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Water – India's Burning Problem Vis-à-vis Hydropower – Nepal's Burning Desire

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Abstract

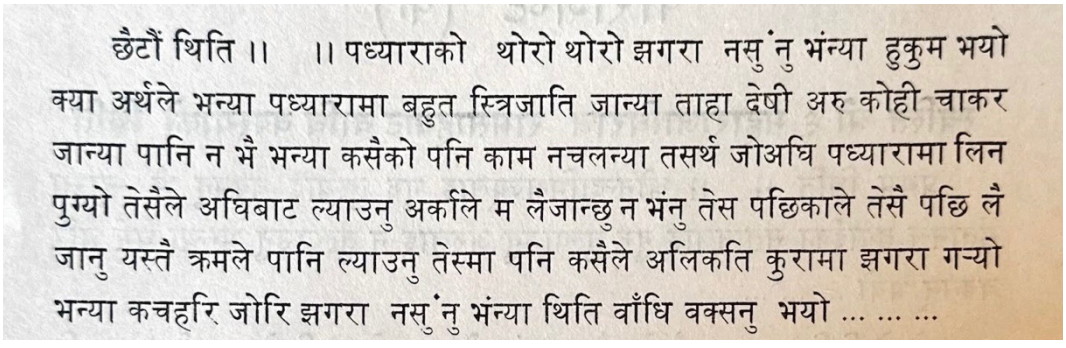
Having been badly stung by the one-sided unequal 1954 Kosi and 1959 Gandak treaties with India, Nepal had the World Bank involved in the development of the Karnali Chisapani Multipurpose Project. At the same time, Nepal also sought multilateral/bilateral assistance in the development of her medium rivers: Kankai, Kamala, Bagmati, West Rapti and Babai. Unfortunately, Nepal had to undergo tough negotations with India on every medium river project. This is because India's greatest burning problem is freshwater – water to drink/ bathe and produce food for 47% of India's gargantuan 1.4 billion people living in the Ganges Basin. A running commentary of the struggles on the Babai Irrigation Project has been related in this article. But for reasons best known to our politicians and bureaucrats, Nepal is ceaselessly beating her war drums to produce 28,500 MW by 2035. Is Nepal barking up the right tree? That is the million-dollar question!

Keywords: water, hydropower, energy security, securitization of Nepal's water resources, unintentional giveaways, rightful inheritance

Introduction

Recognizing the importance of water, the 17th century King Ram Shah (reign 1606 – 1633) of the small and impoverished Gorkha kingdom codified the following (Government of Nepal, 1854) three edicts on water *(thiti):*

On Water to Drink – 6th Tithi:



छैटौं थिति ।। ।। पध्याराको थोरो थोरो झगरा नसुंनु भंन्या हुकुम भयो क्या अर्थले भन्या पध्यारामा बहुत स्त्रिजाति जान्या ताहा देषी अरु कोही चाकर जान्या पानि न भै भन्या कसैको पनि काम नचलन्या तसर्थ जोअघि पध्यारामा लिन पुग्यो तेसैले अघिबाट ल्याउनु अर्कोले म लैजान्छु न भंनु तेस पछिकाले तेसै पछि लै जानु यस्तै क्रमले पानि ल्याउनु तेस्मा पनि कसैले अलिकति कुरामा झगरा गर्‍यो भन्या कचहरि जोरि झगरा नसुंनु भंन्या थिति बाँधि वक्सनु भयो ... ...

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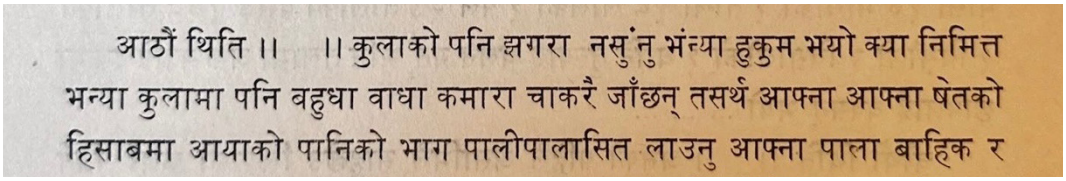
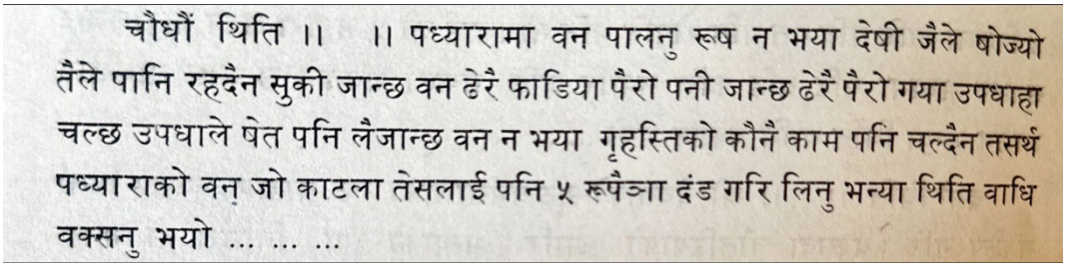
On Water to Produce Food – 8th Tithi:



आठौं थिति ।। ।। कुलाको पनि झगरा नसुंनु भंन्या हुकुम भयो क्या निमित्त भन्या कुलामा पनि वहुधा वाधा कमारा चाकरै जाँछन् तसर्थ आफ्ना आफ्ना षेतको हिसाबमा आयाको पानिको भाग पालीपालासित लाउनु आफ्ना पाला बाहिक र

On Conservation of Water – 14th Tithi:



चौधौं थिति ।। ।। पध्यारामा वन पालनु रूष न भया देषी जैले षोज्यो तैले पानि रहदैन सुकी जान्छ वन ढेरै फाडिया पैरो पनी जान्छ ढेरै पैरो गया उपधाहा चल्छ उपधाले षेत पनि लैजान्छ वन न भया गृहस्तिको कौनै काम पनि चल्दैन तसर्थ पध्याराको वन् जो काटला तेसलाई पनि ५ रूपैञ्या दंड गरि लिनु भन्या थिति वाधि वक्सनु भयो ... ...

Fast forward to 21st century, Professor Kader Asmal, a South African and Chairman of the World Commission on Dams, painted the following global water picture (World Commission on Dams, 2000):

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Consider on this blue planet:

- less than 2.5% of our water is fresh
- less than 33% of freshwater is fluid
- less than 1.7% of fluid water runs in streams
- In China, Mexico and India water tables fall a meter a year
- In a few decades, as we seek a fifth more water for three billion new people, one in three of us may struggle to drink or bathe
- Some see in our scarcity, a harbinger of troubled waters to come
- Thus, they maintain, that when rivers cross borders within or between nations, water scarcity leads to water stress which may lead to water wars

Brahma Chellaney, India's leading Strategic thinker at Centre for Policy Research New Delhi, foresees the impending water-stressed Asia picture as he says, "The battles of yesterday were fought for land. Those of today are over-energy, but the

battles of tomorrow may be over water. Nowhere is that danger greater than in water-stressed Asia" (Chellaney, 2011). Similarly, Peter Gleick, an American scientist at the Pacific Institute for Studies in Development, Environment and Security adds, "As more and more countries with larger populations face water stress and outright water scarcity, conflicts over water could erupt in the coming decades" (Gleick, P. and Cooley, H. 2021).

Water – India's Most Burning Problem

India's politicians/bureaucrats, having delved deeply into the intricacies of the Indus Waters Treaty (Gulhati, 1973) with Pakistan during the 1950s and with Bangladesh over the Farakka Barrage (Abbas, 1982) in the 1970s, are all well-educated about the intrinsic value of the diminishing freshwater in South Asia. During the dry season, 72% of the Ganges flow is dependent on Nepali rivers. The Ganges Basin is inhabited by a burgeoning 47% of India's population of 1.21 billion in 2011 (World Bank, 2012). India, with a population of 1.46 billion in February 2025, has overtaken China as the country with the largest population in the world. Nepal with only 30 million, sandwiched between two giants with over two billion people, faces Herculean challenges.

After the overthrow of the autocratic Rana regime in 1951, Nepal's naive and uneducated politicians/bureaucrats had to grapple with India over the one-sided unequal Kosi (1954) and Gandak (1959) agreements. In the 1970s and 1980s, Nepal had to face grueling struggles with India while attempting to develop multipurpose projects with the assistance of multilateral/bilateral donors on all five medium rivers: Kankai, Kamala, Bagmati, West Rapti and Babai. The 1990 regime change from *Panchayat* to multiparty democracy and the ratification of the 1996 Mahakali Treaty were hailed by Nepali politicians with the 6,480 MW Pancheshwar Multipurpose Project making Nepal's sunrise possible from the west and billions tinkering annually into Nepal's coffer. Twenty-nine years later, Nepal's sun continues to rise from the east and not a paisa has tinkered into Nepal's depleting coffer.

Babai Irrigation Project

As part of one such Herculean challenge, an attempt is made below to give the ball-by-ball commentary (World Bank, n.d.) on the 1980s tough battle Nepal faced with India on the World Bank-assisted Babai Irrigation Project.

Originating in the hills of Salyan/Dang, the Babai River travels from east to west for about 60 km, then flows southward for about 40 km through Nepal's rich agricultural

Bardiya Terai. Babai enters India where it is called the Sarju River and joins the Ghagara (Karnali) which then discharges into the Ganges River. The feasibility study of the Babai Irrigation Project, financed by UNDP with the World Bank acting as the Executing Agency, was completed by Tahal Consulting Engineers in November 1978. In response to Nepal's request for assistance in implementing the Babai Irrigation Project in Bardiya, the World Bank approved Credit 1093-NEP to carry out detailed engineering studies of that project. This entailed the construction of a diversion concrete weir with associated irrigation canal and drainage systems to irrigate about 13,300 ha on the left bank of the Babai River. Already an area of about 8,000 ha was being irrigated on this left bank through temporary farmer-built diversion (World Bank, 1980). No Indo-Nepali agreement exists on the use of the waters of the Babai River. In fact, by 1981 only two Indo-Nepali agreements on the Kosi (1954) and Gandak (1959) Rivers existed. Except for the Indo-Nepali Mahakali agreement that came later in 1996, there are no other agreements either on the major Karnali River or the other five medium rivers – Kankai, Kamala, Bagmati, West Rapti and Babai (World Bank, 2012).

On 6 November 1980, a month before Nepal's Babai Irrigation Project negotiations, India, through its Executive Director at the World Bank, raised concerns that the project would adversely affect, during the dry season, the two irrigation projects of Uttar Pradesh – Sarju Pumped Canal and Sarju Nahar Pariyojana. The Bank informed that the rights of the downstream users would be protected while designing the project. India raised no objection at the Bank's Board meeting that approved the Credit 1093-NEP dated 26 March 1981. The Bank's Project Brief dated 17 January 1983 clearly stated that the Babai Project "would not have a significant adverse effect" on the water flows of the Sarju River in India. In February 1983, before the Appraisal Mission, India's Executive Director at the Bank again raised concerns arguing that the Appraisal Mission consider building a reservoir on the Babai River for providing irrigation waters to both riparians (The World Bank, 1983). The Executive Director made reference to prior discussions between Nepal and India for constructing such a reservoir. In March 1983, the Appraisal Mission after visiting the area was of the opinion that the project "even without the reservoir would not adversely affect the downstream users" in Uttar Pradesh (Pun, 2024).

This view was repeatedly communicated during the following year to the Executive Director who continued to register India's objection to the Project. In April 1984, the Bank suggested to Nepal that in order to process the project, efforts should be made to reach an agreement with India on the use of the Babai waters. Nepal was not

keen on this course of action but agreed that the Bank provide India with technical information about the project to solve the impasse. Consequently, a summary of the Staff Appraisal Report was provided to India in September 1984, technical discussions were held in New Delhi between Bank staff and Indian officials in February 1985 and additional information requested by India on the Babai water flows was provided in July 1985 (Pun, 2024).

On 29 October 1985, the Bank, in accordance with its provisions of Operation Manual Statement 2.32, informed India through its Executive Director that despite India's concerns, the Bank intended to proceed with processing the Babai Irrigation Project and gave India six months (up to 28 April 1986) to register final comments on the Project. On 25 April 1986 (just three days before the expiry date), India informed the Bank that, based on the information it had been provided, it appeared that the "Babai Project would be harmful to its interests and once more recorded its objection." In June 1986, the Bank informed Nepal about India's objection to the project and the Bank's decision to postpone further its processing based on Nepal's serious budgetary constraints and the ongoing dialogue on Structural Adjustment Credit (World Bank, 2012).

Thus, the tragic six years' Indo-Nepali tough battle over the Babai Irrigation Project ended. If implemented, the project would have uplifted the quality of life of the marginalized indigenous Tharu people living in Bardiya. India keeps an extremely close watch on Nepal's water resources development to protect her diminishing water in the Ganges Basin – harping again and again on her "existing, committed and planned water uses." Experts say India's gargantuan population increases her vulnerability to water shortage and scarcity. Furthermore, India's exponentially growing middle class is raising unprecedented demands for clean, safe water. Climate change and temperamental monsoons aggravate this water scarcity. In 2016, nearly half of India's 640 districts faced acute drinking water shortage forcing the government to operate special trains just to carry drinking water to the affected places.

Suresh Prabhu, India's former Chairman of the Interlinking of Rivers Task Force and former Union Minister, lucidly and transparently identified India's most burning problem, "Overall, India's economic as well as human development index (HDI) all depend upon the country's ability to address this most burning problem, water. India desperately needs expansion of irrigation to rain-fed agricultural lands (currently 68 percent) to reduce dependence on the vagaries of the monsoon. To meet monsoon-proof India's water requirement, the need for more storage has to

be urgently addressed" (Prabhu, 2008). Salman Haider, India's former Foreign Secretary also admitted, "Mahakali is a multi-purpose project. India has alternative sources of power supply. We do not have alternative sources of water supply. The long-term interest of India in water from Mahakali outweighs our interest in power supply" (Haider, 2004).

Hydropower – Nepal's Acute Burning Desire

"To meet monsoon-proof India's water requirement, (with) more storage", Nepal has unwittingly come up with the "Decade (2016–2026) of Hydropower Development" with 1,200 MW Budhigandaki, 625 MW Dudhkoshi, 417 MW Nalgadh, 280 MW Naumure Projects on the cards plus conducting the Feasibility Study of 10,800 MW Karnali Chisapani Hydropower Project (Nepal Government, 2015). At the Third Nepal Investment Summit in Kathmandu inaugurated by the then Prime Minister Pushpa Kamal Dahal on 28 April 2024, Nepal called on foreign investors to invest in her energy development roadmap of generating 28,500 MW in 12 years: consuming 13,500 MW by herself and exporting 10,000 MW to India and 5,000 MW to Bangladesh. At the Investment Summit, Nepal revealed: a) its installed hydropower capacity as 2,910 MW of which 2,214 MW in the private sector b) 131 hydropower projects of 3,397 MW capacity under construction c) 138 hydropower projects of 3,615 MW capacity under financial closure negotiations and d) another 258 projects with 19,623 MW capacity licensed and at various stages. Thus 16,635 MW of projects are under construction, financial closure negotiations and licensed. By 2040, the government is planning to produce 51,330 MW of hydropower (Government of Nepal, 2024).

Odd Hoftun, a Norwegian, in an interview (Nepali Times, 2007) made the following introspection of his over 40 years of work experience in Nepal's hydropower – "Nepal's vast water resource is both a blessing and a curse. Indian market as a potential source for Nepal's water resources development is tremendous. That does not mean Nepal should rush into big projects. Big projects should and must be undertaken but that is only possible through export to India. For something like that to work, there has to be fair agreements and a very high level of trust between the two countries."

India, in its "2016 Guidelines on Cross Border Trade of Electricity" issued on 5 December 2016, cited electricity trade to be 'issues of Strategic, National and Economic Importance'. Does the "very high level of trust between the two countries" referred to by Odd Hoftun exist between India and Nepal? The following

would depict the picture of that level of trust:

On Pancheshwar DPR finalization, three Prime Ministers of Nepal and one of India had given the following assurances:

"...finalize the DPR of Pancheshwar Development Project and begin implementation of the Project within one year." in August 2014 – Sushil Koirala and Narendra Modi.

"... noting the positive and productive discussion on the Pancheshwar Multipurpose Project, directed the concerned officials to finalize its Detailed Project Report within a month." in August 2017 – Sher Bahadur Deuba and Narendra Modi.

"Sabka Sath, Sabka Vikas'"– Narendra Modi and "Samriddha Nepal, Sukhi Nepali" – KP Sharma Oli in April 2018 – nothing on Pancheshwar DPR!.

" …. expedite the bilateral discussions towards early finalization of the Detailed Project Report (DPR) of the PMP within a period of three months." in June 2023 – Pushpa Kamal Dahal 'Prachanda' and Narendra Modi.

The then Prime Minister Sher Bahadur Deuba and Indian Prime Minister Narendra Modi signed the Indo-Nepali 2022 Joint Vision on Power Sector Cooperation on 2 April 2022 at New Delhi's Hyderabad House hailing it as the "cornerstone of Indo-Nepali energy partnership." The joint vision was specifically focused on Power Sector Cooperation and not Water Resources Cooperation. This Power Sector Cooperation was duly followed up on 4 January 2024 when the Long-Term Power Trade Agreement of 10,000 MW was signed with India (Narendra Modi, 2022). The agreement stated, "Both parties shall strive to increase the quantum of export of power from Nepal to India to ten thousand megawatts (10,000 MW) within a timeframe of ten years." India skillfully not only enshrined "shall strive" in the agreement but also ensured to include her controversial procedure, "In implementing this agreement, both parties shall abide by their applicable laws, regulations and procedures related to cross border trade in power." Under this Procedure, India would categorically not buy electricity from power plants that have Chinese investments (Central Electricity Authority, 2021).

In fact, even in the case of the entirely Nepal-invested-built 456 MW Upper Tamakoshi, India still refuses to buy electricity from that plant because the contractors happen to be Chinese. It may be interesting to note that the bilateral trade between India and China in FY 2023 stood at USD 113.83 billion against USD 115.83 billion in FY 2022 (Ministry of External Affairs, 2023). So, while India herself carries out roaring trade with China, she ensures China, a major investor in Nepal's hydropower development, does not get access to her market.

Nepal's politicians and bureaucrats, for reasons best known to them, prefer to remain either oblivious or ignorant of India's most burning problem – water. Bhim Subba, a Bhutanese of Nepali origin and the first electrical engineer of the country who later landed up in Nepal as a refugee points out, "71 percent of the river's flow during the critical dry season comes from Nepali tributaries. The success of an Indian water strategy to meet the growing water demand in Uttar Pradesh and Bihar, the country's most populous states, hinges on Nepal. It has been trying to sell electricity while it is water that India needs. India should concede that regulating the Ganga waters is her primary concern. Nepal must redirect its efforts from trying to sell electricity to fulfilling this need for regulated water. Most importantly, stored water has monetary value" (Subba, 2002).

The fundamental flaws pointed out in 2002 by Bhim Subba should have become the *Gayatri Mantra* of the then Water Resources Ministry that now wears the mantle of Energy, Water Resources and Irrigation Ministry. Our politicians and mandarins at Singha Durbar are totally mesmerized and enchanted by Megawatts of Hydropower (Thapa, 2024). They are either completely oblivious or ignorant of water-stressed India's most burning problem. Bishal Thapa, a writer in the energy sector, believes "our leadership has no time for initiatives outside of electricity. They are blinded by and too busy counting the MWs contracted with India. Nepal has 40,000 MW of hydropower potential. Most Nepalis will benefit none from it." Hydropower does not generate job opportunities unless the power is utilized by industries within the country itself.

Take the case of hydropower exporting Bhutan with a per capita income of USD 3,266 making it the richest country in South Asia. But Nepal with a paltry per capita income of USD 1,337 is the poorest in South Asia (World Bank, 2024). Despite enjoying Gross National Happiness (GNP) by being the richest South Asian country by exporting hydropower to India (Observer Research Foundation, 2023), 'Of late, Bhutan is witnessing a new challenge – a massive exodus in search of better opportunities. A shortage of manpower is being felt in every sector for a country with a population of less than 800,000." This recent 2023 report by India's Observer Research Foundation is something for our politicians and mandarins at Singha Durbar to chew upon. The export of hydropower to India will undoubtedly generate huge job opportunities for Indians because it already has massive industrial bases that require cheap renewable hydro-energy. But for the over 5 million Nepali youth, they are forced to go abroad in search of three D's jobs with some even for the Russia-Ukraine fodder.

Conclusion

With the enthused government beating the 28,500 MW war drums by 2035, is our government barking up the right tree? There were a few articles in the media advising the government and multilaterals to stay out of financing large hydropower plants and instead focus on health, education and social infrastructures (Thapa, 2023). C. K. Lal (2023), a veteran political commentator, finds the Nepal Government's pursuit of hydropower and remittance "the perilous path to quick-fire prosperity." On hydropower development, Lal believes "Beyond ensuring energy security for the country, further investment in hydro-electricity is best avoided and institutional capacity should be developed to handle geo-economic rivalry that invariably comes into play. Exporting electricity to Bangladesh is a goal worth pursuing." Undoubtedly, the pursuit of hydropower "beyond ensuring energy security for the country" is indeed the perilous path to quick-fire prosperity! On "developing institutional capacity to handle geo-economic rivalry," Lal has hit the right nail on the head. Though he believes "exporting electricity to Bangladesh is a goal worth pursuing," the present unfolding geopolitics in Bangladesh after the fleeing of Prime Minister Sheikh Hasina to India will no doubt indicate if that goal is now worth pursuing (Lal, 2023).

"Ensuring energy security for the country" is very important. Far more important is ensuring the securitization of Nepal's vast water resources. Our politicians and mandarins at Singha Durbar fail to comprehend our vast water resource as a strategic asset. When it comes to national interest such assets should be used as strategic tools – on a *quid pro quo* basis in cases like trade and transit blockades and other critical bilateral issues perturbing Nepal. The government's pursuit of hydropower for "quick-fire prosperity" is laden with grave dangers. This danger has been very well explained by American Paul Terell, a former employee of the US firm Overseas Bechtel Incorporated, who was hired as an adviser to the then His Majesty's Government during the mid-1980s when the Himalayan Power Consultant was preparing the feasibility report of the Karnali Chisapani Multipurpose Project. He advised, "Nepal should beware of unintentional "giveaways" in hydro development, and not rush to compromise the optimum development for the sake of a quick deal with the buyer. A less-than-optimum power dam on the Karnali River could preclude optimum development for all time. The present institutions should be wary of giving away Nepali children's rightful inheritance" (Pun, 2024).

It is very much hoped our politicians and mandarins at Singha Durbar will take as *Gayatri Mantra* Paul Terell's sincere but grave advice: "….beware of unintentional

"giveaways" in hydro development….be wary of giving away Nepali children's rightful inheritance!"

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