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THE IMPACT OF CLIMATE CHANGE ON INDIGENOUS COMMUNITIES AND THE SIGNIFICANCE OF THEIR TRADITIONAL KNOWLEDGE IN CONSERVING ENVIRONMENT

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I. ABSTRACT

This paper sheds light on the plight of indigenous communities as victims of climate change whose concerns have been institutionally sidelined and paid disregard by both the governmental and non-governmental bodies. The knowledge of the indigenous communities that has been garnered by them through centuries of experience and seasonal survival strategies shall be helpful in adapting and mitigating climate change, however, owing to our obsession with the modern and scientific methods, such traditional ecological knowledge is not paid due regard hence acting as retarding force in our collective development. The paper further enlightens regarding the intricate connection of indigenous communities and environment and how reciprocity exists between healthy environment and these people.

The paper elucidates the injustice being meted out to these communities and seeks to enforce restorative justice through governmental measures. The paper attempts to sensitise the conscience regarding the sufferings of indigenous communities owing to disproportionate burden being placed on them despite contributing least to the adverse climatic changes. These communities have been forced to relocate and adapt to new changes in lifestyle which impacts their health and development. These communities share a spiritual bond with their lands and struggle to survive in the world of redrawn boundaries where these communities have been dislocated either regionally or nationally.

The persecution faced by these people is a relic of historical colonization and contemporary capitalistic developments across the globe. This builds a strong case for indigenous communities to come forward and voice their concerns regarding the

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injustice faced by them. Restorative justice is the need of the hour to correct testimonial and environmental injustice. The paper elucidates the role played by Indian judiciary in safeguarding their rights while highlighting the significance of adaption and restoration.

II. KEYWORDS:

Indigenous communities, climate change, environment, traditional knowledge, displacement, restorative justice.

III. INTRODUCTION

Spanning over a spectrum of multifarious long-term average weather changes that have been historically introduced at the regional and global level,² climate change is affecting the Earth in an extremely unwanted manner. The World Bank Group provided that indigenous communities account for approximately six percent of the global population and have common ancestral links with the places and natural resources where they reside.³ Though humanity as a whole is facing repercussions of these climatic changes however indigenous communities are especially vulnerable owing to their strong and intricate cultural linkage to the environment.

McCarthy elucidates that vulnerability is a function of three factors: exposure, sensitivity and adaptive capacity.⁴ *Exposure* refers to the change in climate and what it affects; climate change has a direct influence on systems, known as *sensitivity*; and *adaptive capacity* refers to a system's ability to adapt to climate change, mitigate negative consequences, or capitalize on positive benefits.⁵ Moreover, response to climate change requires attention on both adaptation and mitigation.⁶ Adaptation is intricately linked to adaptive capacity and latter is determined by the socioeconomic

² *What Is Climate Change?*, NASA (last visited June 2, 2024), <https://science.nasa.gov/climate-change/what-is-climate-change/>.

³ *Indigenous Peoples*, THE WORLD BANK (last visited June 2, 2024), <https://www.worldbank.org/en/topic/indigenouspeoples>.

⁴ MC CARTHY ET AL., *CLIMATE CHANGE 2001: IMPACTS, ADAPTATION, AND VULNERABILITY* (Cambridge University Press 2001).

⁵ *Id.*

⁶ JOEL B SMITH ET AL., *CLIMATE CHANGE, ADAPTIVE CAPACITY AND DEVELOPMENT 1* (Imperial College Press 2003).

conditions of a community. Enhancement of adaptive capacity is a prerequisite for minimising vulnerability, particularly for the most vulnerable socioeconomic groups.⁷

Before going deeper into the intricacies of how climate change is impacting the indigenous communities and what role do they play in moulding climate change policies, it is essential to understand what communities shall be regarded as indigenous. As far as the International Law is concerned, in spite of giving recognition to the rights of these communities, there has not been a formulation of a universally applicable definition of an 'indigenous community.'⁸

In 1982, the United Nations Economic and Social Council, Commission on Human Rights, adopted a definition as follows: "Indigenous populations are composed of the existing descendants of the peoples who inhabited the present territory of a country wholly or partially at the time when persons of a different culture or ethnic origin arrived there from other parts of the world, overcame them, and by conquest, settlement or other means, reduced them to a non-dominant or colonial situation; who live today more in conformity with their particular social, economic and cultural customs and traditions than with the institutions of the country of which they now form a part."⁹ Therefore, the essential elements that characterize the indigenous people are their culture, habitation in a specific region and historical connection with the land.

IV. DIMENSIONS OF LIFE OF INDIGENOUS PEOPLE BEING IMPACTED BY CLIMATE CHANGE

Life is composed of and revolves around fulfilment of basic necessities. Foremost requirement among them is of food and shelter. Going deeper these two requirements when improperly met further impact physical and mental health of the inhabitants leading to creation of a disequilibrium and formulation of a distinct kind of inequity among the sapiens.

⁷ BARRY SMIT ET AL., CLIMATE CHANGE 2001: IMPACTS, ADAPTATION, AND VULNERABILITY 879 (Cambridge University Press 2001).

⁸ Janeth Warden-Fernandez, Indigenous Communities Rights and Mineral Development, 23 J. ENERGY & NAT. RESOURCES L. 395, 398 (2005).

⁹ *Id.*

An analysis by the UN Food and Agricultural Organization (FAO) provides that the food systems being utilized by the indigenous communities were the most sustainable in terms of efficiency, waste avoidance and seasonal adaptation.¹⁰ Usage of land by these communities depended on seasonality which made *waste* a concept alien to their culture.¹¹

Climate change poses a challenge to land rights of indigenous peoples, which are closely linked to their identity, culture, and natural resources.¹² Therefore, climate change impacts capacity of indigenous tribes to define their own identity and culture not only at individual but also at communitarian level.¹³

A. Colonialism and Historical Displacement

The societal perception which places *technical* at a higher pedestal than *traditional* has influenced the culture and practices of colonized communities and influenced them to perceive themselves as beings of some lower order, subjugating not only their life practices but also their beliefs under the garb of colonial ideology. As a result of these colonial conquests, the indigenous people have suffered through centuries of oppression and subjugation significantly affecting their spiritual connection with the environment they bond with.¹⁴ These communities being traditional rooted in environmental and seasonal practices were governed more by their customs and practices rather than the written words of law.¹⁵

However, with a change in rulers, changed the rules and the communitarian actions came to be determined by the colonizer who even displaced these native people to places foreign to their cultural knowledge and survival strategies.¹⁶ This historical

¹⁰ Fabio Teixeira, Climate change threatens age-old indigenous food systems, says UN, World Economic Forum (last visited June 3, 2024), <https://www.weforum.org/agenda/2021/06/united-nations-highlights-how-climate-change-is-affecting-indigenous-communities/>.

¹¹ *Id.*

¹² S. James Anaya, *International Human Rights And Indigenous Peoples*, 21 ARIZONA JOURNAL OF INTERNATIONAL & COMPARATIVE LAW 13 (2009).

¹³ Randall S. Abate & Elizabeth Ann Kronk, *Commonality among Unique Indigenous Communities: An Introduction to Climate Change and Its Impacts on Indigenous Peoples*, 26 TUL. ENVTL. L.J. 179, 190 (2013).

¹⁴ *Id.* at 180.

¹⁵ *Id.*

¹⁶ Sara C. Aminzadeh, *A Moral Imperative: The Human Rights Implications of Climate Change*, 30 HASTINGS INT'L & COMP. L. REV 231, 255 (2006).

displacement deprived the indigenous communities of their rich natural resources, habitat and lifestyle thereby uprooting their environmental connections.

B. Relocation

Corporations and private business ventures expel these communities from their native places to use their land for their own gains.¹⁷ Even the national governments fail to protect these communities for multiple unfair reasons and discriminately target their historical lands¹⁸ resulting in violent conflicts which often result in killings of indigenous people.¹⁹ Owing to this, they have to restart their life which is not so easy because of the lack of resources they have.²⁰ Moreover, these people also do not often speak the primary language of their country which further perpetuates their inability to relocate.²¹

Climate change forces these communities to migrate to cities or other places and engage in different economic activities for their survival which are distinct from their cultures and identity fostering again a struggle for survival.²² In his paper, Joseph Cauch-Tamay argues that indigenous communities qualify as a particular social group and they shall be treated as environmental asylees.²³ Further, some of these communities have also been environmentally displaced to foreign nations and

¹⁷ Anastasia Moloney, *U.N. lambasts Latin America for abusing indigenous rights*, REUTERS (Jan. 11, 2018), <https://www.reuters.com/article/us-latam-rights-landrights/u-n-lambasts-latin-america-for-abusing-indigenous-rights-idUSKBN1F02J6>.

¹⁸ Marcia Reverdosa et al., *Invasions and illegal exploitation of indigenous lands in Brazil tripled under Bolsonaro, says advocacy group*, CNN (Aug. 28, 2022), <https://www.cnn.com/2022/08/28/americas/brazil-land-invasions-bolsonaro-latam-intl/index.html>.

¹⁹ Maria Martin, *Killings of Guatemala's Indigenous Activists Raise Specter of Human Rights Crisis*, NPR (Jan. 22, 2019), <https://www.npr.org/2019/01/22/685505116/killings-of-guatemalas-indigenous-activists-raise-specter-of-human-rights-crisis>.

²⁰ *To Be Indigenous and a Citizen of Latin America*, WORLD BANK (Aug. 9, 2017), <https://www.worldbank.org/en/news/feature/2017/08/09/ser-indigena-ciudadano-latinoamerica>.

²¹ Julio Cesar Casma, *Discriminated against for speaking their own language*, WORLD BANK (Apr. 16, 2014), <https://www.worldbank.org/en/news/feature/2014/04/16/discriminados-porhablar-su-idioma-natal-peru-uechua>.

²² Arpitha Kodiveri, *Being, Becoming and (Un)Becoming Indigenous? Indigeneity, Human Rights, and Climate Change in India*, 38 WIS. INT'L L.J. 232 (2021).

²³ *Id.* at 271.

relocating them back to their homelands is also not feasible as they face life threat there.²⁴

C. Disproportionate Burden

Looking from Indian perspective, Indian government has maintained that all Indians are indigenous contending that indigeneity is a western concept imposed on post-colonial states.²⁵ Some argue that this stance was taken to ensure cohesion and unity.²⁶ However, one might contend that this stance was taken in response to the confront that recognizing indigenous communities may pose challenge to the claim of state control over forests and natural resources, as such groups have the possibility to use global laws to assert their entitlements to resources and land.²⁷

Indigenous people bear the brunt of the repercussions of climate change, although making minimal contributions to the problem.²⁸ They are disproportionately susceptible to changes in the climate as many of them rely on ecosystems that are especially sensitive to the adverse impacts of climate change and extreme weather events including droughts, floods, heat waves blazes, and cyclones.²⁹

Indigenous communities exemplify the paradox of being perceived as weak while still being a part of the solution. They handle this contradiction as a means of gaining rights while being cognizant of the uneven weight of conservation that they must face. This duality is a handy combination of rights and obligations, but the challenge is that the indigenous groups bear a disproportionate amount of the burden of conservation in contrast to others.³⁰ Determining how to equally spread the cost of conservation is a challenging problem and communication with the communities also indicates the evolving character of indigeneity and the eagerness of younger members of the

²⁴ Joseph Cauch-Tamay, *Indigenous Groups Who Have Been Environmentally Displaced Should Be Considered Environmental Asylees under a Particular Social Group*, 24 RUTGERS RACE & L. REV. 257, 266 (2023).

²⁵ Virginius Xaxa, *Tribes as Indigenous People of India*, 34 ECON. & POL. WKLY. 3589, 3591 (1999).

²⁶ BENGT G. KARLSSON & T.B. SUBBA, INTRODUCTION TO INDIGENEITY IN INDIA 19 (2006).

²⁷ *Supra* note 21, at 236.

²⁸ Elizabeth Ann Kronk Warner, *Working to Protect the Seventh Generation: Indigenous Peoples as Agents of Change*, 13 SANTA CLARA J. INT'L L. 273 (2015).

²⁹ *Human Rights Council, Rep. of the Special Rapporteur on the Rights of Indigenous Peoples*, U.N. Doc. A/HRC/36/46 (Nov. 1, 2017).

³⁰ *Supra* note 21, at 245.

community to deviate from the demands of maintaining forests.³¹ These members sufficiently consider that the ones responsible for bearing the brunt of climate change is not solely their community but the government and corporate contributors to the unhealthy state of environment.³²

Although the claims are brought by different indigenous groups in different legal forums, both claims concentrate on climate change, which, like the heritage of radioactive contamination, “can lead to artistic and indeed physical genocide for contemporary communities, if the damages aren’t completely engaged and retaliated.”³³ Also, like radioactive impurity if banded, as contemplated in Professor Tsosie’s paper, indigenous communities have pitched in little, if anything, to the problem of climate change, yet bear the disproportionate impacts of its negative goods which have the capacity to annihilate indigenous communities and lives.³⁴ Not only are the negative externalities of climate change and radioactive impurity analogous amongst indigenous communities, but these communities may all be part of the dialogue on “transnational immolation areas.”³⁵

V. TRADITIONAL KNOWLEDGE TO MODERN RESCUE

Archana Soreng, an indigenous researcher and youth activist, says that she first heard the term “climate change” a few years ago. However, she rapidly realized that India’s tribal groups had been living climate-friendly lifestyles for millennia. “The contemporary world is essentially ‘hijacking’ these age-old indigenous methods and values in its battle against climate change. So why not give indigenous communities their due credit and a larger leadership role in dealing with climate threats,” she argued.³⁶ As the globe confronts plastic pollution, she believes the world may learn from indigenous cultures who have long utilized alternatives to plastic, such as

³¹ *Id.*

³² *Id.*

³³ Rebecca Tsosie, *Indigenous Peoples and the Ethics of Remediation: Redressing the Legacy of Radioactive Contamination for Native Peoples and Native Lands*, 13 SANTA CLARA J. INT’L L. 203, 208 (2015).

³⁴ *Id.* at 209.

³⁵ *Id.* at 245.

³⁶ Moushumi Basu, *This Indian activist says its time to use indigenous knowledge in the fight against climate change*, WORLD ECONOMIC FORUM (Aug. 17, 2020), <https://www.weforum.org/agenda/2020/08/young-activist-aims-to-bring-indias-tribal-wisdom-to-the-climate-fight/>.

biodegradable plates made from leaves and toothbrushes fashioned from Neem tree twigs or date palm.³⁷

Indigenous Peoples' resilience stems from millennia of interaction and adaptation to environmental change and ecological processes. It is related with improved management, conservation, and biodiversity sustainability, and is thus essential for generating so-called 'nature-based solutions' (NbS).³⁸ The most successful NbS are those that are context-specific and suited to the ecological and cultural requirements of Indigenous areas.

Indigenous peoples have historical knowledge that may be used to comprehend, appraise, and raise awareness of dangers and repercussions. This increases their knowledge and inspires actions that lead to innovative solutions to current problems, so encouraging social revolution.³⁹

Their place-based, intergenerational, and holistic qualities help to address climate change by overcoming the compartmentalized methods that characterize institutional adaptation solutions. Evidence suggests that Indigenous Peoples' co-management and community-based biodiversity management contribute to more equitable, effective, and long-term adaptation results. Indigenous peoples' participation in decision-making offers fresh and historically contextualized methods to tackling unfairness and injustice.⁴⁰

Furthermore, including customary and traditional justice systems of indigenous people improves equality in adaptation policy processes, lowering vulnerability and enhancing resilience. The evidence shows that Indigenous Peoples' activities that promote biodiversity and ecological integrity help in improving food and water security. When indigenous people and their knowledge systems are truly engaged, the efficacy of water and food adaptation alternatives increases.⁴¹

³⁷ *Id.*

³⁸ Rosario Carmona et. al, *Analysing engagement with Indigenous Peoples in the Intergovernmental Panel on Climate Change's Sixth Assessment Report*, 29 CLIMATE ACTION (2023).

³⁹ *Id.*

⁴⁰ *Supra* note 37.

⁴¹ *Id.*

Non-indigenous people have always seen indigenous people as serious “obstacles to the progress of modern civilization.”⁴² One part of indigenous peoples’ colonization has been the dismissal of ancestral understanding of the environment as worthless. Western scholarship, for instance has typically disregarded native people’s traditional knowledge of the environment as “anecdotal, non-quantitative, without method, and unscientific.”⁴³

The disparity in worldviews between dominant civilization and indigenous people makes it difficult for scientists and politicians to completely appreciate traditional knowledge. As an instance, they frequently view traditional knowledge as a single body of knowledge and concentrate on its ecological aspects; however, it is critical to acknowledge that indigenous people regard traditional knowledge as a way of life, and that the spiritual and sustainable elements of conventional wisdom cannot be detached from the ecological wisdom.⁴⁴ Those who possess knowledge are simply considered as “conduits to knowledge that is controlled by spirits and ancestors.”⁴⁵ These notions of inferiority and inequity are tremendously against the dignified existence of indigenous communities and leads them to a life of misery which leads to unaccountable and unjust experiences meted by them.

Indigenous people claim that traditional environmental knowledge is stronger and wider than traditional science, and that it includes a spiritual connection to the environment; hence, traditional science should not be equated with traditional environmental knowledge.⁴⁶ However, because environmental monitoring and observation are fundamental components of conventional ecological knowledge, as well as many scientific research approaches, the two can be combined and strengthened.⁴⁷

⁴² TAIAIAKE ALFRED, *PEACE, POWER AND RIGHTEOUSNESS* (Oxford University Press 1999).

⁴³ George Hobson, *Traditional Knowledge Is Science*, 20 N. PERSP. (1992), <http://www.carc.org/pubs/v20no1/science.htm>.

⁴⁴ Leanne Simpson, *The Colonial Context for the Indigenous Experience of Human-Induced Climate Change*, 2 CRITICAL ETHNIC STUDIES 19 (2016).

⁴⁵ *Id.*

⁴⁶ *What is Traditional Knowledge?*, ARCTIC NATIVE SCIENCE COMMISSION (last visited June 5, 2004), <https://www.nativescience.org/hm/traditional-knowledge.htm>.

⁴⁷ *Id.*

Researchers should incorporate indigenous cultures in all parts of study initiatives that employ their customary ecological knowledge; nevertheless, they should take care not to harm indigenous cultures by imposing Western science on them.⁴⁸

Traditional environmental knowledge provides numerous distinct benefits for climate change strategies and science. The most significant benefits of using conventional environmental wisdom are greater understanding about the environment in the region, opportunities for indigenous communities to have a say when making choices so that they are more likely to endorse and adhere to policies, and the capacity to identify some early effects of the climate change that policymakers and researchers may miss.

First, conventional environmental information comprises ongoing, long-term records of local changes in climate consequences that policymakers and scientists would not otherwise have access to.⁴⁹ This expanded local knowledge base may be utilized for evaluating regional or local vulnerability to climate change and to assist policymakers in establishing adaptation plans to address specific local consequences of climate change.⁵⁰

Science can offer better tests for potential causes of change over large spatial scales, but since science is expensive, it often requires special skills or technology, and is less practicable in remote places such as the Arctic, where the scope of scientific endeavours is often limited.⁵¹ Because scientists are often constrained to short periods of time for data collection, they may miss extreme events that are observed by indigenous people.⁵²

Case studies of how Arctic indigenous people use traditional ecological knowledge to monitor changes they observe in the environment show that “although traditional monitoring methods may often be imprecise and qualitative, they are nevertheless

⁴⁸ *Supra* note 42.

⁴⁹ Henrik Moller et al., *Combining Science and Traditional Ecological Knowledge: Monitoring Populations for Co-management*, 9 *ECOLOGY & SOCIETY* (2004).

⁵⁰ SIRI ERIKSEN & LARS OTTO NAESS, *PRO-POOR CLIMATE ADAPTATION: NORWEGIAN DEVELOPMENT COOPERATION AND CLIMATE ADAPTATION: AN ASSESSMENT OF ISSUES, STRATEGIES, AND POTENTIAL ENTRY POINTS* 14 (CICERO Center for International Climate and Environmental Research 2003).

⁵¹ *Supra* note 48.

⁵² *Id.*

valuable because they are based on observations over long time periods, incorporate large sample sizes, are inexpensive, invite the participation of harvesters as researchers, and sometimes incorporate subtle multivariate cross checks for environmental change.”⁵³

These studies show that while different fundamental assumptions about the world and spiritual beliefs can lead scientists and indigenous people to different conclusions about what is causing problems and how to solve them, they overwhelmingly agree as to the nature of problems.⁵⁴

VI. RESTORATIVE JUSTICE

Gerry Johnstone, a legal expert and proponent of restorative justice, advocates discussing restorative justice’s unique contributions to tackling intergenerational justice issues.⁵⁵ The restorative justice paradigm gives a new perspective on environmental breaches. It does not dismiss the charges lightly, but rather permits us to examine them in a new light. Howard Zehr, the godfather of restorative justice, argues that wrongdoing is more than just a breach of the law; it is “a wound in the community, a tear in the web of relationships.”⁵⁶

A similar concept might be extended to environmental wrongs, allowing them to be viewed as harm to the web of interactions that includes the world as a whole and vulnerable people such as future generations. According to Father Jim Consedine, a restorative justice advocate from New Zealand, this perspective allows us to understand “a world view that says we are all interconnected and that what we do, whether good or evil, has an impact on others.”⁵⁷

Restorative justice emphasizes the need of making atonement for people who have been hurt. The conventional legal system recognizes the need of setting things right, but focuses on the criminal who did the harm. Restorative justice requires healing and

⁵³ Erika M. Zimmerman, *Valuing Traditional Ecological Knowledge: Incorporating the Experience of Indigenous People into Global Climate Change Policies*, 13 NEW YORK UNIVERSITY ENVIRONMENTAL LAW JOURNAL 803, 828 (2005).

⁵⁴ *Id.*

⁵⁵ GERRY JOHNSTONE, RESTORATIVE JUSTICE: IDEAS, VALUES, DEBATES 11-15 (2011).

⁵⁶ HOWARD ZEHR & ALI GOHAR, THE LITTLE BOOK OF RESTORATIVE JUSTICE 20 (2002).

⁵⁷ JIM CONSEDINE, RESTORING JUSTICE: HEALING THE EFFECTS OF CRIME 183 (1999).

apologies to take place with the victims at the center.⁵⁸ The needs of the plaintiffs in restorative justice claims were highlighted in *Juliana v. United States* which included: reassurance, reparation, vindication, and empowerment.⁵⁹

Furthermore, restorative justice emphasizes unstated requirements such as restoring confidence in the government and receiving assurances from the government and governmental entities that they would preserve the future of younger generations to come.⁶⁰ Reassurance from the government is crucial not just for addressing environmental crimes, but also for overcoming “political inertia” in dealing with climate change challenges.⁶¹

The third aspect of restorative justice is how to “relate to and deal with” the wrongdoing.⁶² The conventional technique of ‘punitive isolation’ is deemed ineffectual in changing the offender’s conduct, and more crucially, it is considered “morally inappropriate as a response to fellow members of the community.”⁶³ The present criminal justice system focuses on punishing criminals rather than teaching them about the repercussions of their conduct or generating empathy.⁶⁴

Restorative justice seeks to reform criminals by taking their needs and hurts seriously.⁶⁵ Given that the violator is also an integral part of the community at large, they are held responsible and expected to accept responsibility for their illegal activity in order to reintegrate into society.

The fourth theme of restorative justice is to prepare the community to address conflicts and social problems. The community not only offers “a collective framework”⁶⁶ for

⁵⁸ Chaitanya Motupalli, *International Justice, Environmental Law, and Restorative Justice*, 8 WASH. J. ENVTL. L. & POL’Y 333, 352 (2018).

⁵⁹ HOWARD ZEHR, CHANGING LENSES: A NEW FOCUS FOR CRIME AND JUSTICE 194 (2005).

⁶⁰ *Supra* note 55.

⁶¹ Jan Christoph Minx & Christoph von Stechow, *How Political Inertia Threatens the Paris Climate Accord*, *Huffington Post* (Apr. 22, 2016), https://www.huffingtonpost.com/jan-christoph-minx/paris-climate-accord-politicsjb_9749268.html [<https://perma.cc/W36P-4M67>].

⁶² *Supra* note 54, at 11.

⁶³ *Id.* at 13.

⁶⁴ *Supra* note 57, at 354.

⁶⁵ DANIEL VAN NESS & KAREN STRONG, RESTORING JUSTICE: AN INTRODUCTION TO RESTORATIVE JUSTICE 46 (2015).

⁶⁶ GEORGE PAVLICH, GOVERNING PARADOXES OF RESTORATIVE JUSTICE 85 (2005).

shaping perceptions of crime, victims, and offenders, but it also plays a vital role in creating pressure to resolve problems.⁶⁷

The last theme highlights the need of restorative justice as a less formal way to achieve justice. Johnstone acknowledges that the traditional, court-based formal legal justice system is insufficient for accomplishing restorative aims and recommends comparatively fewer formal methods of attaining justice.⁶⁸

This discussion about restorative justice aims to set a background as to how the injustice meted out to the indigenous communities can be mitigated by resorting to the path of justice. Since, the injustice faced by the indigenous communities is not a fault of their own deeds but has been a consequence of encroachment by multiple invaders and authorities. The wrong done to them cannot be corrected by imposing punitive sanctions on the wrongdoers but can be redressed by making the wrongdoers realise the evil of their actions. This would serve the community in two ways: firstly, the gravity of the harms shall be diluted and; secondly, the efforts to restore and rehabilitate these communities shall no more remain one-sided. Since, the problems also involve moral upliftment that cannot be brought about solely by judicial and governmental actions in this regard. Re-association to environment and culture requires the claims of restorative justice to be met.

However, it is to be noted that the restorative justice claims require wrong to be corrected by teaching the wrongdoers the harmful consequences of their conduct rather than resorting to punitive sanctions. This makes it essential to discuss the injustice meted by the indigenous communities so that it can be corrected by educating the masses about the harmful consequences of communitarian displacement and climate change which not only impacts the lives of native people but also poses long-term threat to the ecosystem as a whole.

A. Testimonial Injustice

First component of assessment of injustice is Testimonial injustice. It is an important part of how we perceive trust in people and organizations such as science and politics.

⁶⁷ *Supra* note 54, at 14.

⁶⁸ *Id.* at 15.

We rely on others' words to comprehend the world and form our own views. However, the speaker's relationship with the hearer is not easy. Speakers, for example, can deceive, lie, or make mistakes, but hearers may have preconceived notions about speakers or refuse to trust them without interacting with their evidence. Accordingly, testifying exposes speakers to faulty replies that deprive individuals of recognitional epistemic goods, compromising their status as knowers.⁶⁹

Colonial invaders firstly attempted to deprive the natives of the worth of their knowledge so that they can be easily subjugated by the colonial masters. Depriving these communities of the worth and significance of their knowledge helped these invaders in penetrating deeper into their conscience and ideologies. The greed of modernization and trap that western knowledge is the pathway to achievement of higher ends made these communities fall into the lure of external manifestations. However, this deprivation from the status of 'being knowers' was not only brought about by using tactical means but also through employment of force to displace these communities which accounts for testimonial injustice.

Professor Tsosie concludes that international fora may be used by indigenous peoples to engage the public in a discourse about the effects of climate change and displacement on their community. Such a debate may be an exercise of "cultural sovereignty."⁷⁰ Furthermore, such exchanges prevent "testimonial injustice," or the exclusion of indigenous community members in favour of scientific and commercial assessments of injury.⁷¹ This further highlights the significance of traditional assessment of problems being faced by these people. Mere scientific valuation of the harms caused to the indigenous people without paying heed to their voices about their primitive status would only lead to shoving off the true responsibility from the institutional shoulders.

Rebuilding trust in institutional efforts is also essential for correcting testimonial injustice as when the remedy is in the hands of the wrongdoer, and correction can be

⁶⁹ *Testimonial Injustice and Trust – A PERITIA Special Issue*, PERITIA (last visited June 6, 2024), <https://peritia-trust.eu/testimonial-injustice-and-trust/>.

⁷⁰ *Supra* note 32, at 326.

⁷¹ *Supra* note 27, at 289.

done only through contribution and support from the wronged, it becomes extremely important to nurture faith in the minds of the wronged to restore the victims to their original status.

B. Environmental Injustice

Another significant strand of injustice associated to indigenous communities is environmental injustice. Truth and justice are the most fundamental human virtues, and they cannot be compromised. Since the 1980s, the environmental justice movement's slogan has been "clean environment, equitable enjoyment."⁷² It is a type of fair treatment for all people on our planet who have the right to life and a healthy environment. Environmental rules and regulations, as well as the right to development, should be administered and executed by the government in an equal and fair manner. According to the Massachusetts Commonwealth, environmental justice is a principle that ensures that everyone has the equal right to be pollution-free and live in a safe and healthy environment.⁷³ It is a good tendency that frequently moves from individuals to the environment, and is also a component of social justice. The constitutional forefathers and mothers of India also stipulated that everyone shall be treated equitably. It is an equitable sharing of the benefits of economic progress.

Environmental justice shifts the attention away from the environment and onto anthropocentric activities like racism and other forms of oppression. It's a point of contention for environmental and social justice organizations. Professor Andrew Dobson addressed this issue in his book *Work Environment and Justice* written in 1998.⁷⁴ He connected sustainability to the issue of social justice, emphasizing the necessity of scientific study in addressing it. Dobson believes that disparity is the most pressing environmental issue on the Earth. The central theme of discourse is distributive and productive environmental justice, which aims to reduce ecological hazards and their distribution, as well as the production of ecological hazards, with

⁷² Parshant Kumar, *Climate Change and Environmental Justice in India*, 5 INT'L J.L. MGMT. & HUMAN. 1901, 1904 (2022).

⁷³ *Id.* at 1905.

⁷⁴ ANDREW DOBSON, *ENVIRONMENT AND JUSTICE* 240 (Oxford University Press 1998).

the ultimate goal of achieving transformative environmental justice, which ensures equality in regional development.

Professor Robert Williams, for example, argues that American environmental law has a set of values that is antithetical to achieving environmental justice for indigenous people because it privileges human values over environmental values and does not incorporate the view commonly held by indigenous people that these values are interconnected.⁷⁵ Indigenous people are consequently “forced to conduct themselves within the framework of the dominant value and legal systems, thereby preventing indigenous visions of environmental justice from guiding human conduct toward the environment.”⁷⁶

Numerous, perhaps even all, indigenous people across the world already have their own intellectual and legal traditions from which to build a self-determined future that includes living in harmony with the Earth. However, global economic institutions and their ‘false solutions’ actively destroy Indigenous peoples, particularly indigenous women, in systematic, continuous, and violent ways. As a result, indigenous people cannot rely on these global, national, and regional economic and political frameworks to achieve climate justice and a sustainable future.⁷⁷ This again brings us to the concern of building trust in the institutional efforts that can be done through active engagement and participation of these communities in correcting environmental injustice. If we keep them aloof from the restorative efforts, their suspicion on the active efforts of the institutional machinery shall never be vanished which will reduce the importance of their contributions in preserving the environment.

When we talk about inclusivity, we cannot seclude this objective from the perspective of justice. Justice in its every form is closely associated with and intricately interwoven with two aspects of equity and those are fairness and awareness. Indigenous communities with their own set of customs and habits, and resourceful storehouse of knowledge which combines not only literal but also practical knowledge of

⁷⁵ Robert A. Williams, Jr., *Large Binocular Telescopes, Red Squirrel Pinatas, and Apache Sacred Mountains: Decolonizing Environmental Law in a Multicultural World*, 96 W. VA. L. REV. 1133 (1994).

⁷⁶ *Id.*

⁷⁷ Deborah McGregor et. al, *Indigenous environmental justice and sustainability*, 43 CURRENT OPINION IN ENVIRONMENTAL SUSTAINABILITY 35 (2020).

environment when neglected and not paid due attention which is requisite, not only fosters injustice to such community but also perpetuates in the form of injustice to the society as a whole. Therefore, new knowledge combined with traditional knowledge, in association with mutual trust and synergies shall lead to correction of injustice, conferment of justice and preservation of environment.

VII. STANCE OF INDIAN JUDICIARY ON THE RIGHT TO A HEALTHY ENVIRONMENT AND FREEDOM FROM ADVERSE EFFECTS OF CLIMATE CHANGE

The Fifth Report of the Intergovernmental Panel on Climate Change (IPCC) indicated and asserted with great confidence that human activities are causing global warming.⁷⁸ Klaus Toepfer, former United Nations Environment Programme (UNEP) Executive Director, stated that “human rights cannot be secured in a degraded or polluted environment.”⁷⁹ He aptly puts forth that the existing environmental problems are an impediment in the exercise of the basic fundamental rights, especially of the indigenous communities who have least to contribute but maximum to repent of adverse climatic changes.

Indian perspective on the issue of safeguarding the rights of indigenous communities and preventing harmful impact of environmental hazards on them is reflected in the verdicts of the apex court. The Hon’ble Supreme Court of India has always played the role of champion of rights and saviour of justice. In *M K Ranjitsinh v. Union of India*,⁸⁰ the apex court advocated for “the right to a healthy environment and the right to be free from the adverse effects of climate change.” The court reiterated its verdict in *M.C. Mehta v. Kamal Nath*⁸¹ and emphasised that Articles 48A and 51A(g) must be interpreted in light of Article 21 of the Constitution.

Article 48A provides that “the State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country” and clause (g)

⁷⁸ Rebecca Bratspies, *Do We Need A Human Right to a Healthy Environment?*, 13 SANTA CLARA JOURNAL OF INTERNATIONAL LAW 31, 33 (2015).

⁷⁹ *Id.* at 51.

⁸⁰ 2024 SCC OnLine SC 570.

⁸¹ (2000) 6 SCC 213.

of Article 51A stipulates that “it shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures.” Although both of these constitutional provisions are non-justiciable, however, they are indicative of the constitutional recognition of the significance of the natural world. The importance of environment as elucidated and reflected in these articles takes the configuration of a right in the essence of Article 21 as the *right to life* and Article 14 which advocates for *equality before the law*. These two fundamental rights thus become the salient sources of the “the right to a healthy environment and the right to be free from the adverse effects of climate change.”⁸²

Moreover, in *Virender Gaur v. State of Haryana*,⁸³ the apex court conferred a responsibility on the shoulders of the State to maintain ecological balance and a hygienic environment. Inequality poses itself in multiple shades when the discourse shifts to the environmental rights of the indigenous communities. Their right to equality is violated in a manner that it becomes extremely difficult to remedy it. The court while addressing the concerns of rising sea level due to climate change in *Karnataka Industrial Areas Development Board v. C. Kenchappa*⁸⁴ noted this issue.

Further it exemplified that when sea levels rise and oceanic problems ensue, the people of indigenous communities residing near the sea shores and near islands shall be at a greater disadvantageous position than the people residing somewhere in the middle of country.⁸⁵ Since these communities live a traditional life and are comparatively differently dependent on their lands than the persons residing in urban areas, they are more prone to loss of their culture and lifestyle associated to it.⁸⁶ This mandates especial attention to be paid to the problems of these native people and appropriate efforts to be taken to ensure their survival and dignified living.

⁸² *Supra* note 79, at 12.

⁸³ (1995) 2 SCC 577.

⁸⁴ (2006) 6 SCC 371.

⁸⁵ *Supra* note 79, at 14.

⁸⁶ *Id.*

The court also recognised the role of participation from indigenous communities in conservation of environment. In *Lafarge Umiam Mining (P) Ltd. v. Union of India*,⁸⁷ following its verdict in *T.N. Godavarman Thirumulpad v. Union of India*,⁸⁸ the court mentioned that when it comes to conservation of forests, indigenous communities have special knowledge with regards to the fact that how limestone mining shall be carried out without causing environmental degradation. This fosters the idea that the native and indigenous communities know how a balance shall be maintained between economic and environmental stability.

Moreover, in *Orissa Mining Corpn. Ltd. v. Ministry of Environment & Forests*,⁸⁹ the court expressed the concern that the members of indigenous communities are unable to access justice as many of them are totally unaware of their rights and remain totally aloof from the mainstream society. This is related to the concerns of testimonial injustice where the deprivation of knowledge is in itself a source of injustice. Therefore, awareness is also an extremely important component of these indigenous communities' struggle for rights.

Various verdicts by the apex courts reflect a national stance as to how the rights of these communities are being violated. Association of environmental and human rights of the indigenous communities to fundamental rights gives them an enforceable right against the state which bounds the state to mitigate their problems and take concrete steps to redress their problems. However, integral to the exercise of such rights is the awareness about the existence of such rights. This requires that emphasis shall be on both awareness and adaptation.

VIII. CONCLUSION AND SUGGESTIONS

Humanity as a whole is dependent on a congenial environment for its survival and sustainable development. When we try to put ourselves at a higher pedestal than the nature considering ourselves to be more technologically advanced than our fellow human beings, we not only sow the seeds of destruction for ourselves but also nurture

⁸⁷ (2011) 7 SCC 338.

⁸⁸ (2009) 17 SCC 178.

⁸⁹ (2013) 6 SCC 476.

the evil for the indigenous communities and the environment. The inconsiderate actions of certain technologically advanced human communities have caused irreparable harms to the traditionally rooted indigenous communities and affected their linkage to the environment.

Even more disheartening is the lack of response from the institutional side be it in the governmental sector or the sensitivity from private enterprises. The sheer capitalistic and materialistic mindset surrounding the conscience of sentient beings is paradoxically reflective of unconsciousness on their part regarding the nature and ecosystem is regretful. The contemporary need is to address the challenges surrounding the human species as a whole and sharing the burden disproportionately being placed on the shoulders of that segment of population which contributes least to the grief of the environment. The changing climate is impacting their lifestyle in a manner that threatens their survival which is posing challenge to the extinction of a culture and segment of sapiens as a species.

The injustice being meted out to the indigenous communities is a blot on the face of humans claiming to carry humanity in their hearts and actions. These communities still rooted in their culture carry and imbibe such traditional knowledge which associates them closely to the environment and this association is comparatively stronger than the human population which is residing in species and leading a modern lifestyle. Neglecting the resourceful wisdom that these communities hold which could help the scientific developments in being more helpful in fighting against environmental catastrophes and climate change is an impeding ideology. Therefore, to progress in unison, and to adapt and mitigate to climate change, indigenous communities and their contribution to address climate change shall be paid due regard which shall further ensure justice to them and strategic survival for all.

Indian judiciary has always been at the forefront whenever it came to the concern of safeguarding rights of the vulnerable. Through its multiple verdicts, the apex court has highlighted the problems of indigenous communities and emphasized the need of urgent solution. However, judicial efforts in isolation do not serve any purpose

unless proper enforcement mechanism is in place. Therefore, to meet the needs of awareness and adaptation certain concrete measures shall be taken.

Firstly, an institutional organization shall be set-up which is better equipped with facilities for communicating to indigenous communities so that their traditional knowledge can be preserved. This also included overcoming linguistic barriers as many times these communities do not understand the language of the researchers and scientists.⁹⁰ Secondly, education is very essential to redressing environmental problems. Therefore, curriculum in schools shall mandatorily include chapters related to the environmental problems and the concerns of indigenous communities which makes the children know at early age what actions are a hazard to the environment.

Further, masses shall be educated using various seminars and programmes to shed light on the impact of our wrongdoings on the lives of indigenous communities. Educating indigenous communities is also integral to safeguarding their rights. Therefore, proper measures of outreach through governmental measures and remote connectivity through technological means shall be resorted to connect the indigenous communities to the outside world rather than relocating them to farther places away from their native lands. Moreover, such educational programmes for them shall be specially fashioned in indigenous languages.

Another significant issue is restoration and adaption that cannot be brought about in one day. Gradual measures and changes in everyday lifestyle are required to bring long-term sustainable changes to conserve environment. These adaptations include resorting to sustainable living methods such as avoiding use of such goods that are harmful to environment, keeping a check on pollution, and minimising the depletion of non-renewable resources.

Every measure at restoration and adaption requires contribution from the indigenous communities who have long been closely associated to the environment. Their close association shall be beneficial in not only improving their surroundings but shall also assist in securing a healthy ecosystem for the all the living beings. Their sustainable

⁹⁰ *Supra* note 20.

practices and traditional knowledge are something that are a healthy practice for the humans to adopt so that hazardous impacts of climate change on the environment can be minimised. Valuing and propagating the knowledge of indigenous communities shall regenerate their self-worth which will be positive sign towards correction of injustice and restoration of justice. Therefore, appropriate coordinated efforts from the institutional machinery and the indigenous people are a key to sustainable living and healthy environment.

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