Pakistan.⁸ On the rivers allocated to Pakistan, India was not allowed to build storages except to a limited extent under the three categories of general storage, power storage and flood storage. The treaty also provided for the setting up of a development fund for the development of irrigation works in Pakistan for the utilizing the waters allocated to it. There were several international contributors; India itself paid an amount of Pounds 62.06 million in accordance with Article V of the IWT.

While both within India and Pakistan there are any number of critics of the treaty as having been unfair to their respective country, over the years, the international community has hailed the IWT as a

model of water sharing between two adversarial countries. This is because despite having gone to war thrice since the treaty was concluded, India has not even once, even in the face of the gravest provocation, violated the provisions of the treaty and denied Pakistan the waters of the Indus.

As it stands, the IWT has resulted in 80% of the total waters of the Indus river system to be allocated to Pakistan, while India, the upper riparian has been allocated only 20%.⁹ Critics in India point this out as foolish generosity on the part of an upper riparian. On the other hand critics in Pakistan believe that since at the time of Partition the territories which were awarded to India only utilized 10% of the Indus waters the IWT was unduly generous in allocating 20% to India.

Experts like B.G Verghese believe that a new treaty based on cooperative principles should be worked out for the betterment of people in both countries.¹⁰ But others such as Ramaswamy Iyer reject the idea. In Iyer's view the Indus treaty is a "negative, partitioning treaty, a coda to the partitioning of the land" and therefore cannot be built upon. The highly technical nature of the treaty has led to complications over interpretation of its clauses.

Significantly, abrogation of the treaty, rumoured to have been considered in 2002, is ruled out as unwise by most experts. Besides the international outcry it would result in, India would be in a less advantageous position compared to now. While Pakistan would lose its special rights on the western rivers which it now enjoys, it would continue to have rights as a lower riparian state under international law on those rivers; further, its rights on the eastern rivers which now stand overridden by the Indus Waters Treaty would be revived. Thus, with all its defects, *all* agree that there is no alternative to the Indus waters Treaty at present.

Principles of Water Sharing in International Law - According to one definition, an international river is "one either flowing through the territory of more than one states, sometimes referred to as a successive river, or one separating the territories of two states from one another, sometimes referred to as a boundary or contiguous river".¹¹ The concept of a 'drainage basin' gained currency with the framing and adoption of the Helsinki Rules by the International Law Association at Helsinki in 1966¹² which defined the international drainage basin as a "geographical area extending over two or more states determined by the watershed limits of the system of waters including surface and underground waters, flowing into a common terminus". Several doctrines or principles have been used to settle disputes on sharing of international river waters. The main ones are listed below:

1. The Doctrine of Riparian Rights¹³ - The essence of this doctrine, which originates in Roman Law, is recognition of equal rights to the use of water by all owners of and abutting a river as long as there is no interference with the rights of other riparian owners. Each co-riparian has the right to have the water flow pass his lands undiminished in quantity and unimpaired in quality. Although referred to in international law this concept has never been accepted as a basis for settlement of disputes.

2. Prior-appropriation Theory - According to this theory, (developed in the US in the early 20th century to resolve inter-state disputes on water diversion) water in its natural course is the property of the public and cannot be privately owned. The right to use water may be acquired by appropriation and application to beneficial use. Thus, the first user establishes a prior right to the water; beneficial use being the basis and limit of the right to use the said water.

3. Territorial Sovereignty or Harmon Doctrine - Also known as the doctrine of "absolute sovereignty", it originated in the opinion expressed by US Attorney General Harmon in 1896. Harmon asserted that the rights of the US as the upper riparian in the waters of the Rio

Grande river were unlimited by any effect the unbridled exercise of those rights might have on the flow of the river in Mexico, the lower riparian state. Interestingly, while the US invoked this theory in its 1909 treaty with Mexico, it repudiated this theory later when as a lower riparian it negotiated with Canada with respect to the waters of the Columbia River.

4. Natural water Flow Theory - Also referred to as the "territorial integrity theory", under this theory a river is treated as part of the territory of the concerned State and, therefore, every lower riparian is entitled to the natural flow of the river uninterrupted or unhampered by the upper riparian owners because such an interruption by the upper riparian will amount to violation of the territorial sovereignty of the lower riparian State. Egypt invoked this principle against Sudan with regard to the use of the Nile in 1925. The Nile Waters Commission rejected Egypt's claim; however through the agreement of 1929, Great Britain (representing Sudan) conceded to Egypt the right to veto on exclusive utilization of water by Sudan as upper riparian.

5. Equitable Apportionment Theory - Under this theory, every riparian or basin State is entitled to a fair share of the water of the said basin or inter-State river. The theory conceptually embodies the following elements: equitable apportionment implies equality of rights as between the contestant units to use the concerned basin or inter-state waters; equality of rights does not mean the right to equal division of water literally; it means the right of each co-basin or co-riparian State to waters on the basis of various factors including its social and economic needs, consistent with the corresponding rights of other co-basin states; it is concerned with the beneficial use of waters; it would be contrary to the concept to reserve water for future when present users are not satisfied.

6. Community of Interest Theory - This theory treats the entire basin as one economic unit disregarding the political frontiers. Thus respective waters are considered as vested in the community as such. This theory presupposes that under an integrated programme of development of the concerned river the dams or other planned works are to be located at the best suitable place and the benefits resulting therefrom are to be shared by the co-riparian or concerned States. The 1954 Indo-Nepal Treaty on the Kosi project is an example.

7. Equitable Utilisation Theory - This theory has been referred to in the Helsinki rules of 1966 (Articles IV and V). The relevant factors, which determine equitable include: (i) the geography of the basin (ii) hydrology (iii) climate (iv) past utilization of waters including existing utilization (v) socio-economic needs of each basin State (vi) population dependent on the said waters (vii) comparative costs of alternative means of satisfying the economic and social needs of each basin State (viii) avoidance of wastage (ix) practicability of compensation for affected parties (x) degree to which the needs of a basin State may be satisfied without causing substantial injury to a co-basin State. While this term is distinct from the term "equitable apportionment" increasingly the two terms are being used interchangeably.

Although sound, the Helsinki Rules do not have an official standing. In 1970, the UN General Assembly requested the International Law Commission (ILC) to prepare a draft text of an international convention on the non-navigation uses of international water courses. The ILC draft submitted in 1991, after further debate in the Legal Committee of the UN from 1996-97, was adopted by the UN General Assembly by vote in May 1997. 103 countries including Bangladesh and US voted in favour; there were 27 abstentions including France, Egypt and India¹⁴ and three voted against China, Burundi and Turkey. The 1997 UN Convention on the non-navigable Uses of International Water Courses is yet to come into effect¹⁵. Thus, a binding international law on Transboundary Rivers is currently absent.

Utilisation of river water between India and China

1. Transboundary Rivers - While it is generally known that India and China share the waters of the Brahmaputra, what is less known is that even the Indus river system begins in Tibet, China. Between the two river systems are five transboundary rivers which are known by different names in the two countries¹⁶.

As regards the *Indus system*, two rivers i.e the Indus main and the Sutlej rivers originate from the Ngari region of the Tibetan plateau. The *Indus River*, the longest river (3180 kms) of the Indian sub-continent rises close to Lake Manasarovar in Tibet. It is known as the Sengge Zangbo (Tibetan) or the Shiquan he (Chinese) river, which means the lion river. However, other sources believe that the Indus river is the confluence of the Sengge river and the Gar river that drains Kailash mountain range. The *Indus river* enters India through the Ladakh region of Jammu & Kashmir state and flows into Baltistan and Gilgit in the Northern areas just south of the Karakoram range.

The *Sutlej river*, which is the longest tributary of the Indus river system, also originates from around the area of Mt. Kailash/Lake Manasarovar in Tibet, China. It is known in Tibetan as Langgen Zangbo or the Xiangquan He river (in Chinese Xiang means elephant) and regarded as sacred as the Sengge river. The Sutlej enters India through the state of Himachal Pradesh.

The *Parechu* river, which was much in the news a few years ago, is a minor tributary of the Sutlej which originates at the tri-junction of Ladakh, Spiti district of Himachal Pradesh and Tibet and flows into India.

As regards the *Brahmaputra* river system (2,900 kms), the *Yarlung Zangbo* is the best known of the tributaries of the Brahmaputra rising in Tibet, China. It is referred to as the Mother River by Tibetans and is the largest river in Tibet. It originates in the Gyima Yangzong glacier at the northern foot of the eastern Himalayas, 63 kms south of Lake Manasarovar traverses around 1625 kms within Tibet before entering India through the state of Arunachal Pradesh. At an elevation of 4500 metres above sea level it is considered the highest river in the world. Around 1 million or 37% of Tibet's total population live in the area drained by the Yarlung Zangbo and the region is home to Tibet's major cities and towns including Lhasa, Xigaze, Gyangze, Zetang and Bayi.

2. Indus River System - The Indus basin extends over an area of 11,65,500 sq. km and lies in Tibet (China), India, Pakistan and Afghanistan. It is bounded on the north by the Karakoram and Haramosh ranges, on the east by the Himalayas, on the west by the Sulaiman and Kirthar ranges and on the south by the Arabian Sea. The catchment/drainage area in India amounts to 28%, while the amount in Pakistan is 59%. **The combined share of Afghanistan and Tibet, China is 13 %. The drainage area lying in India is 321,289 sq. km. which is nearly 9.8% of the total geographical area of the country.** In India, the basin lies in the States of Jammu and Kashmir, Himachal Pradesh, Punjab, Rajasthan, Haryana and the Union Territory of Chandigarh. The culturable area of the basin is about 9.6 M.ha which is 4.9% of the total culturable area of the country.

3. Chinese Plans for Transboundary Rivers - Let us examine the two river systems and upstream activities in Chinese territory with respect to these rivers. The *Indus river* flows for a very short distance in Indian territory (Ladakh region of Jammu & Kashmir) before entering the Northern Areas occupied by Pakistan. Given the difficult terrain in India, very little survey work has been done on the river; it is exploited only for subsistence irrigation. On the other hand, the Sutlej is one of the largest tributaries of the Indus system and the mainstay of Punjab, Haryana and Rajasthan. Besides irrigation, the Sutlej has several major hydroelectric projects on its waters as already elaborated in the previous chapter. Reportedly, NRSA data

indicate the existence of 13 small to medium dam like structures on the Sutlej¹⁸. A 2006 report also mentioned that a barrage had been built across the Zada gorge on the Sutlej waters in western Tibet to supply electricity to Zada town.

As regards the *Brahmaputra* river system, Chinese plans for the Yarlung Zangbo have two aspects: (1) diversion of waters (around 40 bcm) from the Yarlung Zangbo to the Yellow River and (2) production of 40,000 MW of hydropower at the great bend of the Yarlung Zangbo¹⁹.

While reports in the Indian media on possible diversion of the Brahmaputra waters by China cannot be dismissed as baseless, they are certainly exaggerated in presenting it as an imminent danger. While these reports imply that the proposal has been finalized, other reports emanating from China suggest a lack of consensus within that country on the subject. In the year 2000, the Chinese Academy of Engineering (CAE) published its 'Strategic Study on Sustainable Development of China's Water Resources in the 21st century', wherein questions were raised whether the project was technically feasible and financially viable²⁰. China's Minister of Water Resources Wang Shucheng, who is also a hydraulics engineer, has termed Guo's plan as "impractical and fantastical"²¹. At a meeting of the Communist Party of China (CPC) party meeting Wang Shucheng reportedly stated that solutions to the country's water shortage problem lay in developing a water-sustaining society instead of building water diversion projects. Chinese scientists are also believed to be alarmed at the possibility of endangering the fragile ecosystem of the areas both in Tibet and in the arid north by this revolutionary water transfer project.

4. China's Official Position vs China's Capabilities - At the official level, China has been consistently denying that it intends to divert the waters of the Brahmaputra. In November 2006, the state-run published Minister Wang Shucheng's comments on the Guo Kai plan which he termed as "unnecessary, unfeasible and unscientific". The spokesperson of the Chinese Foreign Ministry also stated clearly that the "Chinese government has no plans to build a dam on the Yarlung Zangbo River to divert water to the Yellow River"²². Since these statements coincided with the visit of President Hu Jintao to India they were obviously made to allay Indian concerns over the project.

While these statements clearly indicate that the proposal has its share of critics within China and that the Chinese will carefully examine all parameters before taking such a decision, it does not rule out the project taking shape sometime in the future²³.

Observers also point out that China's technological capabilities and national determination are stupendous. The recently completed Gormo-Lhasa railway project is one of the most magnificent engineering feats in the world. The Vice General Manager of the China Railway Construction Corporation Hu Zhenyi who was involved in the project has reportedly declared that compared to that undertaking the Great Western Route project was an easy job for the railway engineering corps "which has a great deal of experience in building dams, digging tunnels, protecting local environment and resisting altitude sicknesses".

Furthermore, those who believe that China is likely to go in for such an option point out that the current leadership is best placed to take such a decision. President Hu Jintao has a post-graduate in "water conservancy engineering" from Qinghua University (considered to be China's MIT), has worked for hydroelectric projects and in the Ministry of Water Conservancy and Power. Besides, he was also the Communist Party chief in Tibet and is familiar with the geography of the area. Some reports indicate that he supports the proposal²⁴.

5. Consequences of Possible Chinese Projects - As regards the Indus River system, while there is some conjecture there is paucity of hard data on Chinese activities on the waters within Tibetan territory. Even the yields of the Indus main and Sutlej Rivers at the

point of entry into India are not available. One view is that any diversion on the Sutlej will have downstream effect and may lead to the type of serious inter-state problems which currently bedevil the sharing of the Ravi-Beas waters between Punjab, Haryana and Rajasthan. Major hydroelectric projects are located on the Sutlej. The breach of a landslide dam on the waters of the Parechu River, a minor tributary of the Sutlej in Tibet, had tragic consequences in Himachal Pradesh in the year 2000; a larger diversion would do far greater damage.

However, individual projects such as the proposed Upper Siang projects (11,000 MW) which were to be constructed close to the boundary and which depend upon the waters of the Siang/Yarlung Zangbo may have to be scaled down. Reports already suggest that the Chinese have asked for the shifting of the Upper Siang project to an alternative site 49 KM downstream since the original location may lead to flooding across the border. What must be kept in mind is that the effects of climate change with melting and, thereafter, receding glaciers causing floods and thereafter a drying up of the rivers may have the same effect as physical diversion of waters by China. Thus, there is a serious case for cooperation between India and China.

Conclusion

China is likely to go in for water diversion projects including from the Yarlung Zangbo sometime in the future, although this may not be in the **immediate** future. It certainly has the technological capability to do so. As yet, there is nothing under international law to prohibit China from diverting the waters. Thus, to accuse China of declaring water war on India is to overstate the case²⁵. China's actions are aimed at resolving its own domestic crisis in Northern China due to the water stress there. Nevertheless, action should be taken for building up a case of existing rights in India which could minimize both the extent of diversion by China as well as its impact on our national development. India would benefit from these measures irrespective of whether China undertakes a diversion of Transboundary Rivers which flow into India or not.

References:

- Ling, Li, Tibet Water Plan to Save China, Beijing, 2005.
- Tubiliwicz, Czeslaw, ed., Critical Issues in Contemporary China, Routledge 2006; Chapter 5 Edmonds, Richard Louis, China's Environmental Problems, Routledge, pp 133.
- Ibid, pp 134.
- Zhengyin, Qian, ed., Water Resources Development in China, China Water and Power Press, Beijing, 1994 : Chapter 2: History of Water Conservancy pp 43-93. www.water-technology.net/projects/south_north; accessed on 24 Sep 2016.
- Weiluo, Wang, Water Resources and the Sino-Indian Strategic Partnership, Big Country, Small World: China Rights Forum Issue No.1, 2006.
- Sridhar, Subramanyam, The Indus Water Treaty, Bharat Rakshak, The consortium of Indian military websites: Security Research Review, 2005.
- Iyer, Ramaswamy R., ed, Water - Perspectives, Issues, Concerns, Chapter 19: Conflict Resolution: Three River Treaties, Sage Publications, New Delhi, 2003, pp 220.
- Indus Treaty: A different View; website abstract of paper by Ramaswamy R. Iyer published by the Economic and Political Weekly, 16 July 2005.
- Vergheese, B.G, opinion piece in The Tribune, April 2 2002: Talk of Abrogating Indus Water Treaty.
- Chauhan, B. R., Settlement of International and Inter-State Water Disputes in India - Chapter 3: Sharing of Water Resources: Some Concepts, 1992, N M Tripathi Pvt Ltd, Bombay.
- The International Law Association is a private body but highly respected professionally.
- In international law riparian rights mean the "rights of the owners of lands on the banks of watercourses relating to the water, its use, ownership of soil under the stream, accretions etc".
- India abstained on the vote since it had reservations on several articles including the term "sustainable utilization" and the dispute resolution mechanism.
- Prof Cafilisch, Lucius, Graduate Institute of International Studies, Geneva questions in World Bank technical paper 414 whether, given the difference of opinion, the Convention will ever enter into force.
- There is no published literature which gives an authoritative account of common rivers between India and China. Even official statements are ambiguous and piecemeal. This inference has been put together by the author on the basis of different sources mainly available on the internet.
- Website of the Central Water Commission, Government of India, 2007. The percentage share of the basin has been taken from proceedings of expert group meetings.
- The Tribune, August 20, 2006: Lakes Pose Threat to North India.
- Arpi, Claude, Diverting the Brahmaputra, Declaration of War?, Rediff special, October 23, 2003.
- The Southern Weekend, July 27, 2006 translated by Shao Da for China.org.cn August 8, 2006.
- Ibid.
- Joseph, Anil K, Rediff News, No Plans to Divert the Brahmaputra: China, Beijing, November 22, 2006.
- A senior Chinese official has underlined the ambiguity of China's position by indicating that while the official position is that there is no decision to divert the waters of the Brahmaputra, there is "some scientific work which is going on", thereby indicating the possibility of a diversion at a future date.
- Chellaney, Brahma, China aims for bigger share of South Asia's water lifeline, The Japan Times, June 26, 2007.
- Ibid. Chellaney has stated therein that the project would constitute the declaration of a water war by China against India and Bangladesh.