'Divided by borders united by the Himalayas': A Cross regional Policy Paper on the 'Third Pole effect', focusing on the issue of Water Crisis and Climate change in South Asia.

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Abstract

Most of the countries in South Asia like Bangladesh,China, India and Pakistan derive their water sources from the Hindu Kush mountains. It holds the largest stretch of frozen water outside the polar territory for which it it's referred to as the 'Third Pole.' There exists an imminent threat from both the climatic and ecological variations coupled with human activities.Signs of water stresses have been found in majority of the affected regions. More than a billion people are living and thriving off this geo-climatic zone which has therefore, become a region of man-made exploitation. If the predictions, in respect to, growth of population, latent demand for agricultural and energy resources along with climatic variations are not made accurately, the actual stress on the Hindu Kush Himalayas(HKH), can never be assessed correctly, and hence actions taken may not lead to the pre-set goals.

Chances of probable water stress are high. Therefore, this paper strives to testifyand analyse the growth of burgeoning literature springing from research institutes that testify a range of existing and emerging natural and human driven hazards. There has been a lacuna despite the concerned efforts of scientists, humanitarian as well as developmental policyformulators. Thus, this paper tries to channelize an institutional perspective and a holistic approach which needs to be brought in place to study inter-relationships and the dynamics of such perils.

Keywords: *- Climate change, Hindukush Himalayas (HKH), Third pole, glaciers, treaties.*

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I. Introduction

The expanse of the Third Pole is very wide, initiating from Indira Col in the north west to the starting point of river Nubra in the northeast. It is situated in the eastern Karakoram range covering an expanse of nearly 1000 square kilometres and its breadth ranges from 2 to 8 kilometres. It is one of the harshest profiles, due to harsh temperatures and high elevation. The Siachen Glacier finds its place just below the Fedchenko Glaciers of the Pamirs receiving 6 to 7 metres of snow where the yearly total does not exceed above 10 metres in the months of winter. The Fedchenko Glacier stretches across 77 kilometres in length. Strong blizzards in the Siachen glacier, are a common occurrence which have an average speed of 150 knots or 300 kilometres per hour. The wind chill factor tends to further decrease the temperatureevenbelow than a negative 40 degree Celsius on a daily basis. Summing up all these factors and their consequences on the 'Siachen Glacier', the terrain has been referred to as the 'Third Pole[1].'

There have been significant indicators like a rapid increase in air temperature, glacier retreats, notable variations in spring phenology[2], rise in permafrost temperatures, herbage greening and active cover heaviness. These variations have a vital impact on the ecological community and a consequential effect on the carbon interchange between atmosphere and the active layer. In the mid and low latitudes of the northern hemisphere, the Siachen Glacier has the largest expanse of permafrost contour.

II. The Effect of Climatic Variation upon Glaciers in Asia

Reports concerning major changes in the glaciers due to rapid climatic fluctuations in the Himalayas and other parts of high Asia have come to light, especially of rapid melting of glaciers. The threat of imminent glacier pitfalls

[1] Climate Change, The Third Pole (2020), https://www.thethirdpole.net/en/ (last visited Jul 15, 2020).
[2]Third Pole climate warming and cryosphere system changes, World Meteorological Organization (2020), https://public.wmo.int/en/resources/bulletin/third-pole-climate-warming-and-cryosphere-system-changes (last visited Jul 3, 2020).

and the reliability on water reserves is a major concern at the local, national and transnational strata. The glacial diversity in the region are very wide and so are their responses.

Documents reporting the disappearance of glaciers have been reported from various glacial regions of Asia. Though glaciers are vanishing more or less at a fast rate, the glaciers in the upper Indus and upper Yarkand river basins have been an exception. The glaciers there have been holding tight for a prolonged period of time and presently many have started forming and advancing in the Karakoram Himalayas. These happenings are just the broader picture of the current scenario of the Eurasian glaciers as they too had denigrated through most of the twentieth century. These instances point out that, clinging onto efforts to protect our already existing glaciers, might lead us to overlook the potential threats which a new glacier may behold, the threats being far more complex and far more precarious than the foregone ones.

'Himalaya' as a term has been used since time immemorial to depict the snow- and ice-covered mountain regions which separates Indian subcontinent from rest of the Asian subcontinent. People have a positive outlook towards the mountains and its bountiful resources as their livelihood is depended on it; the rivers being the creators of the fertile fields, and being interconnected with the Greater Himalayan Watershed ensure the best agricultural output and give a much significant boost to population. The conservation of the ecological and hydrological systems of the highlands are dependent on the accumulation of water and silt.

The 'Siachen Glacier' till the 1940s was controlled under a small symbiosis of tiny states that often let loose on its authority. The Russians, the British and the Chinese marked the mountains as their final perimeter and had very prominently distinguished their lines on the map but left them unexplored. After the second world war the subjects of the colonized states were let free and, in a hunger, to claim more immunity and authority, a brawl occurred which led to a mess of claims and counter-claims that stretched from Afghanistan to Myanmar, across

the 2400-kilometer-long stretch of the Himalayas. Nepal and China were the only countries who could ever come to an agreement in the year 1961[3].

India and Pakistan have till date fought three wars since 1984, over the Gilgit-Baltistan (a region in the north of Kashmir) province, which is looked after by Pakistan. The countries have strongly catalyzed the highest battleground in the world, and India and Nepal still continue to work out matters between their shared border. The Aksai Chin region has been jointly claimed by India and China which is a desert in a high-altitude region between the Tibetan Autonomous Region (China), Xinjiang (China) and Ladakh (India)[4]. This region is administered by the Indian government and claimed by the Chinese counterpart. However contrary to this, Arunachal Pradesh (not entire, major parts of it are claimed by China though), (north-east India) is administered by China and claimed by India which pop up on the map of China as Nang Tsang (South Tibet). China and Bhutan too have a similar contradiction.

In 1962, Bhutan and China were at war in the east-west sections of their borders. Tensions persisted. Gradually China in 1964, India in 1988 and Pakistan too in 1988, became nuclear armed nations. The Dokolam stalemate escalated the normalized state of tension between the two countries in 2017 when China tried to seize a piece of high- ground from the Indian troops in the China – Bhutan border[5]. A terrorist attack in the Jammu highway in 2019, had sparked off a military attack by India in Pakistan occupied Kashmir (PoK) in retaliation. Though an administrative re-organization has been carried out by India on the part of the land on which they operate, Jammu and Kashmirhave been placed effectively under the control of New Delhi's legislation.

III. Problems Related to the Third Pole

[3] HimalDoc, Lib.icimod.org (2020), https://lib.icimod.org/record/27387 (last visited Jul 12, 2020)

[4] India-China relations and the geopolitics of water, Lowyinstitute.org (2020), https://www.lowyinstitute.org/the-interpreter/india-china-relations-and-geopolitics-water (last visited Jul 10, 2020).

[5] Ahead Of Parliament Session, Government Finds Support On China: 10 Facts, NDTV.com (2020), https://www.ndtv.com/india-news/pm-modis-top-ministers-brief-all-parties-on-stand-off-with-china-10-updates-1724886 (last visited Jul 23, 2020).

ICIMOD (International Centre for Integrated Mountain Development) is an intergovernmental research centric organization possessing regional status within South Asia basically dealing with sustainable development and climate change. A current study by the ICIMOD[6] reveals that one -third of the glaciers in the Himalayas would cease to exist by the next one hundred years. It can only be stopped if the countries reduce emitting harmful gases by the end of 2050. Such a change will lead to the depletion of groundwater resources and significant water bodies, increase in temperatures and certain areas may experience harsh climatic situations rather than, due rainfall. The changes in the conditions are quite radical; they might lead to problems in future. The glaciers are melting fast and there are significant transitions in the weather of such regions. The rainfall intensifies and regions experience droughts, floods and landfalls to a great extent. Economic saturations and population resettling are effects of such a situation. As these changes grow more prominent, it is expected that these changes will widen and conflicts will boil leading to vast variations and shifts in population. It is estimated that 50 percent of the population residing in the countries besides the Himalayans suffer from improper nutrition intake. Any further variations in climate and temperature will make them more exposed.

There is a need of urgent focus on the glaciers of the Indus and Yarkand rivers. The growth of such glaciers has led to the formation of enormous dams made of ice and damaging floods. In the coming years the existing and the present water reserve uses are completely dependent on glacier-fed streams and face a potential danger from glacial floods and sedimentation. Inadequate information and tracking coupled with marginal scientific comprehension of these high elevation glaciers continue to be the largest barriers. Deceptive reports based on assumption and not on evidence is also a problem. Crucial documents suggest that the Indus basin is at great risk of losing all its glaciers. The Karakoram region has been presumed to be covered with "dangerous lakes"[7]coupled with advancing ice in a few regions.

[6] https://www.eurekalert.org/pub_releases/2019-12/caos-awt120619.php

[7]Asian water towers are world's most important and most threatened, EurekaAlert! (2020), https://www.eurekalert.org/pub_releases/2019-12/caos-awt120619.php (last visited Jul 20, 2020).

The underlying problems are endless. The dams are being constructed in ecologically weak areas. The hydropower turbines can fail to operate, as in the cold months the dam water may solidify. Glacial Lake Outburst Floods may happen when melting water at the foot of the glaciers may burst up through the blockhouse and wash away the valleys creating havoc. The magnitude of such outbursts is on the rise each year and the probability of their occurrence is also up the scale. It will take time for the people to counteract with the idea of a dam to be constructed. The Himalayas are not seismically dormant. If a massive earthquake were to make a direct hit on a dam, the consequences could be catastrophic. The effects of a massive earthquake and its effects on a dam could be extremely disastrous. The Wenchuan Earthquake[8]of 2008, had caused the Zipingpu Dam (Sichuan's largest hydroelectric dam), quite close to collapsing and, a devastating flood was on its way.

The manner in which the dams have been resurrected in the Himalayan range, further arouses the possibility of a collapse of a dam due to an earthquake. In place of constructing single dams on the water affluent, constructing water fall proper dam systems on primary river channels is a more suitable alternative to the state- run hydroelectric corporations, who aim at building dams on the principal river strait. UN's Clean Development Mechanism Program[9] along with the World Bank are some of the global sponsors to this initiative. A domino-like outburst is bound to occur subject to any catastrophic change on these new ventures.

The 10 Hindukush conjoint rivers measure for one-third of the HKH 16's surface water reserves, but one in every two people reside there out of the sixteen countries. One-third of the Hindukush 16's GDP, generated in the 10 basins, yields to a total of 4.3 trillion USD. Sudden boom and expansion of both the population and the economy, has put ecological strain on the basin water reserves. Five out of the ten Hindu Kush Himalayan (HKH) reserves are already either facing tremendous water scarcity or have already dried up. If laid enough

[8] Chinese Academy of Sciences, TWAS (2020), https://twas.org/partner/chinese-academy-sciences (last visited Jul 2, 2020).
[9]Clean Development Mechanism - an overview | ScienceDirect Topics, Sciencedirect.com (2020), https://www.sciencedirect.com/topics/earth-and-planetary-sciences/clean-development-mechanism (last visited Jun 1, 2020).

light onto the scenario, it stings hardly, the belief that worker and speculation groups, have not begun anticipating and marking the liability of the disclosure of their resource to the risk associated with basin water.

IV. **Global Warming -Impact on Himalayan Riverine**

The patterns in the rain fall, the months in which the seasonal rains occur, the melting of the glaciers, the transition from snowfall to rainfall all are critically responsible for causing differences in the 10 HKH river basins. If we take the example of the Upper Indus and the Upper Yellow rivers, we see that a crucial component for overflows is a combination of snow melt and glaciers, and such combinations are present for 62-79 percent in the Upper Indus and 25 percent in the Upper Yellow. However, there is absentia of proper glacial records system for Asian countries. The HKH River Basins cumulatively host an ice deposit of 7,547 cube- kilometers. This magnanimous collection of ice exterior from both the Northern and the Southern poles are termed as 'Asia's Water Tower'[10]. This accumulation of ice is one of the largest bases outside the two poles and is very frequently regarded as the Asia's Water Tower. The water that can be derived from the melting of these ice masses, will accumulate to 7 trillion meter-cube of freshwaters. Such huge quantities of water is sufficient to replete Lake Michigan and Lake Erie and nearly 40, three gorges barriers. Amidst the 1970s and the 2000s, China has let gone of its glacial territories which were far larger in area than the land cover of Thailand. Hence there is an immediate and growing requirement to search for the starting point, which is very crucial to reach out and fill the discrepancies in data, analyzing them and starting a deep dug research into the crisis.

Recent upgraded trends in the city lifestyle reveal that people are migrating in and out from over more than 280 cities, all of which are situated in the 10 Hindu Kush Himalayan riverine. This effect of accumulation of migrants' pave way for the discourse of the rivers and also increased rate of droughts and floods. According to the current data, 1.77 billion people already reside in the 10 HKH

[10]OECD Water Governance Programme - OECD, Oecd.org (2020), https://www.oecd.org/env/watergovernanceprogramme.htm (last visited Jul 6, 2020).

river valleys and an estimated total of 1.7 billion people in the HKH. It is projected that by 2050, there will be a 50 percent more industrialization rate in six of the eight countries for which there might be a sudden boom in population migration and proper mechanisms to keep the system steady, should be thought of from now. A direct consequence of the increasing systemic subjection in the basins, will force the commercial banks to think through yet again, with their credit schemes to account for the environmental hazards from a ground level perspective.

The climate patterns (that is snowfall, rains, overspill) in the HKH basins both in the past (1955-2005) and in the near future (2006-2055)[11]is estimated and recorded to be under RCP 4.5 by the Chinese Academy of Sciences[12]; taking the assistance of five climate models. The outcomes were unsatisfactory. It came out to be that the temperatures will keep on shooting up and might become twice of the present in six of the basins. On the other hand, rivers like the Tarim, Indus and the Ganges will face twice the losses with snowfall steadily but continuously falling. Certain rivers will face mixed consequences of the overflows and four of these rivers will face reduction in water movement. It is expected that these forecasts will stay on either a 2 degree rise or a 2-degree fall.

V. Water Policy and Governance in Asia

The term – 'water governance' has been defined as the "social, political, economic and administrative systems that influence the use and management of water" by the United Nations Development Programme (UNDP)[13]. The end results of water governance as to who is entitled to what amounts, how and when, in what manner and other benefits is finalised by the symbiosis of certain determinants involved in water governance. The resourcefulness in allocation and the distribution of water resources is dependent on the availability and usability of water resources which is revealed by the study of "water

[11]Communities fight for greater say in river management, The Third Pole (2020), https://www.thethirdpole.net/en/2019/02/20/communities-fight-for-greater-say-in-river-management/ (last visited Jul 15, 2020).
[12]Home - ICIMOD, ICIMOD (2020), https://www.icimod.org (last visited Jun 15, 2020).
[13] Renewables Policy Scheme |https://www.thethirdpole.net/en/2019/07/03/renewables-the-only-way-to-go/(last visited Jun 27,2020).

governance"[14]. It aims at balancing its usage between the exosystemic protocol and the socio- economic activities. By the term 'governing water' we mean the formulation, foundation and employment of water regulations, laws and a proper framework to implement the same. Clarification based on the responsibilities of the government, human society and services is a must. The action of right-holders on how to react to the provisions and responsibilities given to them, has major impact on the outcomes.

The antique concept and application of cross-boundary water jurisdiction is as old as that of its management. Thus, there is requirement of a constant critical analysis of the secondary data, which is set as a base to discover the research rationale which lays its foundation mainly on the perspectives of transboundary water management[15] on a domestic and international paradigm.

In this wider context of cross-boundary water governance, the present scenario of transboundary water reserves and its governance in the Hindu Kush Himalayas before conducting a search for any trail or plausible source, takes as a tenet of ongoing understanding of the transboundary alliances which hasn't yet evolved as a politically backed up will.

Asia needs more water to fuel its economy or give nourishment and force, except if nations fundamentally re-evaluate their flow trade driven development model. At the core of this water emergency are Asia's ten significant streams that begin in the Hindu Kush Himalayas[16] – and give basic water to China, South Asia, and Southeast Asia.

Experiences from developed countries show that trade can also be used for water. United States use much more of the water as compared to European nations, for the fact that Europe is largely reliant on water-intensive imports, essentially using other people's water. Asian countries need to gain knowledge and hone skills from their fellow countries. If we see carefully, though being

[14]National Climate Change Policy | ClimaSouth, Climasouth.eu (2020), http://www.climasouth.eu/en/node/20 (last visited Jun 29, 2020).
[15] https://www.un.org/webcast/ga/59/statements/chieng040927.pdf(last visited Jun 29, 2020).
[16]About | IUCN, IUCN (2020), https://www.iucn.org/about (last visited Jul 31, 2020).

harshly stricken with groundwater scarcity, Pakistan continues to be the largest exporters of ground water reserves which are on the verge of disappearing.

The Ganga, Indus, Yangtze and Yellow[17]breed the largest economies with an estimated total GDP of USD 3.8 trillion, along with a population of more than a billion people.

These four "priority rivers" are pretty sensitive to weather and temperature changes, contributing factors being glacier and snow melt, contributing to over 20% to 80% of erosion in the upper zones of these rivers. Recent estimates tend to show that the entire Ganga and Indus river basins will likely see reduced overspills by the year 2055.

The Chinese Academy of Sciences predicts that the average temperatures of most of the basins in the region, will soon double itself, while snowfall will reduce – with future losses likely more than twice that of the floods caused by Indus, Tarim and Ganga. River runoffs will experience quite a mixed bag of results, out of which four rivers will overflow the most. These projections call for a 2-degree minimum rise on account of the global warming.[18]

This could have several ecological implications ranging from a series of ripple effects on permafrost melt, to monsoon and wider weather systems, breakdown of critical eco-habitats, groundwater eradication and food grain cultivation, still being a blank.

The cross- boundary nature of these rivers should add a level of depth while urging to such problems. "India and China, as upper riparians, must look beyond national interests to protect their common waters and lead the way in both transboundary and regional economic cooperation," the report concludes.

Banks will eventually have to rethink their credit policies to account for the ever-increasing environmental risks from a ground level perspective.

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http://www.mobot.org/MOBOT/Research/ecuador/cordillera/pdf/TheIncredibleCondorITTO-PUBLICATION.pdf(last visited Jun 30, 2020).

18 https://whc.unesco.org/document/107099

VI. Pakistan Water Policy-Third Pole Impact

Getting the due consideration and permission of the "water policy package" which consists of a declaration and a guideline by the Council of Common ministers of Pakistan on the 23rd of April is a landmark moment after a long period of inactivity. It deals with the stagnant disputes between the Sindh and Punjab provinces which had hindered the structuring and developing of the national water policy. The National Water Policy (NWP) talks about nearly all the necessary and contemporary issues regarding welfare of such water resources and also the concerns of the interest – takers and takes into consideration the countries like Pakistan and other knowledgeable fieldsmen, since the last 15 years. The Pact throws light on the gravity of the water crisis and how it looms over a dark shadow on the depleting water resources, food scarcity and also waves warning signals to the fast depleting energy reserves[19].

The salient features of national water policy (2012)[20] are as follows:

Emphasis on the need for a **national water framework law**, putting a comprehensive legislation in place for optimum development of inter-State rivers and river valleys.

1. Water, after meeting the pre-emptive needs for safe potable water and sanitation, achieving food security, supporting poor people dependent on agriculture for their livelihood and high priority allocation for minimum eco-system needs, should be treated **as economic good** so as to promote its conservation and efficient use.
2. Ecological needs of the river should be determined identifying that river flows are characterized by low or no flows, small floods (freshets), large floods and flow variability and should accommodate development needs. A portion of river flows should be kept aside to meet ecological

[19] https://www.nti.org/learn/treaties-and-regimes/south-asian-association-regional-cooperation-saarc/(last visited Jul 12 2020).
[20] https://www.thethirdpole.net/en/2018/10/08/change-world-to-control-climate-change-say-experts/(last visited Jul 24, 2020).

needs, ensuring that the proportional low and high flow releases correspond in time closely to the natural flow regime.

3. Strategies for adaption in purview of climate change for **designing and management of water resources structures and review of acceptability criteria** has been emphasized.
4. A system to evolve **benchmarks for water uses for different purposes**, i.e., water footprints and water auditing should be developed to ensure efficient use of water. Project financing has been suggested as a tool to incentivize efficient & economic use of water.
5. **Water Regulatory Authority** has been recommended to be put in place.
6. **Incentivization of recycle and re-use** has been recommended.
7. **Water Users Associations** should be given statutory powers to collect and retain a portion of water charges, manage the volume regarding the quantum of water, allotted to them and maintain the distribution system in their jurisdiction.
8. **Removal of large disparity** in stipulations for water supply towards the rural and urban areas must be taken care of.
9. Water resources projects and services should be managed with **community participation** and on the discretion of the State governments and local authorities, the private sector can be encouraged to become a service provider in public private partnership model for meeting agreed terms of service delivery, including penalties for failure.
10. Adequate **grants must be given to the States** to update technology, design practices, planning and management practices, preparation of annual water balances and accounts for the site and basin, preparation of hydrologic balances for water systems, and benchmarking and evaluation of performance, etc.

There has been a clear instruction manual laid by the Water Policy affixed to the view of water management and a set of guidelines has been laid down by the federal and national governments to throw light on the falling water supply which is constantly a back fall for such a country which has its population

growing exponentially. The suggestions given by the National Climate Change Policy, 2012[21]are to battle the ill effects of climate change, especially in extreme climatic conditions like floods, drought, sudden extreme heat waves coupled with increase in water level at seas, overestimating lands along the coasts and sinkholes. The primary intention of this project is to increase the country's depleting water containing capability, thus in turn bringing about construction of dams of variable dimensions to keep up with the variations in seasonal water supply. It demands for a complete re – settlement of the country's water resources groundwork, controlling and reducing the present pre – occupation of groundwater , which in turn is leading to a fall in demand of key water user population , such as in areas of irrigation and farming which at present use nearly 95 percent of the disposable supply, giving more power to the governmental and territorial institutes .

VII. The Siachen Peace Park Theory

Peace parks "are transboundary protected areas that are formally dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and to the promotion of peace and cooperation", as has been clearly defined by the International Union for Conservation of Nature and Natural Resources.

The rapid changes of the unstable zone into a cross boundary protected area might appear to be a perfect solution, but prior to that removing out the armed forces from that region is the primary task. Majority of the already functioning peace parks, are situated either between friendly neighboring countries or was created after the fugitivity between the two countries were over. Such an example is of the Condor- Kutuku peace park which was set up in 2004[22] in the region of Cordillera del Condor, which is located between Ecuador and Peru.

[21]Climate Change, The Third Pole (2020), https://www.thethirdpole.net/en/ (last visited Jul 15, 2020).
[22] UNFCCC |https://www.sciencedirect.com/topics/earth-and-planetary-sciences/united-nations-framework-convention-on-climate-change/(last visited Jul 24, 2020).

This has many times proved to be a role model for the Siachen Peace Park. However, it is a sin that peace has not been followed by these parks.

Some environmentalists are even of the opinion that avoiding the struggles and appealing for encouraging the militaries of India and Pakistan to act as rangers in managing the conservation area as an immediate arrangement, act as keepers and look after the forest conservation within a short period arrangement, and allowing the tourists provided that they carry their visa which has been issued either by India or Pakistan.

But the fact of the matter is that there are people who have demanded a complete abortion of the military in the red alert zone, instead they want an international science center to be built in the area straight away, for a gamut of research studies into different fields. If a cross-boundary peace park is built under the aegis of the IUCN(International Union for Conservation of Nature), or a World Heritage Park is built under the aegis of the UNESCO[23], or both of them , it would help in the post-disbanding conservation of the surroundings of the glacial habitats which have displayed a broad horizon of how the actual process would take place, what would be the aftermath effects and which all areas would find themselves in oblivion.

If the conclusion arises that all wild plants and animals along with the natural glaciers needs to be left alone, then there arises no question of converting them to cross – nation research labs from war-zones. The main idea of a peace park does not fulfill the purpose of deactivating the zone, which at first place was the crux of the argument. There needs to be a treaty on the annexure of the possession of the conflicted areas post the deactivation to make matters more lucid. But it is hard to perceive that at a point of time when both the nations, India and Pakistan, pay-off the peace parks, expecting them to come to a consensus; is very primitive. It is very clear that the disarmament of the glacier cannot be linked to the formation of such a park.

To curb the problem from its very core, a gradual process needs to be followed, both at country as well as national level, catering towards the motive of ecological protection in the northern glaciers, which could not essentially lead to

[23]Climate Change Is Disrupting Signs of Spring, ThoughtCo (2020), https://www.thoughtco.com/spring-phenology-and-global-climate-change-1203890 (last visited Jun 21, 2020).

the formation of an international peace park, but a milder version of protecting , perhaps, by neutralizing the effects of unauthorized human or third party activity, could be launched. There lies a pothole in the relationships between India and Pakistan for much obvious reasons and an inter – national peace park would help to bridge in the divide and on a larger picture, this would help both the countries to earn a great deal of revenue.

VIII. Conclusion and Policy Recommendations

There always lies an ardent need for the indigenous Himalayan voices to speak up in the policy-making for the region as such would necessitate looking beyond the state and setting up priorities for engaging networks of local and regional community-based administrations. This would entail reversing the current trend of central powers thereby putting more emphasis on local groups, creating emphasis upon environmental concerns in the valley. Localised self-government structures have been the most common form of governance in the region throughout the hills across civilisations. This kind of recognition is very relevant because most peaks and regions within the Himalayas are still recognised by the colonial names. The most coveted and famous of these names is the Mt. Everest, a nomenclature[24]given by the British to the world's highest mountain which has overshadowed the local name. The mountains are a worship arena and considered extremely sacred by the Sherpas. Although the mountain has different names, the most famous among them is Chomolungma -Chomo" means "lady", and "langma" means "willow", "cow" or "heights". Thus, using the local names could be asmall step towards respecting and recognising the rights of the tribes and indigenous people in the region, and towards decolonising the Himalayas.

There is also a requirement of further research that could channelize and promote the participation,thusconstructing two alternatives: i.e. to either proceed with and fortify existing bi-parallel settlements participating in the transboundary coalition, between entities including all concerned nations, or

[24] Agriculture Third Pole| https://www.downtoearth.org.in/news/revised-draft-national-water-policy-restores-priority-to-agriculture-38696(last visited Jul 31, 2020).

conduct research and initiate a methodology to assess a speculative circumstance, in which each HKH nation chooses to sign and approve a water sharing and management treaty,considering the numerous rights and obligations under cross-boundary laws and standards,as per various UN conventions and recommendations. Be that as it may, by deciding the expense of 'inaction' for all riparian HKH nations in case,of nothing, will be a new situation where nations keep on ensuring their sovereign rights over water assets. Thecurrent domains and prospective areas of research to fulfil the vacuum would help to conceive a country's position within a more vigorous transboundary alliance.

Creation of policy and research in the field of river water sharing would also help in an understanding of different enablingconditions and also help to foster educational growth of institutional mechanisms to facilitate regional cooperation.Thereby, fostering the understanding of water distribution among nation states.

In addition to research and development, it is also imperative to empower the role and capacity of various regional institutions, like the South-Asian Association for Regional Cooperation (SAARC)[25]and ICIMOD (International Centre for Integrated Mountain Development)to help facilitate the access toknowledge sharing, technological advancement, critical data exchangeand monetarily backed up distribution schemes, whichshould be relooked todecipher, whether such inter- organisational collaborations could create a platform to provide an appropriateforum to develop a shared understanding of the issues pertaining to water governance, in the Hindukush Himalayan region**.**

[25]Surveying Bhutan's most dangerous glacial lakes, The Third Pole (2020), https://www.thethirdpole.net/en/2016/03/18/surveying-bhutans-most-dangerous-glacial-lakes/ (last visited Jul 2, 2020).