

ROLE OF INDIGENOUS PEOPLE IN MITIGATING CLIMATE CHANGE: AN INDIAN PERSPECTIVE

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ABSTRACT

The role of Indigenous People in mitigation and adaptation in climate change has gained significant consideration in recent years, due to their governance practices, different knowledge systems and deep connection with environment and its valuable insights. Indigenous Communities around the world have developed place systems of knowledge and intricate practices such as fire management, agroforestry and water conservation that allows managing ecosystems, conserving biodiversity and adapting to changes of environment. The Intergovernmental Panel on Climate Change (IPCC) through its various reports, including the Fifth Assessment Report (2014) and the Special Report on Climate Change and Land (2019) emphasizes that Indigenous Knowledge is pivotal for enhancing the resilience of ecosystems and communities to climate impacts. The International Work Group for Indigenous Affairs (IWGIA) advances for the rights of indigenous people particularly for climate change, environmental protection, and sustainable development. This research paper explores the role of indigenous people of India and their traditional ecological knowledge in developing strategies for climate change mitigation and adaptation. This study will investigate how the practices of indigenous people can be integrated into contemporary climate policy and modern scientific research. The persistent need of climate action necessitates a multi-faceted approach, and knowledge that's offers a critical perspective in building adaptive capacity and fostering environmental practices. This research will contribute to comprehensive understanding of the value of indigenous knowledge in context of climate change and ensuring the indigenous community acts as key contributors to global climate solutions.

Keywords: Indigenous People, environment, governance, biodiversity, and climate change etc.

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I. INTRODUCTION

The concern of climate change has been the most pressing global issue in recent years. According to the Fourth Assessment Report¹ by the Intergovernmental Panel on Climate Change (IPCC)² pollution by humans particularly greenhouse gases emissions are the key drivers of climate change.³ Industries have contributed significantly over the past 200 years to climate change, on the other hand, the indigenous communities being the minimalist in causing it are often the most vulnerable to the impacts of climate change as they are the closet to the nature.⁴ The migration of the indigenous people to drought lands or less productive lands which are due to historical, social, economic marginalization, political reasons are more prone to climate change.⁵

In the words of a representative of a federation of indigenous peoples Member of the ICCA Consortium: “Indigenous peoples live in nearly all countries on all continents of the world and form a spectrum of humanity, ranging from traditional hunter-gatherers and subsistence farmers to legal scholars. Indigenous peoples number between 300-500 million, embody and nurture 80% of the world’s cultural and biological diversity, and occupy 20% of the world’s land surface.”⁶ “Indigenous peoples are inheritors and practitioners of unique cultures and ways of relating to people and the environment. They have retained social, cultural, economic and political characteristics that are distinct from those of the dominant societies in which they live.”⁷

The Indigenous communities are highly vulnerable to the impacts of climate change, yet their system of traditional knowledge offers valuable mitigating strategies and insights for addressing climate related challenges. This knowledge has passed down through generations in communities to adapt to environmental changes and hence play a key role in climate change mitigation. These communities face inequality and marginalization which pose challenge for future which reduces their ability to effectively respond to climate changes. Furthermore, this weakens the policy making process and overlook their traditional practices and knowledge.⁸

¹ Fourth Assessment Report — IPCC

² IPCC — Intergovernmental Panel on Climate Change

³ Machhi 2008

⁴ Green & Raygorodetsky, (2010)

⁵ Machhi 2008

⁶ Reyes, 2017

⁷ United Nations website on indigenous peoples, <https://www.un.org/development/desa/indigenouspeoples/about-us.html>.

⁸ Asia Indigenous People’s Pact (AIPP), 2012 p:2-3

Their valuable knowledge about climate change adaptation of poor people remains unaided and unidentified by government, developing agencies or international agencies.⁹

Indigenous People:

Indigenous peoples are recognized as the original inhabitants of specific regions, possessing distinct social, cultural, economic, and political characteristics that differentiate them from other populations. They maintain unique relationships with their environments and have historically been marginalized or excluded from mainstream societal structures. International legal frameworks, such as “the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)” and the “International Labour Organization’s Convention No. 169”, do not provide a universal definition of “indigenous peoples.” Instead, they emphasize the principle of self-identification, allowing communities to determine their own status. UNDRIP, adopted in 2007, does not define “indigenous peoples” but asserts in Article 33 that “indigenous peoples have the right to determine their own identity or membership in accordance with their customs and traditions.” This underscores the importance of self-identification in recognizing indigenous status.

Similarly, ILO Convention No. 169, adopted in 1989, applies to “Tribal peoples whose social, cultural, and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations.”

Peoples who are regarded as indigenous on account of their descent from populations which inhabited the country or a geographical region at the time of conquest or colonization and who, irrespective of their legal status, retain some or all of their own social, economic, cultural, and political institutions.

Article 1.2 of the Convention emphasizes that “self-identification as indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which the provisions of this Convention apply.” This approach recognizes the right of communities to self-identify, aligning with the principle of self-determination

“1. ... (a) Tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status

⁹ Christoplos et al., (2009)

is regulated wholly or partially by their own customs or traditions or by special laws or regulations; (b) Peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present State boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

2. Self-identification as indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which the provisions of this Convention apply.”

In 1986, the United Nations Commissioner on Human Rights¹⁰ proposed to identify indigenous peoples as peoples having “historical continuity with pre-invasion and pre-colonial societies that developed on their territories”. Following the 1989 International Labour Organization Convention No. 169, *Concerning Indigenous and Tribal Peoples*, the ‘time factor’ has been further emphasized and indigenous peoples have been noted as traditional peoples “who hold an unwritten corpus of long-standing customs, beliefs, rituals and practices that have been handed down from previous generations”.¹¹

The “2007 *UN Declaration on the Rights of Indigenous Peoples* (UNDRIP)” suggests “a set of guiding characteristics that may assist in the identification of indigenous peoples, which include: self-identification as indigenous nations and/or peoples a shared history of suffering injustices, colonization and land dispossession; a complex web of place-based relationships; language, traditional practices, knowledge, and legal and cultural institutions distinct from those dominant in the national state where they reside;¹² and knowledge, culture and practices that contribute to sustainable governance and management of human relationships with the natural world and beyond.”

II. INTERNATIONAL INSTRUMENTS FOR INDIGENOUS PEOPLE

1.1 “**The United Nations Declaration on the Rights of Indigenous People**”¹³, recognizes and affirms the fundamental rights of indigenous peoples in various concern. “These rights are framed within the broader principle of self-determination and include the right to non-discrimination and equality, the right to maintain and strengthen cultural integrity,

¹⁰ *Study of the Problem of Discrimination Against Indigenous Populations*, 1986 .

¹¹ Mugabe, 1998.

¹² Supra 3

¹³ Adopted by the General Assembly on 13th September, 2007.

territories, and rights over land and natural resources, the right to self- government and autonomy, and the right to free, prior and informed consent, among others.” The main objective of this Declaration is to ensure development of Indigenous People to determine political, social and economic systems.

1.2 **“The International Labour Organization (ILO) Convention No. 169 on the Rights of Indigenous and Tribal Peoples in Independent Countries,”**¹⁴ designed to protect the rights of indigenous people. “This Convention includes provisions on various aspects, for instance the rights to consultation and participation, rights over territories, lands and natural resources, administration of justice and respect for indigenous customary laws. Additionally, it promotes social inclusion of indigenous people and preserves their cultures.”

1.3 **“The International Covenant on Civil and Political Rights (ICCPR)”**¹⁵ mentions particularly about “indigenous people”. ICCPR has applied “certain articles in relation to indigenous rights”, including Article 1, “which addresses the right to self-determination,” Article 16 gives “recognition as a person before the law which includes indigenous people and gives them electoral rights.” Article 27 provides “rights of individual belonging to minorities.” It gives recognition and status to indigenous people in country and formulates the legislative protecting rights and give land rights to indigenous people.

1.4 **“The International Covenant on Economic, Social and Cultural Rights (ICESR)”**¹⁶ contains provisions responsible for monitoring adequate housing, food, education, health, water and intellectual property rights for indigenous communities.

1.5 **“The Convention on the Elimination of all Forms of Racial Discrimination(CERD)”**¹⁷ is an important instrument for the protection of indigenous people. The “Committee on the Elimination of Racial Discrimination” has increasingly focused on indigenous rights with “General Recommendation No. 23” offering guidance on the issue of indigenous peoples’ rights and their situation relation to racial discrimination.

1.6 **“The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)”**¹⁸ specifically addresses “the issues and challenges faced by indigenous women”. The Committee has recognized “the unique vulnerabilities and disadvantages

¹⁴ Adopted by the International Labour Conference on June, 27, 1989.

¹⁵ Adopted by the General Assembly on December 16, 1966

¹⁶ Adopted on December 16, 1966

¹⁷ Adopted on December 21, 1965

¹⁸ Adopted on December 18, 1979

experienced by indigenous women.” Furthermore, the Human Rights Council pays special attention to the condition of indigenous women ensuring their human rights.

- 1.7 **“The Convention on the Rights of the Child”**¹⁹, Article 30 explicitly addresses “the rights of indigenous child”. The indigenous child shall not be “denied the right, in community with other members of his or her group and enjoy her or his culture, to profess and practice his or her own religion or language.”²⁰
- 1.8 **“The Convention on Biological Diversity”**,²¹ Article 8(j) expressly recognizes “their rights over traditional knowledge, innovations and practices related to sustainable use and conservation of biological diversity. It promotes the involvement of knowledge and participation of indigenous community and sharing the benefit equitably deriving from it.”
- 1.9 **“The United Nations Framework Convention on Climate Change (UNFCCC)”**²², aims to “bring stability in greenhouse gas concentrations to avoid dangerous interference with the climate system, focusing on adaptation and mitigations strategies.” A landmark accord of UNFCCC, the Paris Agreement²³ came out to be first international agreement to explicitly acknowledge and mention human rights and particularly of indigenous people. The objective of the Paris Agreement “emphasizes that climate change is a common concern and encourages state to consider their obligations towards human rights and address to climate change impacting largely to rights of indigenous people.” **The Paris Agreement** also emphasize on “the contribution of traditional knowledge of indigenous people and local communities’ incorporation with scientific knowledge to formulate policies and actions to address climate change.”²⁴
- 1.10 **“The Escazu Agreement”** a pact focusing on public participation and access to information and justice in environmental matters. “It encourages States to assist indigenous peoples in making request for information and receive responses in Article 5.4. Article 7 mandates that States uphold their domestic laws and international commitments regarding the rights of indigenous peoples and Article 9 ensures a safe and enabling environment for individuals, groups and organizations advocating for environment and climate change protecting from restrictions and threats.”

¹⁹ Adopted by the General Assembly November , 1989

²⁰ Convention on the Rights of the Child | OHCHR

²¹ Adopted in Rio de Janeiro on June 5, 1992

²² Adopted in 1992

²³ 2016

²⁴ Article 5, The Paris Agreement, 2016

III. ROLE OF INDIGENOUS PEOPLE IN MITIGATION OF CLIMATE CHANGE

Indigenous Peoples manage approximately 25% of the Earth's land, encompassing rich biodiversity and significant carbon storage in soils and biomass. These territories, home to over 70 million Indigenous individuals, are predominantly forested areas vital for preserving their cultures, traditions, and livelihoods. Research indicates that, despite increasing external pressures, ecosystems under Indigenous stewardship often remain healthier and more resilient compared to those outside their management. By safeguarding these ecosystems, which serve as crucial carbon sinks and biodiversity reservoirs, Indigenous communities play an indispensable role in global environmental health. However, their contributions frequently go unrecognized, underscoring the need for enhanced political acknowledgment and inclusion in governance structures.

Recognition at the Bonn Climate Change Conference 2022

At the 2022 Bonn Climate Change Conference, it was concluded that international climate policies would remain ineffective without the active involvement of local populations, particularly the integration of Indigenous knowledge and perspectives. The findings presented in the publication *Nationally Determined Contributions in Asia: Recognizing the Rights, Roles, and Contributions of Indigenous Peoples* highlight the necessity of Indigenous knowledge in formulating effective climate change strategies.

Indigenous Knowledge: A Pillar for Climate Action

Traditionally viewed as victims of climate change, Indigenous Peoples are often overlooked as active agents in combating it. Nevertheless, the ecosystems they manage are critical for both mitigation and adaptation efforts. Over centuries, Indigenous communities have developed adaptive strategies to navigate environmental changes. Nature-based solutions and principles offer vital insights into climate-resilient practices such as agroforestry, disaster preparedness, and water management. Given their expertise, Indigenous Peoples can be potential leaders in decision-making processes for climate change mitigation and adaptation. Incorporating Indigenous knowledge and practices into international and national policies is essential for effective climate negotiations and actions.

UNDP's Support for Indigenous Communities

The United Nations Development Programme (UNDP) has consistently supported Indigenous Peoples and their knowledge systems. Over the past three decades, the Small Grants Programme (SGP), primarily funded by the Global Environment Facility (GEF) and managed by UNDP, has played a leading role in working with Indigenous communities. The programme has invested approximately \$163 million in 5,832 projects benefiting Indigenous communities across areas such as biodiversity conservation, climate change adaptation and mitigation, land degradation, waste management, and international waters.

Additionally, the Global Support Initiative for Territories and Areas Conserved by Indigenous Peoples and Local Communities (ICCA-GSI) has provided direct funding to Indigenous communities in 50 countries, supporting biodiversity conservation, sustainable livelihoods, and resilience to climate change.

The UN Collaborative Partnership on Reducing Emissions from Deforestation and Forest Degradation (UN-REDD) has been instrumental in ensuring that climate actions in the forest sector respect Indigenous Peoples' rights. Led by UNDP, it was the first UN programme to include Indigenous Peoples in governance roles with full decision-making authority. UN-REDD also pioneered the integration of Free, Prior, and Informed Consent (FPIC) into its operational guidelines.

The Equator Initiative acknowledges and highlights the work of Indigenous-led and community-based organizations addressing the climate crisis. For instance, the youth-led Uru Uru Team in Bolivia utilized their knowledge of native plants to create floating rafts that have helped reduce pollution in Uru Uru Lake, a vital resource for their culture and economy.

With funding from the UK's Department for Environment, Food, and Rural Affairs (DEFRA), small grants are being provided to Indigenous communities in Cambodia, Ecuador, and Kenya. These grants aim to support efforts to combat forest degradation and deforestation, which are critical to meeting climate goals.

In the Philippines, UNDP has collaborated with the Indigenous Umayamnon community to combat deforestation and pollution by promoting the cultivation of bamboo and cocoa. The initiative offered training in growing, harvesting, and marketing these crops, supported by the

Adaptation Fund Climate Innovation Accelerator (AFCIA), which provides small grants to scale up local adaptation projects.

In Uganda, a project funded by the Green Climate Fund is combining Indigenous forecasting methods with scientific weather data to enhance the reliability of climate information for local farmers. This approach builds trust and helps farmers make more informed decisions about their agricultural practices.

Through its Climate Promise initiative, UNDP works to ensure that the needs and perspectives of Indigenous Peoples are incorporated into Nationally Determined Contributions (NDCs) and that they actively participate in climate planning and policy processes.

To ensure the protection of Indigenous Peoples' rights, UNDP applies its Social and Environmental Standards to all projects that may impact their human rights, lands, natural resources, cultural heritage, or traditional livelihoods.

PRACTICES OF INDIGENOUS PEOPLE IN MITIGATION AND ADAPTATION OF CLIMATE CHANGE

1. **Forest and Biodiversity Conservation:** Although Indigenous Peoples make up only 5% of the global population, they manage about 25% of the Earth's land, which is home to much of the planet's biodiversity and carbon stored in soil and biomass. Despite increasing external pressures, many forests and ecosystems in Indigenous-managed areas remain in better condition than those outside these regions.
2. **Sustainable Resource Management:** A key example of sustainable resource use by Indigenous Peoples is shifting cultivation, a practice deeply rooted in their cultural traditions. Research has shown that shifting cultivation is an effective means of carbon storage. However, it is often wrongly classified as a cause of deforestation in national policies due to the significant variation in how it is practiced across different communities.
3. **Traditional Knowledge for Climate Adaptation:** Indigenous knowledge and practices play a crucial role in enhancing resilience to climate change. These traditional approaches should guide and inform national strategies for climate adaptation, as they offer valuable insights for mitigating the impacts of climate change.

4. **Passing on Traditional Knowledge:** The efforts of Indigenous communities, particularly women, to pass down traditional knowledge from elders to younger generations are essential for future sustainability. However, many young people are leaving their communities for education or employment, which contributes to a "brain drain" and poses a threat to the continuity of this vital knowledge for climate action.
5. **Food Security and Sovereignty:** Indigenous Peoples provide valuable lessons in building resilient food systems, which can contribute to transforming broader food systems to adapt to climate change.

Despite the protection and contributions Indigenous Peoples offer for climate action worldwide, a concerning trend in recent reports is the failure of climate policies to adequately address land tenure security and the associated risks to traditional livelihoods faced by Indigenous communities.

IV. CONCLUSION AND SUGGESTIONS

Indigenous communities are important portion of the world's biodiversity and carbon reserves, and play a pivotal role in combating climate change. The communities bear the brunt of its adverse effects of climate change due to be direct contact of its nature and socio- economic. Despite contributing minimally to environmental degradation, they often bear the brunt of its adverse effects due to their close ties to nature and socio-economic marginalization. However, their ancestral knowledge and practices, honed over generations to adapt to environmental shifts, offer invaluable strategies for climate change mitigation and adaptation. Integrating Indigenous perspectives into global climate policies is essential for crafting inclusive and effective solutions.

International Recognition and Ongoing Challenges

International frameworks like the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), ILO Convention No. 169, and the Paris Agreement increasingly acknowledge the rights of Indigenous Peoples and their critical role in climate action. Nonetheless, significant gaps persist, particularly concerning land tenure security and the protection of traditional livelihoods within climate policies. The active participation of Indigenous communities in climate decision-making is crucial—not only to uphold their rights but also to enhance the resilience of ecosystems and societies facing climate challenges.

Indigenous-Led Initiatives and Global Impact

Despite enduring inequalities and marginalization, initiatives by organizations such as UNDP, the UN-REDD Programme, and the Equator Initiative underscore the transformative potential of Indigenous-led efforts in addressing climate change. Their sustainable practices—including biodiversity conservation, shifting cultivation, and food sovereignty—serve as models for broader global actions aimed at fostering a more resilient and sustainable future.

Recommendations for Inclusive Climate Action

To effectively combat climate change and build a sustainable world, the contributions and rights of Indigenous Peoples must be fully acknowledged and respected. As both protectors of the Earth and vital actors in climate solutions, Indigenous Peoples should be at the forefront of the global fight against climate change, with their knowledge and perspectives fully integrated into climate policies, strategies, and governance.

1. **Enhance Indigenous Participation:** Ensure direct involvement of Indigenous Peoples in the design and implementation of climate instruments and plans, adopting an intercultural and gender-sensitive approach, and adhering to the principles of Free, Prior, and Informed Consent (FPIC) as outlined in UNDRIP.
2. **Establish Permanent Mechanisms:** Create enduring platforms for Indigenous Peoples' participation in national climate governance, reflecting territorial diversity and specific cultural contexts.
3. **Strengthen Monitoring and Reporting Systems:** Develop systems that facilitate effective engagement of Indigenous knowledge holders, incorporating grievance mechanisms to ensure the inclusion of Indigenous perspectives and understanding of climate change impacts on their communities.
4. **Recognize Indigenous Knowledge Systems:** Affirm and respect Indigenous Peoples' knowledge systems, promoting collaborative efforts with non-Indigenous knowledge systems and co-producing knowledge in alignment with Indigenous protocols and guidelines.
5. **Include Indigenous Representatives in Climate Negotiations:** Ensure representation of Indigenous Peoples in national delegations at climate change conferences and

intergovernmental forums, strengthening the capacities of both UN member states and Indigenous communities for such participation.

6. **Support Indigenous Capacity Building:** Provide resources to enhance Indigenous communities' capacity, grounded in their knowledge systems and customary institutions, to engage in climate action effectively.
7. **Involve Indigenous Representatives in IPCC Processes:** Consistent with the preferences of Indigenous Peoples' organizations, include Indigenous representatives in national delegations at Intergovernmental Panel on Climate Change (IPCC) plenary meetings, including sessions concerning the potential creation of a durable mechanism to ensure direct Indigenous participation in IPCC processes.



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