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Analyzing Resource Control
as a Component of
Comprehensive National
Power with Reference to
India-Pak Relations

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Abstract

India has been subjected to Pakistan sponsored terrorism for over three decades. Despite being economically and militarily stronger and with a credible nuclear deterrent likely to be in place shortly, India has not been effective in deterring Pakistan, especially in the sub-conventional domain. In an increasingly globalised and interdependent world, recourse to a conventional conflict, especially by a responsible country like India, is increasingly becoming a less likely option. Therefore, there is a need to look at non-kinetic, non-conventional options to counter this hybrid threat. Resource control is one such component which can be explored and exploited to enhance the Nations' Comprehensive National Power (CNP). Being upper-riparian to all the rivers in the Indus Basin, India has an opportunity to exercise resource control especially with a highly water deficient Pakistan, if it so deems.

Keywords: Comprehensive National Power, Securitization of water, Resource control, Water stress, India, Pakistan, Indus Waters Treaty 1960

To fight and conquer in all your battles is not supreme excellence; supreme excellence consists in breaking the enemy's resistance without fighting [. . .] Therefore the skillful leader subdues the enemy's troops without any fighting[. . .] With his forces intact he will dispute the mastery of the Empire, and thus, without losing a man, his triumph will be complete.

—Sun Tzu, The Art of War, 500 B.C.E

The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.

—Alvin Toffler, Future Shock, 1970

Introduction

India today is making rapid strides internationally, be its economy, which is amongst the fastest growing in the World, or in diplomacy, where it gets invited to sit on any and every global high table. A peaceful nation of 140 crore plus, a stable democracy, a country feted by the developed world for its consistent efforts to pull its poor out of the morass of poverty and to top it all, a demographic dividend that is likely to last till 2050-55 (Thakur, A., 2019).

However, in spite of all the positives, India is saddled with a maverick, nuclear armed neighbour almost hurtling towards anarchy i.e., Pakistan towards its West, which is bent upon using terrorism as an instrument of state policy, and, an assertive and belligerent China towards North with whom it has long unsettled border issue.

Today, almost all countries, especially stable democracies, would look to avoid any conflicts and settle their disputes peacefully. This has also been articulated by India's Prime Minister Shri Narendra Modi in his recent speeches where he has repeatedly stated that today's era is not an era for war (MEA, India, 2022), and rightfully so. Any conflict, big or small, can extract a very heavy human and economic price that could pull a country back by many decades. The examples of some such countries are Iraq, Saudi Arabia, Syria, Armenia, Azerbaijan, Ukraine, Russia etc.

In this increasingly globalised and interdependent milieu, to be able to stay ahead in the game would require creating leverages to enhance punitive deterrence capability of being able to dissuade or, as a last resort, respond violently to any misadventure by an adversary. The deterrence capability of a country is, in a large measure, dictated by its military heft. However, the epitome of any Nation's grand strategy is to attain its key and vital goals without having to resort to a conflict. This thought has been echoed by all the great military thinkers of yore like Kautilya, Sun Tzu and even Machiavelli. This is why, there is a need to plan and create capabilities other than military, since in the changed global environment, relying mainly on armed forces to secure a Nation's strategic goals is increasingly becoming a difficult aim to achieve.

Analysing Options Available Within the Ambit of Comprehensive National Power (CNP)

India has been spending on an average 2.3 to 2.5 percent of its GDP every year on bolstering its defence, even though there are voices which say that to maintain a 'punitive deterrence' against Pakistan and a 'dissuasive deterrence' posture against China, India needs to raise it up to 3 percent annually. But the fact remains that even today India has one of the highest number of people living below the poverty line and it needs to constantly attain double-digit growth annually to bring them up. The economic health of the country had taken a hit in the aftermath of COVID 19 and it is only now recovering from it. It implies that any increase in military spending would not be an option for the country, at least in the immediate.

Rather than seeking recourse to only military power as a tool to pursue its strategic objectives, the sum total of all the strengths available to a Nation is a much better index of measuring this capability. This is referred to as the Comprehensive National Power (CNP) or

National Power Rankings based on the indices used to calculate the same. However, they all aim towards giving a quantifiable measure of a Nation's CNP. CNP is variously defined as a comprehensive capability to pursue a Nation's strategic objective by taking necessary actions internationally or as the degree of ability to mobilise and utilise strategic resources of a country to realise national objectives. It is also considered as utilising the power of the sum of the whole rather than disparate strengths of separate attributes. Nations which are able to use the sum total of their national strength to achieve strategic objectives would be seen to have used their CNP much better.

A careful comparison of the many indices brings out that to study and analyze CNP as a tool (Singh, Gera & Dewan, 2013), essential factors which need to be considered are:

- (a) Economy.
- (b) Military.
- (c) Internal Security and Social Harmony.
- (d) Human Capital.
- (e) Governance.
- (f) Knowledge and Information.
- (g) Science and Technology.
- (h) Foreign Policy and Diplomacy.
- (i) National Will and Leadership.
- (j) Geography and Natural Resources.

In the overall construct of CNP, geography and natural resources may seem as relatively unimportant attributes but when used intelligently and with long term goals and planning can reap rich dividends.

Resource Control: Water as a Component of CNP

Water is the new oil of the 21st century

—Brahma Chellaney

Securitisation of Water

Water is a very peculiar type of natural resource. Over the years, scientists have been able to discover and invent substitutes for most, if not all of the natural resources, including oil, but water has as yet defied all efforts towards that end. Natural resources are also universally traded like fossil fuels, mineral ores, fish and timber; but it is financially unviable

to import large quantities of water because of the transportation cost involved, though to an extent countries do resort to import of virtual water by resorting to import of items which involves heavy use of water as a raw material e.g., rice etc. Water is denser than oil and that makes it financially unviable to ship or transport across long distances even by pipeline (Chellaney, B., 2013). Water is a sustainer of life but can also cause immense death and destruction when it becomes a carrier of deadly microbes or takes the form of a tsunami, flash flood, storm, or hurricane. Many of the greatest natural disasters of our time — including the Fukushima disaster in 2011 — have been water-induced (Chellaney, B., 2013). This implies that whichever country has control over a transboundary water resource, can use it as a strategic, economic and diplomatic leverage.

The relationship between water and security has become increasingly apparent and pronounced due to multitude of reasons. Worldwide population is increasing exponentially; with increased prosperity, changing food habits, rapid industrialisation and energy production are putting immense pressure on this rapidly dwindling resource. Coupled with climate change and unbridled pollution, the world is faced with a rapid depletion of this life sustaining resource. Another factor that adds to this complexity is that shared water does not respect man-made boundaries and as such the Westphalian concepts of sovereignty and territorial integrity cannot be applied to it.

Water has increasingly been engaging the minds of the governments around the world. The then Secretary of State Hillary Clinton had asked the US National Intelligence Council to prepare an estimate to articulate the impact of water on its national security interests. The report which was released on 22 March, 2012 went on to include water in the definition of Human Security, which it defined as “sufficient access to commodities (food, water) and environments (shelter, healthcare) necessary to sustain human life”. It also states that by 2030 the annual global water requirements will reach 6,900 billion cubic meter (BCM) which will be approximately 40 percent above the current sustainable water supply. The report also states that even though water related state-on-state conflicts may be unlikely over the coming decade, however, as the shortages continue to rise, it will be leveraged as a weapon and may even be employed as a means for furthering a terrorist’s objectives (ICA, 2012).

The impact of fast depleting water resources on communities and economies, and its potential of deteriorating into a conflict situation in the affected parts has been engaging the intelligentsia internationally over the past many decades. In 1985 UN Secretary General Boutros Boutros-Ghali observed that the “next war in the Middle East will be fought over water, not politics.” In 1995, Ismail Serageldin, the first chairperson of the Global Water

Partnership and then Vice President of World Bank warned: “if wars of this century were fought over oil, the wars of the next century will be fought over water — unless we change our approach to managing this precious and vital resource (Otis, G., 2002).” UN Secretary General Kofi Annan warned in an address in 2001, “Fierce competition for fresh water may well become a source of conflict and wars in the future.” In January 2008, addressing the World Economic Forum at Davos, Ban Ki Moon, then UN Secretary General had said: “A shortage of water resources could spell increased conflicts in the future. Population growth will make the problem worse, so will climate change. As the global economy grows so will its thirst. Many more conflicts lie just over the horizon (UNU, 2023). This problem is far more acute in the heavily populated and underdeveloped regions of Africa and Asia, especially South Asia. Water remains a major source of friction in the region over the years despite the best efforts of India, which has been engaging positively with all her co-riparians. The same is borne out by the number of waters sharing treaties and agreements for joint exploitation that have been signed with all the neighbours, be it Pakistan, Nepal, Bhutan or Bangladesh. However, the burgeoning population has meant that these efforts have not been enough. India, though, has a distinct advantage in all the water interactions with its neighbours, being upper riparian to Pakistan and Bangladesh and being the only country, which can help Nepal and Bhutan realise their complete hydro-potential.

Looking at the Indo-Pak strategic interaction over the last three decades and more shows that even though Pakistan is a much smaller and a faltering economy, and the country fares poorly in most, if not all, of the human development indices vis-à-vis India, yet, it has managed to quite successfully wage a hybrid war against the latter. India has been taking many measures, both kinetic and non-kinetic to address the belligerence but has not been able to effectively counter Pakistan. There are many reasons for that and herein lies the need to look beyond the status quo to turn the situation to our advantage. One of the ways would be for India to take recourse to targeting resources which are scarce in Pakistan and the paucity of which could trigger an economic and financial crisis.

This is where the India-Pakistan water entanglement could be used to former's advantage (ICA, 2012). Even though, in the context of Indo-Pak relations, water may not directly trigger a conflict, at least, at the moment, however, the issue of the same being used as a leverage by India does evoke strong sentiments across the border. Be that as it may, securitisation of water in the region needs to be discussed by the strategic community and think tanks and options generated.

One of the ways to look at a non-conventional option is to exploit Pakistan's complete dependence on Himalayan Rivers. It is a highly water stressed country and it needs to be examined as to what can be done to exacerbate this situation, when needed, to our advantage. India being the upper riparian to most of the major rivers flowing into Pakistan can leverage it to create a threat-in-being, if not adversely impact, the heavily canal irrigation based agrarian economy of Pakistan. This is something which needs an in-depth study to ensure our actions do not fall foul of the provisions of Indus Water Treaty (MEA, India, 1960) and accepted International trans-boundary water laws.

In wake of the dastardly attack on the Army Camp at Uri in September 2016, Hon'ble PM Shri Narendra Modi had declared that "blood and water" cannot be allowed to flow together (Bagchi, I and Mohan, V., 2016). Following this public assertion, the Govt had decided to look at diverting the seepage and extra water that has been flowing up till then into Pakistan from the rivers allotted to India under the Indus Water Treaty. A high-level task force was set up under the Principal Secretary to the Prime Minister to ensure that India makes full use of the waters that it is entitled to under the Treaty. Diverting this water for our own use will not only ensure additional water stress for Pakistan, especially in the Central and Southern Pakistan Punjab, but will also bring much larger areas of Punjab, Haryana and Rajasthan under assured irrigation.

Water Resources of Pakistan

Pakistan is one of the world's driest countries, with an average rainfall of 494 mm a year (World Bank, 2020). The country's water resources consist mainly of rainfall, rivers, glaciers and ground water. The population and economy are heavily dependent on an annual inflow into the Indus River system of about 180 km³ of water passing mainly through India which is heavily dependent on glacial melt in the Western Himalayas (World Bank, 2008). Various national and international reports on Pakistan's water situation indicate that the country is fast moving from water-stressed to water-scarce. *Pakistan Strategic Country Environmental Assessment Report, 2006*, says water availability per person has drastically fallen from about 5,000 m³ in 1947 to 1,187 m³ (FAO, 2017). It projects that water availability will hit below 700 m³ per capita by 2025 (World Bank, 2006). The World Bank in its report (2005) observed: "Pakistan is already one of the most water-stressed countries in the world, a situation which is going to degrade into outright water scarcity." In 2007, the Asian Development Bank (ADB) report stated that Pakistan is "nearly at water scarcity threshold of 1,000 m³/person/year" (ADB, 2007). This clearly shows that Pakistan has become a water-scarce country.

As per Shahid Hameed, General Manager (Hydrology and Water Management) Pakistan's Water and Power Development Authority (WAPDA), per capita water availability in Pakistan has come down from 5650 m³ in 1951 to an alarming 908 m³ per annum. As per him, Pakistan can store only 10 percent of its annual river flows against the world average of 40 percent. Ironically, instead of increasing water storage capacity, Pakistan has lost about one-fourth storage of the dams. The live water storage capacity that used to be 16.26-million-acre feet (MAF) in 1976 has reduced to 13.68 MAF, which equals to only 30 days carry over capacity. India has carry-over capacity of 170 days, Egypt 700 days and America 900 days. The carry over water storage capacity has to be increased from 30 days to 120 days for Pakistan to be able to sustain itself (Business Recorder, 2021).

The gap between water supply and demand is widening. In 2004, Pakistan's water shortfall was 13.2 km³ which is expected to go up to 37.2 km³ by 2025. This increasing gap has led to severe water shortage in almost all sectors. Data projecting Pakistan's water needs in the year 2025 tells a sobering story. By that year Pakistan's total water availability will have barely changed from the current availability of 236 km³. Yet its total water demand is projected to be about 338 km³ —suggesting a gap of 100 km³ (Reddy et.al., 2004). In fact, the 100 km³ gap will comprise almost two-thirds of the entire Indus River system's current annual average flow. Currently Pakistan's water requirement in the Indus Water system is 167.45 km³ while availability is 162.7 km³, a gap of 4.75 km³. Some global warming projections have estimated a decrease in the water availability in the Indus River System by a staggering 40 percent by the middle of present century, which if it were to happen, would threaten the very survival of a population already swollen beyond sustainability (Imran, A., 2009). Pakistan's dependence on Indus Basin Irrigation System makes it particularly vulnerable. Unlike other countries with multiple river systems, Pakistan has no alternatives to draw on if Indus supplies fall short. There are also no new water sources that can be mobilised to meet increasing demands.

A comparison table of state of water resources, usage and dependencies of India and Pakistan is as given below. It clearly brings out the extreme water stress and external dependence on water resources that Pakistan has to contend with.

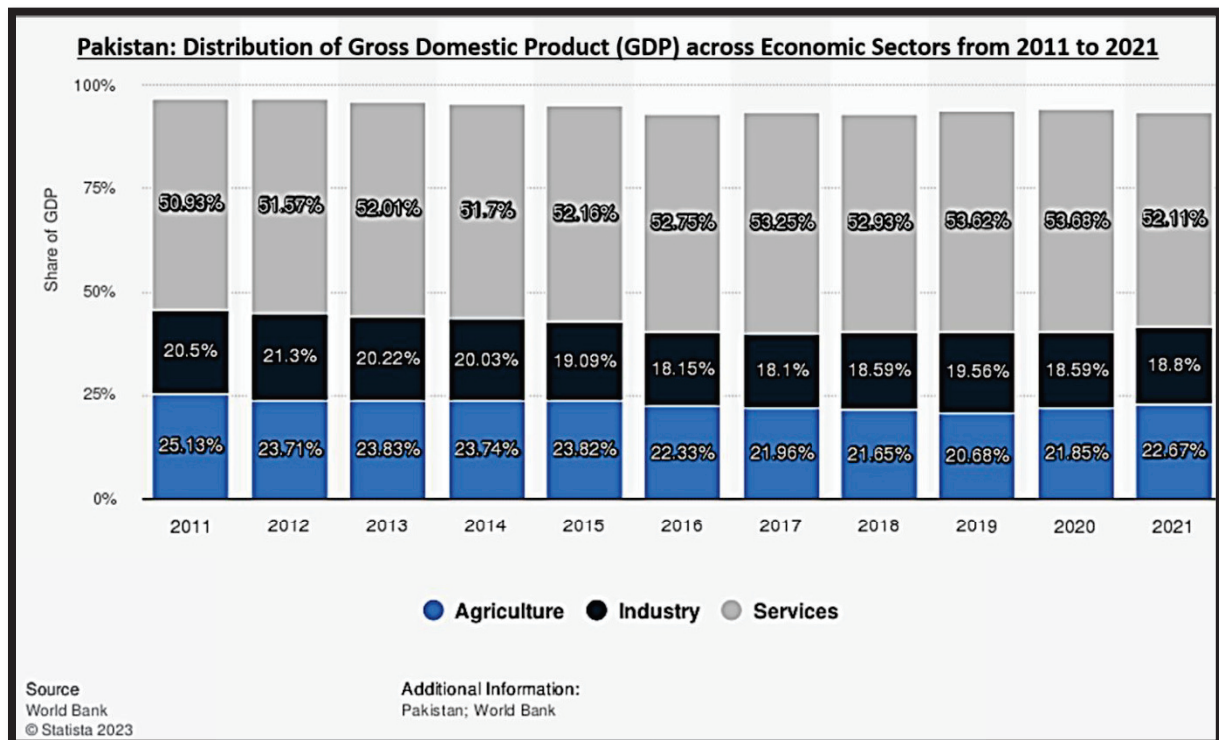
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Parameter	India	Pakistan
Agricultural water withdrawal (10^9 m ³ /year)	6881	172.4
Agricultural water withdrawal as percentage of total water withdrawal (%)	90.41	93.98
Percentage value added to GDP by Agriculture	15.62	22.88
Total internal renewable water resources (IRWR) (10^9 m ³ /yr)	1446	55
Surface water: entering the country (10^9 m ³ /yr)	635.2	265.1
Surface water: leaving the country to other countries (10^9 m ³ /year)	1385	10.72
Total external renewable water resource (10^9 m ³ /yr)	464.9	191.8
Fresh surface water withdrawal (10^9 m ³ /yr)	396.5	138.3
Fresh groundwater withdrawal (10^9 m ³ /yr)	251	61.67
Total freshwater withdrawal (10^9 m ³ /yr)	647.5	200
Water Stress (percentage)	66.49	122.7
Dependency ratio External Waters (percentage)	30.52	77.71

AQUASTAT: FAO's Global Information System on Water and Agriculture

Pak Agricultural Practices and Its Impact on Water Stress

Having statistically taken an overview of the water resources of Pakistan, there is also a need to take a look at the agricultural practices of the nation which have a compounding impact on the water crisis facing it. As per World Bank statistics, agriculture accounts for 22.4 percent of the gross domestic product (GDP) (World Bank, 2022). Also, according to the Labour Force Survey of 2017-18 conducted by Pakistan Bureau of Statistic, thirty-nine percent of the country's labour force is engaged in agriculture. Pak economy is thus heavily dependent on agriculture as it not only supplies most of the country's food, but is also the source of raw material for major domestic industries, particularly cotton products. Cotton and its products contribute about 10 percent to the country's GDP and account for 55 percent of the foreign exchange earnings. Of the total Pak exports of \$ 38.1 Bn (Abbas, G., 2022) in 2022, the textile industry accounted for more than 50 percent at \$ 19.4 Bn (FF, 2022).



The other main agricultural export of Pakistan is rice. In 2019-20 Pakistan produced 7.4m tonnes of rice of which over 4 million tonnes were exported making it the fourth largest exporter of the grain in the world after India, Vietnam and Thailand (Statista, 2023). The country exported 4.166mn tonnes of rice in FY20 which earned \$2.175 Bn (Khan, A., 2021). In addition, it has large tracts of land under cultivation for wheat and sugarcane for consumption of its own population.

For a water stressed country with about 1000 m³ per capita annual availability of water, placing it on the cusp of chronic water shortage, the choice of agricultural produce as in cotton, wheat and rice, three of the top five water guzzling crops, is quite a paradox. On top of that its heavy reliance on export of cotton and textile and rice means it exports 16 percent of its total water as virtual water embedded in crops sent to other countries (Water Footprint Calculator, 2019). As per FAO, AQUASTAT statistics of 2020, Pakistan has a 94 percent agricultural water withdrawal as percentage of total water withdrawals by the country. That leaves very little water for other uses such as industrial, services and domestic. With no fresh water resources available and an exploding population, the pressure on water is only increasing and so is the competition amongst the various users of the limited resource. Incidentally, the world

average for water withdrawal for agriculture is 70 percent and for India also it's a very high 90 percent (Jyoti, A., 2022).

If we take a look at the water statistics, Pakistan has internal renewable water resource of only 55 km³ annually. Surface water entering Pakistan every year, mainly from India and Afghanistan, is about 265 km³. The total fresh water withdrawal by Pakistan is approximately 200 km³ of which about 70 percent is surface and rest is ground water. Seeing these water statistics, the water stress percentage for Pakistan, which is a ratio of total freshwater withdrawal and total renewable fresh water resource plus environmental flows comes to about 123 percent, which is amongst the highest in the World, placing it in critical list (FAO, 2022).

Way Forward

It is amply evident from the above that Pakistan today faces a major water crisis, and by no means is the country doing anything to reign in the slide. The country today is in such an economic doldrum that it is facing a challenge to even feed its population. In such a scenario, to expect it to spend its meagre resources in augmenting its water resources is close to impossible. With India being an Upper Riparian State, water can be used as a strategic tool to impact the already tottering Pakistani economy, especially one of the biggest contributors to its GDP, namely Agriculture and that too in its dominant province of Punjab. This would reap rich dividends, especially in the perception war. It might also create agrarian distress and cause disaffection amongst the most dominant province, both politically and financially.

Despite India and Pakistan having signed a comprehensive World Bank backed Indus Waters Treaty on 19 September 1960, which effectively divided the waters of the Western and Eastern Rivers between the two countries, India still retains lot of leeway in the clauses agreed upon. India as the upper riparian is permitted to partially use the waters of the Western Rivers allocated to Pakistan. There is a need to do an in-depth study of such clauses to see how best those could be exploited by India. In addition, there is also a need to look at exploiting the tenuous hydro-relations coupled with long simmering boundary dispute between Pakistan and Afghanistan as part of this effort. At the beginning of 2023, it was also widely reported in the media that India had issued a notice to Pakistan for starting discussions on modification to the Indus Waters Treaty. The notice was apparently sent on 25 January 2023 through India's Permanent Indus Waters Commissioner. The proposal to initiate the process of looking at the Treaty anew is a step in the right direction for keeping the extremely water stressed Pakistan on its toes (TOI,2023).

India also needs to ensure that the entire quantum of water allocated to it from the Eastern and Western Rivers are utilised and harnessed within India and not allowed to flow into Pakistan unutilised. Approximately 11 km³ of India's share of waters from Eastern rivers flows into Pakistan yearly (FAO, 2011). India has to augment the storage and carrying capacities of its barrages and canals over Eastern rivers so that this water can safely be used for own irrigation purposes. Once impounded, this action alone has the capability of putting immense pressure on the already water stressed Pakistan's irrigation system. India is in the process of impounding about 2.5 km³ of this water by constructing the Shahpurkandi Dam, Ujh Multipurpose Project and the 2nd Ravi Beas Link below Ujh River over River Ravi. Though these projects were long under consideration but inter-state and funding issues had held up progress. Of late these important projects have received due impetus and are now on track for implementation. Similar projects involving widening of canals and enhancement of storage facilities on Sutlej and Beas Rivers also need to be undertaken urgently to even stop the balance of flow into Pakistan. Not only will this make a large quantity of legitimate share of its water available to India but will put added pressure on the already water scarce areas in the Southern parts of Pakistan Punjab which have been utilising this free largesse for more than six decades now.

Besides this, India needs to take urgent steps to make use of all the unutilised provisions of the IWT on the Western rivers. IWT grants India an unfettered right to exploit the hydropower potential of the Western rivers by constructing run of the river projects, subject to conditions. The estimated hydropower potential over these rivers is 16,475 MW and of this only 3,263 MW has been harnessed till now (PTI, 2018). India needs to hasten the process of exploitation of the available hydro-power potential while creatively and technically overcoming the Pakistani objections, which are bound to come thick and fast. Vide Article III, India is allowed certain leeway from Western rivers for domestic and agricultural use (MEA, India, 2010). Annexure C also allows India to use of 1.3 MAF for irrigation. As per experts, this amount of water can irrigate 1.34 million acres while India is utilising only 0.792 million acres worth (MEA, India, 2010) at present. This is again a provision which India needs to tap urgently, especially when large tracts of agricultural land in the Union Territory of Jammu and Kashmir are desperately in need for assured irrigation facility. India is also allowed to construct total storage of 3.6 MAF over the Western Rivers which it is yet to utilise. These projects need to be taken up with renewed urgency (Statista, 2023, pp.227-29).

An increasingly assertive India, has taken a right step in demanding a relook at the IWT 1960. If pursued in right earnest, along with exploitation of all the existing provisions, these

measures can put Pakistan in a bind and create a leverage for India that could be utilised when needed.

Within the context of South Asia, there is also a need for an in-depth study of the water sharing issues which India has with its neighbours especially with China which is an upper riparian and with whom no formal water sharing treaty exists. With China and Pakistan being close allies to the extent of almost being in an alliance against India, there is a possibility of China colluding with Pakistan to create problems for India on all issues including water. Indian policy makers need to work on the counter measures that India may be required to undertake to avoid such a situation being exploited by our Western and Northern neighbours.

Conclusion

In today's scenario, large scale conventional kinetic conflicts are increasingly becoming an option that most countries would try their utmost to avoid. But then the question arises — how to ensure that nations are able to achieve their strategic aims? Using all elements of CNP in tandem can help in achieving strategic goals and resource control from a position of strength can play a pivotal role in this quest. The Indian sub-continent is already water stressed and if the situation continues to deteriorate at this rate, then it will take an alarming turn. Already water is being called the 'new oil' and many thinkers are predicting that the next violent conflicts will be for the control of this most vital resource. Under the circumstances, a well thought out medium to long term policy for exacerbating the water stress within our Western neighbour's boundaries can pay handsome dividends in India's efforts of putting an end to its hybrid war.

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