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Research Paper

Vulnerability of Resistance: Anthropogenic Decimation of the Tibetan Plateau & Complexities of Emerging Hydro-Political Conflicts at the Third Pole of World

Anshuman Ankit
PhD Research Scholar (SRF)
Department of Public Administration
Magadh University, Bodhgaya (824234), Gaya, Bihar, India

ABSTRACT: *The Tibetan Plateau is located at the juncture of South, Central, and East Asia, bordered by the permafrost Hindu Kush-Karakoram-Himalayan system (HKKH) feeds about 1/5th of the global population has been facing ecological degradation more than double the global average. The "Third Pole of the World" has the third largest area of frozen water on the planet, while longitudinal scientific researches assert synchronous disasters of Megafloods and prolonged drought and desertification. The intertwined growing mistrust and broadening arc of resistance among nations could destabilize the region. Are we heading towards the dynamics of "water wars" in South & Southeast Asia? However, socio-political consciousness claims that Inter-boundary politics in the South-Asian region needs to modify its approach from domination to cooperation, combining the interplay of interdependence and 'preservation. The present study underlines the complexities involved in climate diplomacy in the power dynamics of environmental governance of the Third Pole. Further, it makes an assessment of transboundary water conflicts, creating new power disparities in the region, validating more cross-border coordination and support.*

This research, through a qualitative and conceptual methodology, synthesizes existing scientific, geopolitical, and policy-oriented literature and clarifies that a common conclusion emerges across these studies—the crisis associated with the Third Pole is primarily a result of governance failure The study is based on a qualitative and conceptual research analysis by systematic analysis of scholarly literature using secondary data sources including research articles, policy reports, and institutional publications related to climate science, political ecology, geopolitics, and international water governance.

The vulnerability of the Third Pole is not only natural, but is also being exacerbated by anthropogenic power politics, particularly China-centric infrastructural expansion and weak global governance. The literature acknowledges this exploitation, but there is a serious lack of a coordinated global response and a robust climate diplomacy framework.

The study concludes that if the instability of the Third Pole is viewed solely through the lens of bilateral politics or regional power dynamics, the consequences could manifest as long-term water insecurity, socio-economic tensions, and potential geopolitical conflicts in South and Southeast Asia. Therefore, this research establishes the Third Pole as an emerging issue of global water governance and climate diplomacy, and underscores the imperative of translating the warnings issued by scholars into coordinated, multilateral, and governance-level policy actions without delay.

KEYWORDS: *Third Pole, Tibetan Plateau, China, water, Conflicts, India, Governance*

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I. INTRODUCTION

Tibet, variously known as "Shangri-La" or "Paradise on earth", (Geologists and environmentalists often refer Tibetan plateau as the "roof of the world" Third Pole of the World' or the 'Water Tower of Asia' world's highest and most extensive alpine territory, and because it has the most freshwater snow and ice after the North and South poles) a vast plateau between India and China, 13,000 feet above sea level, with 2.5 million sq. km of area, surrounded by the Himalayan, Kantun and Karakoram ranges. Due to its more than 46,000 mountain

glaciers as the source of 10 major rivers of Asia and permafrost snowfields spread over an area of 2,500,000 km2 (970,000 sq. mi) with an average elevation of over 4,500 meters (14,764 feet) includes Mount Everest and K2, making it the world's highest and largest plateau. Tibetan plateau consists of three provinces: U-Tsang (Central Tibet), Amdo (northeast Tibet) and Kham (southeast Tibet). Endowed with immense natural resources and home to four global biodiversity hotspots, it has been the planet's most sensitive habitat zone and forms a global ecological buffer.

In 1951, Chinese delegation concluded an ambiguous and imperious "17- Point Agreement," with the self-proclaimed Tibetan delegates, under extreme duress, for the "Peaceful Liberation of Tibet." In no legal terms it was binding on the Dalai Lama or the legitimate Gaden Phodrang (Lhasa government). The terms of agreement assured of no enforced Communism, ensured religious and cultural autonomy to Tibet and His Holiness the XIVth Dalai Lama as head of the state. Resistance to the Chinese occupation (an act of aggression on a sovereign state and a violation of international law) started to take on organised forms as early as 1952, reached massive proportions in 1959. In a military invasion in the wake of the National Uprising of 10 March 1959 in Lhasa, 10,000 to 15,000 Tibetans were killed within three days. According to a secret 1960 PLA Tibet Military District Political Department report, between March 1959 and October 1960, 87,000 Tibetans were killed in Central Tibet alone. However, the brutal annexation of Tibet in the 1950s and the flight of more than one hundred thousand Tibetans led by HH the XIV Dalai Lama to India gave autocratic power to the Chinese government for the imbecilic industrialisation & urbanization, deforestation, aggressive mining & extraction of minerals deposits and proliferation of hydropower stations. This systematic exploitation of Tibet's pristine ecology has aggravated traditional living conditions, and geologically fragile ecology leading to socio-environmental destruction as experts predict warming up to 5ºC and loss of 2/3rd of its glacier by the end of the century leading to climate catastrophe in Asia. China's determination to dominate and exploit Tibet has gone too far, since it has undertaken a number of projects that have had a major impact not only on the fragile ecosystem of the Tibetan plateau, but have also put Asia as a whole at risk of environmental disaster. Experts asserts that China must cease its continued practice of reckless exploitation of Tibetan rivers, minerals, forests, and other natural resources, and the world must fight China in order to preserve the rest of Asia from climate catastrophe.

II. RESEARCH METHODOLOGY

The research methodology primarily relies on literature synthesis and thematic analysis, through which the perspectives presented by various scholars were organized within a shared analytical framework. This process identified how different studies point to China-centric hydrological interventions, the vulnerability of downstream countries, and the emerging risks of water conflict. Furthermore, the study adopts a conceptual framework that clarifies the interrelationships between anthropogenic interventions, ecological consequences, power imbalances, and governance failures. This methodology provides the research with analytical depth and a policy-oriented perspective, even in the absence of empirical data. Thus, this study reorganizes existing knowledge to present a comprehensive and coherent argument that contributes to understanding the water and governance crises associated with the Third Pole region.

III. RESULTS & DISCUSSION

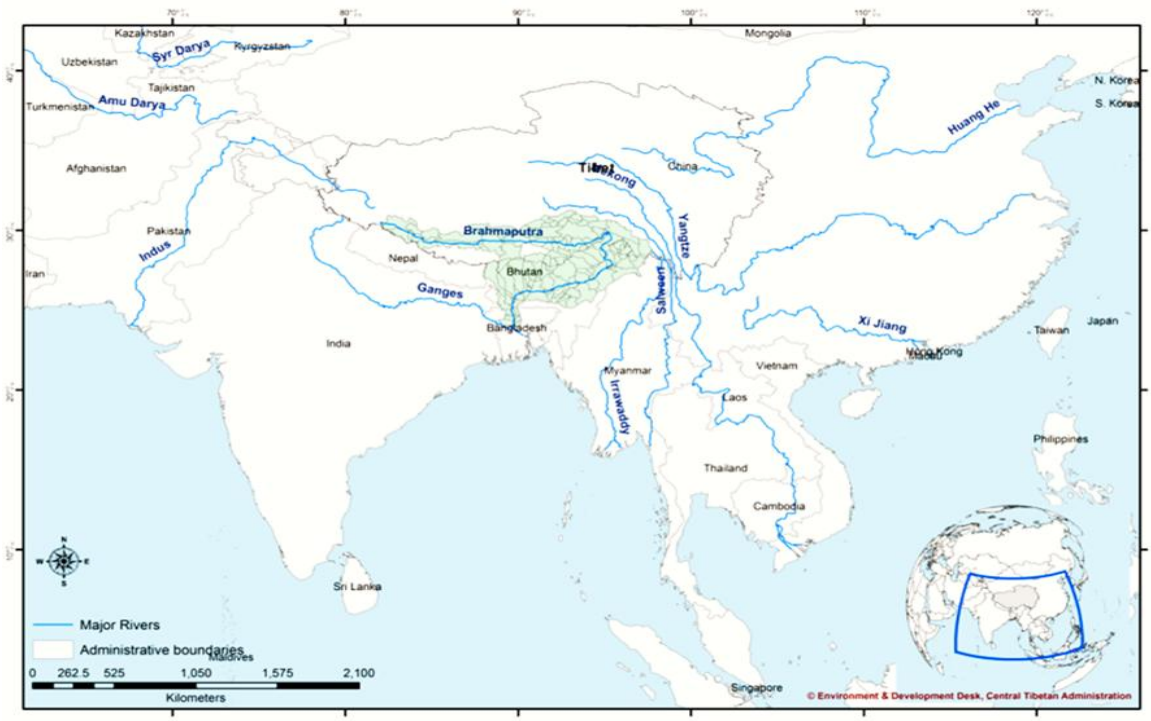
3.1 Governance Fragmentation

China's desperation to dominate and exploit Tibet has gone too far as it has been carrying out multiple projects which have seriously impacted not only the Tibetan plateau's fragile ecology but have also severely exposed the whole of Asia to imminent environmental disaster. Authors asserts China must stop its ongoing process of mindless exploitation of Tibetan rivers, minerals, jungles and other natural resources and the world must confront China to save the rest of Asia from imminent ecological collapse. Experts emphasises that, while man-made conditions have had an influence on the entire world's ecosystem, China's activities in Tibet and exploitation of its natural resources have taken on new significance. Tibet has become a climate change hotspot, with temperatures rising at double the global average. The inhabitants of over a dozen nations rely on Tibet, the source of Asia's eight main rivers, for their water supply. These waterways directly affect the lives of 1.9 billion people and, indirectly, approximately 4 billion people, or half of the world's population. He stated that in addition to its rivers and snow, a significant portion of Tibet is made up of permafrost, which has grasslands on top but contains enormous volumes of frozen water in its bottom levels. The rapid rise in surface temperature in many sections of Tibet has caused subterranean ice to melt, resulting in land sinking and major landslides during the last several years. This will eventually lead to the demise of grasslands on the top and the desertification of a large portion of Tibet. For example, the Gormo-Lhasa trains, a costly and huge showcase project of China in Tibet, are built on permafrost for a significant portion of their length.

Accordingly rising temperatures in Tibetan plateau will soon cause major damage to this railway route, and this project may become infeasible in a few years. However it is visible in the already ongoing environmental destruction in China, other Asian nations, and the rest of the globe, which has had an influence on Tibetan ecology. China is a major source of greenhouse gas emissions. However, reckless and aggressive mining, deforestation, and urbanisation in Tibet are worsening the already vulnerable plateau, with an area roughly comparable to Western Europe, has major ramifications for all of Asia and, to a large degree, the entire globe due to its delicate ecosystem. As a result, it will be fatal for international governments to allow China to continue its irresponsible exploitation of Tibet without resistance.

The "Water Tower of Asia," as it is called, is home to about thousands of glaciers that gradually release fresh water to roughly a dozen Asian nations throughout the year. Thousands of small and large dams have been built on these rivers by the Chinese government in an irrational endeavour to take much of this water for its own use. Thus, it is affecting the natural water flow to all riparian nations, including Bangladesh, Nepal, Myanmar, Thailand, Cambodia, Laos, and India. Furthermore, China is trying to pump out and steal the water from these rivers which truly belong to the downstream riparian countries by using enormous hydroelectric plants/ hydel projects on these dams. The fragility of the region is evident in the severe massive landslides that occurred in in 2017 and 2018, with (estimated volume 100 Million Tons) happened possibly as a result of a seismic event, leading to fall of rock and ice mass (some call it hanging glacier collapse, same difference of opinion as was the case for Chamoli disaster on Feb 7, 2021), from a height of 6600 m to 2700 m or fall of about 3900 m, the landslide temporarily blocked the flow of Yarlung Tsangpo (known as the "Brahmaputra" in India).

Vijay Kranti (Journalist and Tibetologist) alluded to China's plan to attack India with a "water bomb" made of Tibetan rivers. He cited three instances from 2000 and 2005 in which China permitted water bodies to build up to unsafe levels in Tibet across the border in Arunachal Pradesh and Himachal Pradesh due to landslides in the Tsangpo River. Then, at its own discretion, it detonated the banks on the Indian side. Roads, electrical systems, and other infrastructure in these two states were severely damaged by the floods. India repeatedly asked China to provide information about water accumulation and release, but China refused. Prof. Aayushi Ketkar vindicates while President Xi Jinping pretends to be serious about Tibet's environment, but he lacked the guts to answer concerns from the international community, which is why he did not attend the COP-26 world meeting.



DRAINAGE BASIN OF MAJOR RIVERS ORIGINATING FROM TIBET

3.2 Perspectives over Anthropogenic Activities

Supported by funding from the Chinese government, the spread of mining and extraction operations throughout Tibet is endangering both the environment and the populace. Almost no industry existed in Tibet prior to the

Chinese takeover. Millions of Tibetan nomads have now been forced to relocate from their ancestral grasslands to urban areas due to Chinese industrialisation and resource exploitation, rendering their land available for resource extraction and putting an end to the traditional farming methods that have preserved and nourished the Tibetan environment for centuries. The Tibetan Plateau is quickly becoming a profit centre due to mining, which is consuming enormous amounts of money for infrastructure development. This is due to the 80 million tonnes of extractable copper and the 2000 tonnes of gold that Chinese geological teams have confirmed to exist. Tibet is hardly comparable to Chile, the world's largest producer of copper, but China's new mines will be in operation for decades thanks to state investments in the roads, railroads, communications, hydro dams, pipelines, and urban infrastructure required for lucrative extraction enclaves that will eventually overtake the traditional extensive methods.

China has recently funded the infrastructure necessary to significantly increase its level of extraction in Tibet. When the Qinghai-Tibet railway was built in 2006, it connected Tibet to central and eventually eastern China, enabling the eastward movement of its resources at a scale and speeds never before achievable. Road and power plant networks have expanded throughout Tibet in the meantime. Nearly 100 mining sites were dispersed throughout Tibet by 2016, a mere ten years following the railway's construction. Additionally, the Chinese government has been able to send a significant number of Han Chinese labourers into Tibet thanks to the new infrastructure, highlighting the fact that resource extraction in Tibet is not the only goal but also the creation of "facts on the ground" so that self-determination emerges extremely difficult. Although the Chinese government is quick to assert that its presence in Tibet has led to greater development and prosperity, the following case show that China takes far more from Tibet than it gives, and that it causes social and environmental harm as it ships Tibetan resources to Chinese manufacturers.

Geologically Tibet is a young and rising land. Since the rock is frequently loose, it is susceptible to landslides and earthquakes that could obstruct rivers before suddenly erupting. The arsenic that contaminates a large portion of Bangladeshi well water is part of the rock that is found at the surface of the ground in Tibet. Mining, which creates massive waste dumps along major rivers, must be able to prevent tailings waste dams from permanently leaking into the river below since Tibetan rivers inherently contain toxic heavy metals. After mining has depleted the mineral deposits, Tibetans have seen egregious abuses of environmental standards, so there is little reason to think the new miners will protect their waste for decades or even centuries. Indians may think of the Himalayas as a natural barrier wall, but this is not the case. They have always been traversed by people, rivers cut through them, and monsoon clouds float across. The growth of mining throughout Tibet will have a significant impact on South Asia, particularly in the several regions that are being cleared of people due to the grazing restriction policy, which is ostensibly done to increase grass but actually allows more miners to enter without any natives remaining to oppose. Although India is downstream of Tibet and is accustomed to considering itself as upstream of Bangladesh and Pakistan, it is also becoming aware of the close relationship between mining, which is a significant user of hydropower for ore concentrators and smelters, and the hydro-damming of Tibetan rivers. Despite its ambition to harness the hydroelectric potential of those trans-Himalayan rivers, India is taking note of the inconveniences of being downstream.

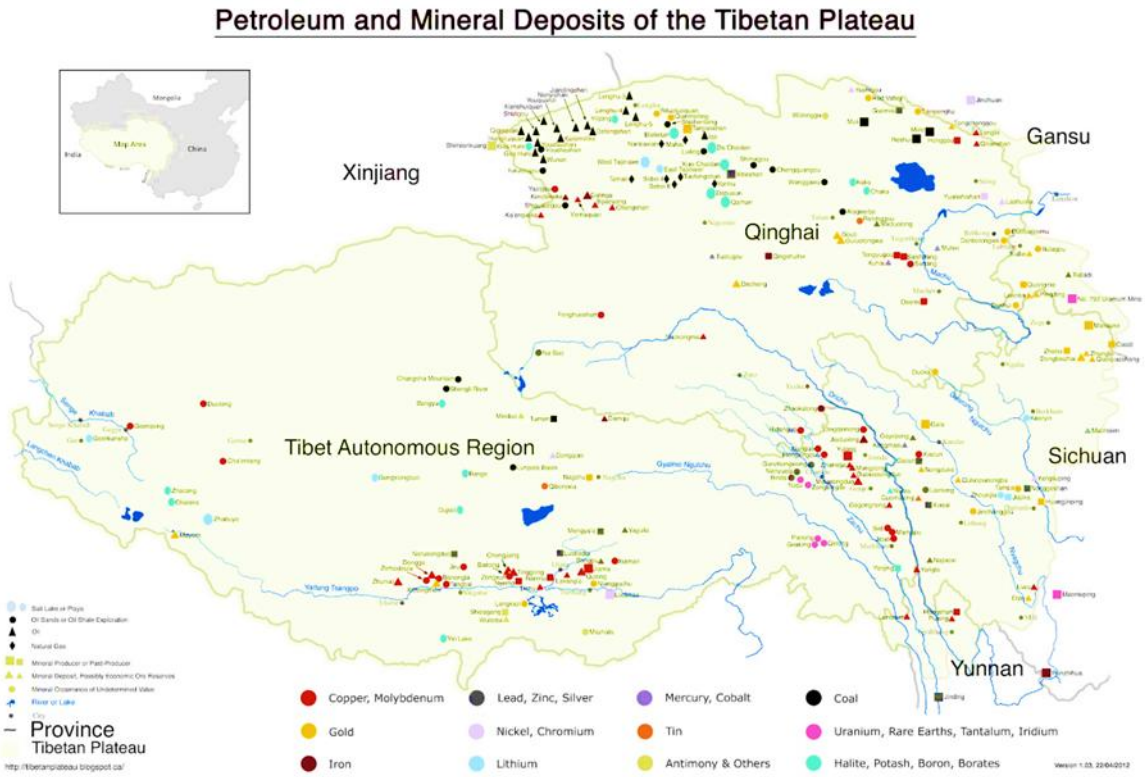
Due to the region's delicate ecological balance, glacier runoff supplies a consistent flow of melted water into the biggest rivers in the area and serves as a backup supply of water in the event that the monsoon fails. Even slight temperature changes can have a catastrophic environmental impact on the lifeblood of more than 25% (1.3 billion) of the world's population. This supply is not limitless, and with the increased melting of Himalayan glaciers, water shortages will lead to interstate and intrastate conflicts in the region, putting millions of lives at risk. Sea levels are expected to increase faster than originally estimated. Furthermore, melting glaciers and catastrophic climatic events like droughts and floods are putting water supplies at danger. These changes endanger not just the environment, but also India's security and stability. Climate change-induced melting of Himalayan glaciers creates a complicated security concern in the form of forced migration and resource-based conflicts. As a result, the melting of Himalayan glaciers due to warming temperatures poses a systemic threat to India's national security. As a result, it is critical to understand how India and its neighbours regarded climate change and its implications.

3.3 China’s Hydrological Interventions

Sinha (2012) reminds that the thirsty nation of China is in dire need of water, lots of it. In the southern region, it is gradually implementing dams and diversions in the Tibetan rivers to meet its energy and water needs in the fertile and heavily populated northern plains. China is perfectly within its riparian rights to do so, but a number of externalities involving the lower riparian needs and water-sharing principles: extending from

Afghanistan to Vietnam—raise questions. In addition to allowing Beijing to overcome its unequal water distribution, political control over Tibet and the powerful rivers that flow from it also gives its leaders strategic breadth and diplomatic leverage when interacting with its neighbors. Using the theoretical framework of power and hydro-hegemony, he explores the potential effects of China's hydro-behavior on the Brahmaputra (*Yarlung Ysangpo*) on India's power dynamics and the appropriate counter-hydro-hegemony approach for India.

On the same note Biba (2013) acknowledges that China plays an unparalleled role as a transboundary and multidirectional water supplier in Asia. There is no alternative to fresh water, and its supply has been drastically decreasing globally. Therefore, an analysis of China's actions regarding its transboundary rivers is essential. In order to establish the theoretical foundation for comprehending China's actions, this article will look at three distinct case studies: the Mekong River in Southeast Asia, the Brahmaputra River in South Asia, and the Irtysh and Ili Rivers in Central Asia. It presents a case for desecuritization strategies, a more modern idea, against realist arguments that have been used in the past. Real long-term cooperation is not always implied by desecuritization, even though it suggests non- or de-escalation. As a result, the future of Asia's shared waters could be controversial.



Similar case in made by Akanda (2012) as South Asia is approaching a major water crisis more quickly than most other parts of the world, particularly the basins in the Eastern Himalayas. Although this area is known to be water-rich, its population has been driven towards basin-wide water scarcity, flood hazards, water quality and ecosystem degradation, and public health issues due to a lack of integrated planning and unfavorable natural and political circumstances. Rapid population growth and a harsh future climate make matters worse and endanger millions more. The ecological integrity of the intricate transboundary river system is not being addressed as the riparian nations continue their unilateral efforts to develop their water resources. This article summarizes the region's unfavorable political realities and hydro climatic asymmetry that have forced the region towards a looming large-scale water conflict.

Pearse-Smith (2012) believes that for riparian countries, the Mekong River system is an essential source of natural resources. However, states in the Lower Basin, which are especially reliant on the basin, are seriously concerned about the integrity of the river system being threatened by the Mekong Basin's hydro-development, which is happening at an accelerating rate. There have been threats of armed conflict or even a "water war" between riparian states as a result of this situation. Interstate tensions in the Mekong region will undoubtedly

continue to rise as a result of the growing scope of hydro-development, but is it realistic to assume that these tensions will eventually turn into armed conflict? This essay uses Aaron Wolf's water and conflict theory to investigate this question. This paper's final conclusion is that armed conflict is unlikely to result from interstate tensions over Mekong hydro-development. The strategic impracticability of such a conflict and the existence of a river basin management institution are partly to blame for this. However, the most compelling argument is that armed conflict is unlikely because cooperation, or at least non-interference, is more beneficial to the Mekong states' economic imperative than conflict over regional hydro-development. Finally, the study recommends refocusing the research on water and conflict in the Mekong Basin at the intrastate level. This is validated by Chellaney, B. (2013) who points out political, diplomatic, and economic water wars are already taking place between riparian neighbors in a number of areas. These conflicts exacerbate water problems, create mistrust that prevents greater regional cooperation and integration, and feed a vicious cycle of retaliation. Growing expenses are still being demanded without any shots being fired. This demonstrates that, in addition to being a threat of the future, water wars are an underreported reality that the world community is already facing. Transnational rivers, aquifers, and lakes are being targeted for appropriation in a silent hydrological war. Competitors use hydro engineering and cross-border support for proxies to increase competition.

3.4 Downstream Vulnerabilities: Potential Water Wars in Scholarly discourse

In South Asia, the state's reliance on water becomes the most important economic factor, ultimately helping to achieve objectives like food and power production self-sufficiency. Because of South Asia's extreme reliance on water supplies, which primarily come from Tibet and then pass through the Indus and Ganga Basins, the water problem has consequently led to estrangement. The study explains how China has manipulated power politics while asserting their ownership of water resources, leading to the emergence of hydro politics. India, on the other hand, believes that China is tampering with water supplies and causing a scarcity of water for its people. Additionally, she wants to redefine or "reimagine" the Indus Water Treaty. Mismanagement, disproportionate resource distribution, and noncompliance with existing treaty implementation are further causes of the water crisis. In summary, the purpose of the paper is to identify, investigate, and offer a workable solution for the water problem.

James F. Brennan (The China-India-Pakistan Water Crisis: Prospects for Interstate Conflict, 2008) examines the prospects of conflict caused by water scarcity in China, India, and Pakistan. The thesis uses indicators of water tensions including: water quality, water quantity, the management of water, state institutions and national water philosophy. On its own, water shortage will unlikely be the only cause of regional conflict; however, the resource may be one catalyst of conflict or instability in the already fragile region. The indicators studied throughout this thesis continue to deteriorate and are anticipated to reach unacceptable levels by the year 2025. The current water dilemma in Asia increases the likelihood for regional conflict if practical solutions are not obtained.

Jin H. Pak (2016) makes the possibility that China and India will go to war over water insecurity. It is unlikely that water insecurity alone will result in war. But when combined with other domestic and international factors, it may make war more likely. There is more pressure to implement contentious water diversion plans in China due to its water shortage and growing north-south water gap. India will be in danger as a result of these plans, particularly because the Brahmaputra River passes through a disputed region. These elements could make war more likely, along with shifting domestic circumstances in China.

IV. CONCLUSION

The Tibetan Plateau, or the “Third Pole,” is no longer merely a most vital ecological region of the world. It has now become an emerging geopolitical zone linked to the water security, food security, and regional stability of South and Southeast Asia. The literature analyzed in this study clearly demonstrates that the intensifying human-induced interventions in this region particularly China's anthropogenic activities, mining, large-scale dam construction, water flow control, infrastructure expansion, and strategic ambiguity are not just limited to environmental degradation but are also vehemently creating structural vulnerabilities for downstream countries. Based on a systematic synthesis of existing academic literature, this study shows that infrastructural and hydrological interventions in the Third Pole are being viewed as potential drivers of future water conflicts in South Asia, particularly in the absence of robust transboundary governance systems. While these risks have been extensively discussed in academic discourse, engagement at the governance level remains fragmented and insufficient.

Various scientists, policy analysts, and political ecologists widely agree that the changes occurring on the Tibetan Plateau are giving rise to concurrent disasters such as accelerated glacial melt, unusual floods, prolonged droughts, and desertification. These processes directly impact countries like India, Nepal, Bhutan, Bangladesh, and Myanmar, which are already grappling with population pressure, water scarcity, and climate vulnerability. Thus, the instability of the Third Pole could create socio-economic tensions and potential conflict situations in South Asia. These findings specifically emphasizes that the concept of "water wars" should not be viewed solely as a hypothetical future possibility. While the literature clarifies that water conflicts are not inevitable, existing power imbalances, a lack of data transparency and weak transboundary water governance make this risk credible and realistic. China's upstream position grants it a disproportionate strategic advantage, while downstream countries have limited control over water flow and minimal diplomatic leverage.

A central conclusion of the study is that the root cause of the problem is not simply the policies of a single nation, but rather a broader global and regional governance vacuum. Although there is continuous and serious discussion on this topic at the academic level, no binding, multilateral, and institutional framework has been developed for the Third Pole on international platforms. Climate diplomacy, which has largely been confined to carbon emissions and temperature targets, has so far failed to adequately prioritize high-mountain water systems and transboundary water risks. In this context, this study argues that the protection of the Third Pole can no longer be left solely to bilateral negotiations or regional politics. It requires a coordinated, transparent, and multilateral governance framework that institutionalizes data sharing, early warning systems, ecological conservation, and water cooperation. Failure to do so will mean that the Third Pole will not only become a symbol of environmental crisis in the future, but could also become a focal point of geopolitical instability and potential water conflicts in South Asia.

Ultimately, the study concludes that protecting the Third Pole is not a regional option, but a global imperative and inevitable for global ecology. It must be secured through global governance like Antarctica and Arctic. If the warnings discussed by researchers and environmentalists are not translated into concrete policy and coordinated governance actions in a timely manner, the Third Pole risks becoming not merely and ecological hotspot but a geopolitical fault line for future water conflict in South Asia.

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