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Review Article

Indigenous Peoples, Indigenous Knowledge and Their Issues on Climate Change, particularly on REDD+, in Developing Countries

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Abstract

The lands, territories and resources of indigenous peoples (IPs) have been of significant historical importance to their livelihoods, cultures and spiritual identities. Over 370 million indigenous peoples are currently living in 70 countries in the world, mostly in remote, ecologically fragile and marginalized areas that are rich in traditional skills, knowledge and practices. Climate change is a global issue, impacting all livelihood sectors at the national and local levels. The poor and marginalized people, especially indigenous peoples, Dalits and women are in the forefront of its vulnerability and impacts. These people and communities have made the lowest contributions to the greenhouse gases emissions, however, they are the most at risks to its impacts. Furthermore, the policies and programs often marginalize and sideline the voices and issues of these people. This paper attempts to gather, review and analyze the information on indigenous knowledge, issues of indigenous peoples on climate change particularly in REDD+ in developing countries. The paper aims to highlight the REDD+ process in Nepal, its obligations at the national and international level (with cases from Asia, Africa and Latin America) and the indigenous perspectives towards the issues, gaps and challenges within the national and international negotiations.

Keywords: Climate Change; REDD+; Indigenous Peoples; Nepal; Developing Countries

Introduction

Indigenous peoples (IPs) have long historical and spiritual connections to their lands, territories and resources for their livelihoods and welfare. However, they are highly vulnerable to climate change impacts since most of them are living in ecologically fragile, marginalized and remote areas with their traditional skills, knowledge and practices. It is estimated that over 370 million indigenous peoples live in around 70 countries in the World with their distinct and unique cultures, traditions and knowledge. However, the UN system has not officially defined the term 'Indigenous' because of the diversity and uniqueness among indigenous peoples around the world. However, the system has defined some common features of indigenous peoples such as (UNPFii, 2016):

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- Strong historical connections and continuity with lands, territories and surrounding resources from pre-colonial and/or pre-settler societies
- Self-identification as indigenous peoples and also acceptance by the communities in and around them
- Distinct social, economic and political systems together with distinct languages, cultures and traditions
- Distinguished from dominant groups of society
- Maintenance and reproduction of ancestral environments and systems as distinctive peoples and communities

Climate change is a global issue with impacts at the local, national and regional levels. Within developing countries, the poor and marginalized people such as indigenous peoples, women and forest dependent communities living very close to nature and depending on natural resources are the first victims to face the impacts despite the least contributions to Greenhouse Gases (GHGs) emissions. The impacts of climate change are anticipated to become even worse due to the projected increase of the GHGs emissions over the next few decades along with the current pace of economic and industrial activities (Kotru, 2009). The major causes of GHGs emissions are increased industrialization, rapid urbanization, transportation and other development interventions to fulfill human consumption habits. All of these changes exacerbate pollution and imbalances in the natural atmospheric cycle. The primary sources of GHGs emissions are the excessive consumption of fossil fuels and factories mainly in the developed countries. Deforestation, land use changes and forest degradation has been also identified as a major changes.

The governments and international communities have formulated and executed many mitigation and adaptation policies and programs at the international and national levels to minimize the impacts of climate change. But most policies and programs are inadequate, and have further marginalized and sidelined the livelihoods of poor and indigenous peoples (Ojha *et al*., 2016). Reducing Emissions from Deforestation and forest Degradation (REDD/REDD+) in developing countries is one of the strategies that draws significant interest and attention of the policy makers and governments to mitigate the climate change. It is a concept of utilizing the forest in developing countries for carbon sequestration to minimize the impacts of climate change, instead of lessening the emissions at the sources by reducing the extractions, fossil fuels consumption and industrialization. It has been a consistently contentious and controversial issue since its inception. Specifically, developed countries and some multinational companies have promoted and supported it as an effective strategy in mitigating climate change, whereas indigenous peoples, climate justice and environment activists have continuously opposed it as it is a deceitful resolution. Furthermore, it is seen as a new form of 'neo-colonialism' which will indirectly control indigenous lands, territories and resources for the social, political and economic benefits of the developed countries. The carbon offset mechanisms will increasingly control forests, agriculture, soils, and water for their pollution instead of reducing GHGs emission at the sources.

Indigenous peoples have been sustainably managing the forests, lands and territories for generations based on their indigenous knowledge, skills and practices. The community forestry program in Nepal is evidence that the communities can manage the forest better than any other entities. Deforestation and forest degradation is certainly an undeniable issue for many communities, particularly indigenous communities, since their livelihoods, cultures and well-beings depend on it. It is estimated that 90% of the 1.2 billion poor people, including 200 million indigenous peoples, directly depend on forests for fulfilling their livelihood requirements such as food, fuel, fodder, medicine, shelter and other socio-economic and cultural benefits (The REDD Desk, 2016a). Forests are vital for their livelihoods and well-being. It is estimated that REDD+ could minimize the 17-20% GHGs emissions from the forests, playing a significant role in mitigation. However, it hasn't considered the issues and concerns of indigenous peoples and forest dependent communities on how REDD+ affect their land tenure and access to the forest resources and ultimately their livelihoods, cultures and well-beings.

This paper has reviewed and analyzed the information related to indigenous knowledge and practices of indigenous peoples on climate change in general and REDD+ in particular, especially concentrating on online resources to uncover their issues and concerns at the international and national levels. It further reviews and analyzes information on REDD+ process in domestic and international legal obligations, positions of indigenous peoples and forest dependent communities at international and national levels, achievements and remaining gaps, challenges and lessons.

Indigenous Knowledge and Climate Change

Indigenous knowledge and practices play key role in the adaptation, mitigation and resilience building process. It employs a continuous and an iterative process of acquiring knowledge and successful practices through adaptation and resilience. It is also observed that increased climate change impacts and intensity have stressed the continuation of indigenous knowledge, skills and practices. The study conducted by Eldis (based on more than 400 projects, case studies and research activities specifically related to climate change and indigenous peoples) highlighted the varied levels and degree of climate change impacts specifically due to changes in temperature and seasons (Eldis, 2016). Furthermore, indigenous peoples realized the difficulty in predicting rainfall and increased frequency and intensity of

extreme weather events. Indigenous peoples in small islands and low-lying areas have feared of devastating impacts of sea level rises. Very few indigenous peoples have observed the positive impacts of climate change such as increasing temperature resulting appropriateness for producing new crops in the locality.

Due to close relationships of indigenous peoples to the lands, territories and resources, they have been directly facing climate change impacts for several decades. They have been coping and adapting to these changes based on their knowledge and skills to varying degrees of successes. Indigenous peoples in Nepal also collectively adapt to climatic and non-climatic stresses through different coping and adaptation measures, though these adaptation plans, measures and strategies, either short-term or long-term, are often ignored by the government and other agencies. Recently, the Ministry of Science, Technology and Environment (MoSTE - now changed into Ministry of Population and Environment – MoPE) conducted a study on "Indigenous and local knowledge and practices for climate resilience in Nepal" under the Mainstreaming Climate Change Risk Management in Development Program of the ***Pilot Program for Climate Resilience (PPCR)*** (MoSTE, 2015). The study gathered and analyzed information on how indigenous and local knowledge and practices could support climate change adaptation policies and programs. The study was concentrated to the selected cases of indigenous and local knowledge and practices to climate change and development in 18 districts of Nepal.

The role and importance of indigenous and local knowledge and practices was globally recognized only in 2007 in the 4th assessment report of the Intergovernmental Panel on Climate Change (IPCC). Attention has been given to the importance of indigenous and local knowledge and practices, despite the limited understanding among the stakeholders including policy makers, academics and other practitioners (Karki and Adhikari, 2015). The knowledge and practices are mainly concerned with agriculture, livestock, natural resource management including water and forest management, rural transport and infrastructure, human settlement and traditional social institutions, traditional medicine and biodiversity conservation. Despite minimal support, indigenous knowledge and its practices are continually utilized by the communities to deal with climate change impacts.

Indigenous Issues in REDD+ Process in Nepal

The REDD Implementation Center under the Government of Nepal/Ministry of Forest and Soil Conservation (GoN/MoFSC) is the focal agency to implement REDD+ in Nepal. It aims to establish an enabling framework to promote transparent, accountable and equitable service delivery mechanism for conservation and sustainable management of forests and its benefits. However, policy and institutional, financial, capacity development mechanisms along with equity and inclusiveness protocols are the main challenges recognized in implementing REDD+ strategies in Nepal since its inception. The REDD+ process in Nepal is rapidly progressing as it has already developed Emission Reduction Project Idea Note (ER-PIN) without demonstrating any concrete examples fulfilling carbon financing and poverty alleviating objectives. Furthermore, the issues of ownership, rights of the indigenous peoples and fair and equitable benefit sharing mechanisms are not addressed in the process (Osborne *et al*., 2014).

The GoN/MoFSC has developed the REDD strategy and a 3-tiered institutional mechanism for REDD+ implementation. The three tiers include the multi-sectoral and multi-stakeholder coordinating and monitoring committee as the apex body, the REDD+ Working Group at the operational level, and the REDD Implementation Center as the coordinating body. The strategy has identified significant environmental and social risks of REDD+, including potential impacts on indigenous peoples and forest dependent communities due to exposure of forests to the international carbon market. This could lead to involuntary displacement and forced acquisition of indigenous lands and territories, along with other violations of their collective and individual rights including loss of biodiversity, traditional knowledge, skills and occupations. There are issues and challenges concerning lack of clarity on indigenous peoples' customary rights and ownerships, user rights of forest dependent communities, access to and control over the forests in REDD+ in Nepal.

Furthermore, lack of awareness among the communities on the REDD+, carbon business and access to the information are additional issues in Nepal. In Nepalese context, participatory or community forestry is identified as the good practice in forest management sector, however, indigenous peoples and local communities are not yet fully satisfied with the community forest management in different parts of the country. The existing forest tenure systems in Nepal regarding the ownership over the forest carbon stocks are a highly contested issue (Helvetas Nepal, 2011). The REDD+ Working Group was set up with 12 experts (9 from the government agencies, 1 from donor and aid agencies and 2 from civil society groups including indigenous peoples, community forest user groups and others). Nepal Federation of Indigenous Nationalities (NEFIN), the federation of indigenous peoples in Nepal, is also part of this group under the civil society groups. But its voice is unfortunately very weak, since the decisions are made based on the majority of the people represented by different ministries. In that sense, it is just a symbolic participation, not a meaningful participation (Accra Caucus, 2012).

The ER-PIN submitted to the World Bank has also planned series of consultations and focus groups discussions with the central, regional, district and local level stakeholders

including government line agencies, indigenous peoples, women and other communities in the selected districts. The consultation should be focusing on sustainable management of forests, improving land use planning, promotion of renewable energy technologies, promoting of private forestry and alternative livelihood options for indigenous and forest dependent communities (WWF Nepal, 2016). However, it is not certain that there will be effective and meaningful participation of the real beneficiaries or victims.

The multi-stakeholders have been strongly emphasizing the promotion of transparent, inclusive, accountable, equitable and sustainable implementation of REDD+ in Nepal as outlined in the Readiness Preparation Proposal (RPP). It further emphasizes the importance of benefit sharing and multi-stakeholder mechanisms for REDD+. It has been emphasizing appropriate mechanisms for training, education and raising awareness to enhance the active and meaningful participation of multi-stakeholders including indigenous peoples, forest dependent communities, women and Dalits. However, many have argued that the consultation processes for REDD+ in Nepal is ineffective, as it is highly dominated by the government officers while the voices of indigenous peoples' organizations and civil society groups are under-represented.

The strategy specifies that the ownership of forest land lies either with the government or with the private land owners, which is also reflected in the Forest Act (1993). However, there has been no mention of indigenous peoples' rights to their lands, territories and resources and rights to free, prior and informed consent (FPIC) as enshrined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) that the GoN adopted in 2007. Securing rights of the indigenous peoples and resolving the land tenure issues are identified as a challenging task in the strategy, with little discussion on appropriate resolutions. It further fails to provide appropriate resolutions to sort out the issue of carbon rights, ownerships and associated benefit sharing (REDD Implementation Center, 2015).

Indigenous Issues in Domestic and International Legal Obligations

Despite the generations of deeply rooted indigenous cultures, traditions and knowledge in Nepalese societies, the GoN/MoFSC has failed to address indigenous peoples' issues and/or enhance effective participation in the past. This provides one piece of evidence that indigenous peoples have been historically marginalized and discriminated in Nepalese society. Only recently has the interim constitution in 2007 been comparatively promising in terms of reflection of indigenous peoples' issues and rights to some extent. Some of the important articles that reflect indigenous peoples include sections 13.3, 14.1., 14.2, 14.3, 14.4, 21.1, 33 (d) and 35.10. However, it remains a continuous challenge for indigenous peoples to concretize these provisions into the practice. At present, the National Foundation for Development of Indigenous Nationalities (NFDIN) is the independent body, which provides support to indigenous peoples in overall development and programs relating to education, economy, culture, technology, and traditional livelihoods. However, it does not include any provision relating to indigenous peoples' rights to forests and biodiversity (Sherpa *et al*., 2010).

Although the constitution of Nepal has not specifically mentioned climate change or REDD+, it has incorporated the issues of forests, environment, water resources, land and agriculture. It is noteworthy that the constitution includes provisions for the right of every citizen to a clean environment, food security and primary health care facilities (Helvetas Nepal, 2011). Furthermore, it has a specific provision on non-discrimination of citizens based on religions, race, caste, tribe, sex, origin, language and ideology. Indigenous and forest dependent communities depend on forests for their livelihood and welfare, which is essential for their access to clean environment, food security and primary health services. Additionally, forests are important for maintaining socio-cultures and welfare. Indigenous peoples, being citizens of the nation, have the right to a clean environment, food security and primary health care. Furthermore, the constitution promotes cultural diversity and mentions the need to enhance skills, knowledge and rights of indigenous peoples.

Nepal has ratified Indigenous and Tribal Peoples Convention, 1989 (ILO Convention 169) and also voted in favor of the UNDRIP in 2007. It is a continuous struggle and fight for indigenous peoples in Nepal to develop new laws in the new constitution in line with the provisions of the ILO Convention and UNDRIP. The government seems not so serious on these provisions, although they have ratified and voted for. Indigenous peoples and other groups such as Madhesis have disclaimed the newly promulgated constitution of Nepal, and continuously struggle for their identity to be protected by the federal law and promotion of rights of indigenous peoples, Madhesis, Dalits, Muslims, Women and persons with disabilities.

The Forests Act (1993) and Forest Regulations (1995) enacts forest management regimes in Nepal including the provisions of religious forests, community forests, protective forests, leasehold forests among others. It has transferred the rights to empower community based forest management regimes to manage their own resources, which now accounts for 25% of all forest land management (The REDD Desk, 2016b). This act and the provisions therein are still active in Nepalese context, however, the act was declared in 1993, when the concept of REDD+ had not yet emerged, and when issues and concerns of indigenous peoples and forest dependent communities were not yet prominent. Since then, the entire political context and system has changed, while new issues and concerns have emerged, but GoN/MoFSC has continued follow the old and

outdated forest act in Nepal, which needs massive amendment. However, it has the provisions to ensure the rights and interests of its traditional forest users while handling or managing the forests under Chapter 7(2), under the provisions relating to religious forests (MoFSC, 1993). Despite this, indigenous peoples and forest dependent communities are always excluded in the decision-making process and equitable benefit sharing mechanisms.

Likewise, the National Parks and Wildlife Conservation Act of 1973 restricted the indigenous peoples' movements into the parks and reserves after its enactment, thus increasing park and people's conflicts in the park territories. Indigenous peoples and forest dependent people were neither consulted nor was their consent taken before the establishment of the parks and reserves, despite the provision to seek feedback and suggestions of local people/leaders before establishment of national parks or reserves in the act (Section 3 and 3a NPWC, 1973). There were many instances in which indigenous peoples, forest and local communities were forcefully displaced from national parks and reserves, but they have hardly received any compensation or proper resettlement. Furthermore, the issues and concerns of these peoples regarding land rights, restitution for loss of their lands and territories have not yet been resolved appropriately (Sherpa *et al*., 2010).

Issues of Indigenous Peoples in REDD+ in Other Developing Countries

More than 40 countries have been engaged in the REDD+ mechanism of the UNFCCC. Most of these countries have developed or are in the process of developing national REDD+ strategies. These strategies have been developed in consultation with international and/or national stakeholders, consultants and government officials, but little involvement of indigenous and local communities, although the latter is directly and indirectly affected by the REDD+ projects when implemented. Additionally, large number of people, groups and organizations are continuously resisting these projects. Their voices and concerns are often ignored by the developed countries and elites who use REDD+ as a means of deferring action from the industrial sector (Cabello & Gilbertson, 2012).

There are different groups of indigenous peoples with unique views, opinions and philosophies towards REDD+. Some of them believe in "No REDD" whereas others follow "No Rights, No REDD". The first group is strictly against the REDD+. The global alliance against REDD, which is an indigenous environmental network campaign, is strictly against the commodification and privatization of nature including REDD+ and other market based mechanisms for managing biodiversity and conservation offsets. They have a distinctive perception of REDD as 'REAPING profits from EVICTIONS, land grabs DEFORESTATION and DESTRUCTION of Biodiversity' (Global Alliance against REDD+, 2016). This group of indigenous peoples have identified REDD+ as a false solution to the climate change as they believe this allow polluters to buy their way out of reducing their emissions at the sources, which commodify and privatize the nature and forest in the name of carbon trading.

Alternatively, other groups of indigenous peoples have concentrated on their rights to be protected from REDD+. They demand for their sovereign rights to decide based on protection of the individual and collective rights such as rights to lands, territories and resources, customary land tenures, Free Prior and Informed Consent (FPIC) and other rights enshrined in the UNDRIP and ILO Convention 169. Indigenous peoples have been the primary guardians of the forests for generations through sustainable management of forests and resources. It is not just the resources at stake, but also sources of life and welfare associated with their history, ancestry, culture and spirituality. Their unique and distinct identities and cultures are strongly associated with the forests. Thus, indigenous peoples should have the rights to make a decision. In order for this to occur, government and companies should be transparent and provide all information (positive and negative) necessary to the indigenous peoples. Indeed, it is not the government or companies who decide the REDD+ in indigenous lands and territories.

The major issues and concerns of indigenous peoples are evictions from their ancestral lands and territories, the risks of exclusion from the forests, restriction to resource access, the form and distribution of benefits, commodification of the nature and natural resources, and lack of safeguards and meaningful participations. The representatives of indigenous peoples have been participating and negotiating in different international, regional and national conferences and forums to influence and ensure their rights and recognitions in favor of indigenous peoples. Many cases and practices exist at the international and national levels. The concept of "Buen Vivir" (literally meaning "good living") is an important perspective to understand the inter-relationships between humans, particularly indigenous peoples, and nature (Accra Caucus, 2012).

There is much evidence of REDD+ projects, including the carbon credits, agro-fuels and mono-crops, which lead to the massive land grabs, eviction of the people from their ancestral lands and territories, human rights violations, carbon slavery and piracy etc. Some of the examples of land grabs in Africa are the land capture (1/3rd of the land) by carbon trading companies in Mozambique, more than 40% of the forests in Cameroon reserved for REDD+ and 20% of forests in Liberia almost grabbed by a billionaire carbon scam (No REDD Africa Network, 2016). Likewise, the evictions are severe in many developing countries in the name of conservation and development projects, at present, more severely because of REDD+, plantations and mono-cropping. Over 22,000 peasants with their land titles were

violently evicted from their lands in Mubende and Kiboga districts of Uganda by the UK based New Forests Company for the carbon credits (Lang, 2014). It is unfortunate that a total of 500 million acres of land in Asia, Africa, Latin America and the Caribbean was already acquired and negotiated for UN carbon offset schemes with the involvement of the World Bank, on behalf of foreign governments and/or transnational corporations. Many of these deals are mainly for plantations, biofuels, growing crops to be exported to developed countries, causing poor, marginalized communities and peasants to be displaced from their traditional lands and territories, with minimum or no compensation.

Indonesia is the country with the largest tropical rainforest, and 50-70 million indigenous populations living close to the forest. A constitutional court ruling decided that customary use forests are not de facto state forest in 2013, which used to be state owned forest in the forestry law. However, land titling of the forests to the communities is not common and forest tenure is still uncertain for many forest dependent communities. The Indonesian government is highly committed and advanced in the development of REDD+, however, the issues such as insecure land tenure, lack of stakeholder's participation and exploitation of forest resources are still prominent (Global Alliance against REDD+, 2016). Land tenure issues are very difficult to resolve and free, prior and informed consent (FPIC) has not been conducted in Indonesia because it's not yet developed or applied in any REDD+ pilots. The forestry regulations have failed to recognize and respect the right of indigenous peoples to manage and control their traditional lands and territories. Despite the existence of 40 REDD+ pilot projects in the country, the information disclosure has been very poor, not transparent and benefit sharing arrangement was not clear among the government, project developer and local communities (Lang, 2011).

Likewise, in Kenya, the REDD+ project has forcefully evicted Ogiek people from Mau forest. Further, the Ogiek activists were attacked while protesting against land grabs. The African Court on Human and People's rights issued provisional measures to protect Ogiek people from forced eviction in March 2013. Amnesty International was also against the forced evictions. Likewise, Sengwer people of nearby Cherangany Hills were also forcefully displaced from the forests and thousands of their homes were burnt, despite the interim injunction granted in the High Court forbidding such actions. It occurred despite a national, regional and international Appeal and the public statement made by the UN Special Rapporteur on the Rights of Indigenous Peoples urging the Kenyan Government to stop such forced evictions (FPP, 2014). The Kenyan government is keen on obtaining financial compensation from REDD+, causing them to displace the indigenous communities from their traditional lands against international and national laws. The communities are neither meaningfully consulted in relation with their resettlement nor is free, prior and informed consent (FPIC) provided. This kind of forced eviction is a severe violation of the Kenyan constitution and international law on human rights, biodiversity conservation and sustainable use. Even the High Court forbids such evictions until the issue of the community rights to their lands is resolved. Article 63 (d) of the Kenyan constitution recognizes the rights of communities to own ancestral lands traditionally occupied by hunter-gatherers. International appeal from international and human rights organizations from Kenya, Africa and all around the world highlighted this violation of the communities' rights (Lang, 2014).

Similarly, Mozambique has initiated REDD+ in 2008 with unreliable data on deforestation and forest degradation, institutional weakness regarding monitoring and property rights and gaps in human and technical capacity. The country has considerable areas of natural forests (around 40 million ha) (Sitoe *et al*., 2012). The land grabbing is serious in Mozambique as the government allows Brazilian companies for commercial soy cultivation in 60,000 sq. Km, (7.6% of the country) in 4 of its provinces, namely Nampula, Niasa, Zambezia and Cabo Delgado. The contract is for 50 years, with possibility of renewing it for additional 50 years. These provinces are already under pressure from commercial agriculture, industrial plantations, logging, biofuel and mining. Additionally, REDD+ pilots are carried out in these provinces. The land of 150,000 sq. km (19% of the country) has been identified for the REDD+ project under British capital. Other private investors have also submitted applications for REDD+ investments (Nhantumbo, 2011). One of the REDD+ project, named N'hambita Community Carbon Project, implemented by Envirotrade, constitutes multi-generational carbon slavery. The communities have received an annual payment of only USD 63 per family to plant and manage trees for 7 years to offset pollution in Europe and the US. As per the contract, they must continue it for 99 years. That means their children and children's children have to continuously take care of the trees for almost free, which is considered as 'a clear case of carbon slavery'(No REDD Africa Network, 2016).

REDD+ in Peru is considered as a new carbon fever just like rubber and oil palm plantation by the indigenous peoples. The companies, NGOs and brokers are desperate for carbon credits that communities even don't understand. REDD+ is considered as 'carbon piracy' because the companies, NGOs and Middlemen involved in this business for huge profits, but the communities remain unaware of it. The indigenous peoples are extremely uncertain about the transparency and respect of their collective rights and self-determination, though the government and civil societies including the World Bank promise it. Indigenous peoples want to know that either REDD+ will control the industrial

logging, deforestations made by loggers, colonists and oil companies. "REDD+ is a threat to indigenous peoples, our objective is to transform it into an opportunity". The REDD+ process completely failed to address the fundamental rights of the indigenous peoples in Peru. The government's efforts to adequately address the issues and concerns of indigenous peoples, recognize the legal forms in Peru that undermine and weaken the indigenous peoples' rights, and effectively consult with indigenous peoples and their organizations have been futile (Llanos & Feather, 2011).

Positions of Indigenous Peoples in Climate Change Negotiations Particularly REDD+

The human rights aspect has been widely discussed even in climate change negotiations, especially in regards to REDD+. The organizations like the Office of the High Commissioner on Human Rights (OHCHR) also advocate for a rights-based approach to climate change in global policies and measures. The duty bearers should identify the rights-holders and strengthen their capacities as appropriate to enhance or make their claims possible. All the principles and standards relating to international human rights law should guide policies and programming in all subsequent phases.

The Cancun Agreement (COP16) in 2010 was the first agreement under the UNFCCC to acknowledge the human rights based approach in climate change. Indigenous peoples all over the world experience the adverse impacts of climate change, and even climate change mitigation and adaptation measures such as REDD+ may negatively impact them, if the indigenous peoples' human rights are not taken into account (Van de Vanis & Feiring, 2016). Many researchers, groups, networks such as climate justice, environmental activists, indigenous peoples' organizations, civil society organizations as well as the media are against REDD+ in the international forums like the UNFCCC. All of these groups, networks and organizations are making distinctive interventions either to turn the negotiations down or to raise the voices to protect and promote the rights of indigenous peoples, in line with the international human rights instruments such as the UNDRIP and ILO Convention 169. One of the main networks is the International Indigenous Peoples Forum on Climate Change (IIPFCC), which has been at the forefront in making regular interventions and demanding respect, recognition and protection of indigenous peoples' human rights within and beyond the UNFCCC negotiations. The forum has indigenous representatives from Asia-Pacific, Africa, Latin America, North America and other regions. Usually, the forum analyzes and raises the voices for the rights of indigenous peoples. The major interventions of the forum in the UNFCCC are concentrated on following issues (AIPP, 2014):

- Respect the rights of indigenous peoples within a broader human rights framework in climate change policies and actions including REDD+ and others
- Ensure active, effective and meaningful participation of indigenous peoples in the bodies, mechanisms and decision-making frameworks at the local, national, regional and international level through self-selection processes
- Recognition and safeguarding of the collective rights to lands, territories and resources, sustainable livelihoods including shifting cultivation and customary forest management and customary land ownership
- Recognition and respect of indigenous peoples' customary laws, traditional knowledge and forest governance systems including their own system of collective decision, autonomy and self-representation.
- Adopt indigenous peoples' policy by green climate fund and ensure direct access to climate finances therein particularly for adaptation and mitigation activities.
- Ensure stakeholder participation, land tenure, ownership and user rights are enforced in a transparent and effective manner in national forest governance structures and REDD+ processes
- Ensure an equitable benefit sharing mechanism and agreement with explicit collective consent of indigenous communities
- Respect the knowledge and rights of indigenous peoples and members of local and forest dependent communities, including accessible and effective grievance mechanisms at the local and national level.

Recently, researchers at Oxford University identified three tiers of indigenous peoples' marginalization in the UNFCCC conference of parties (COP) processes, including the recent COP22 in Marrakesh. The first tier is the political marginalization, since indigenous peoples are not allowed to self-represent in the COP as they are identified as the observers in the negotiations, meaning they cannot intervene directly as the parties. The nation states speak for indigenous peoples on their behalf, and yet the nation states themselves are mainly responsible for their historical and current marginalization within the national boundaries. The second tier is geographical marginalization, as the space given to indigenous peoples is always outside the main negotiating space in the COP. Although they are allowed to organize the side events, they cannot occupy the main space in the COP. Lastly, they experience economical marginalization, since indigenous peoples lack financial support to participate the COP. As a result, developed nations and wealthy lobbyists dominate the forum. Even

indigenous peoples that are able to receive funding have to usually follow the instructions of the donors. Additionally, indigenous peoples usually require translation services as most of them only speak their native languages, thus requiring additional funding for interpretations and translations (Combert *et al*., 2016).

Indigenous peoples constitute more than 37.2% of the total population in Nepal as per the official census, however, indigenous peoples themselves believe that the numbers is closer to 50% of the population. The NFDIN act has identified 59 official indigenous groups in Nepal, although more than 59 such groups exist within the national boundary. Many of such groups are struggling to preserve their identities, traditions and recognitions of their rights. They have distinct cultures, traditions, livelihood systems and strong connections to their lands, territories and resources. Thus, it is very crucial to sustain indigenous peoples' livelihoods and cultures through strengthening their forest and biodiversity management systems and practices.

Indigenous peoples have unceasingly struggled for respect, recognition and protection of their rights and identities in Nepal in line with the national and international human rights instruments such as UNDRIP, ILO Convention 169 and others. The climate change and REDD+ partnership program under NEFIN is taking the lead in coordination on the issues and concerns of indigenous peoples relating to forests and REDD+ in Nepal, with the support of national and international partners such as International Work Group for Indigenous Affairs (IWGIA), Asia Indigenous Peoples Pact (AIPP), and Indigenous Peoples' International Centre for Policy, Research and Education (TEBTEBBA), International Indigenous Peoples Forum on Climate Change (IIPFCC) since 2009. Indigenous peoples' issues, concerns and positions in relation to REDD+ have been continuously circulated, disseminated, published, presented and advocated in different forums at national and international levels. NEFIN and other indigenous organizations like Nepal Indigenous Women's Federation (NIWF), Youth Federation of Indigenous Nationalities (YFIN), and NGO Federation of Nepalese Indigenous Nationalities (NGO-FONIN) have been persistently advocating for indigenous peoples' rights and positions in Nepal. The position of indigenous peoples in Nepal is also in line within the global context. Additionally, the Emission Reduction Program (ERP) in Nepal is in line with the UNDRIP, ILO Convention 169, CBD 8 (j), Cancun Agreements on REDD+ and Paris Agreement (NEFIN, 2016). The demands for the recognition of rights, full and effective participation of indigenous representatives, respect of free, prior and informed consent etc. have continued since the beginning of the REDD+ process in Nepal. Despite continuous struggling with the support of national and international networks, government often ignores indigenous peoples in bodies, mechanisms and processes.

Gaps, Issues and Challenges

Lack of Effective Policy, Institutions and Governance at the Local Level

The REDD+ policies, institutions and governance decisions are driven by the interests of developed countries and corporations rather than the needs and priorities of developing countries. Mostly, international and national experts and consultants usually formulate the policies in developing countries. In the case of Nepal, few technical experts with limited knowledge of local situations have developed the REDD+ policies/strategies at district and local levels. Furthermore, ongoing political transitions and associated uncertainty have also affected the long-term planning and execution in the forestry sector. The governance structure formed under REDD+ in Nepal is not efficient as the apex body is supposed to meet twice a year, however only two meetings were actually conducted in a 3-year timeframe as reported by the GoN/MoFSC. The representatives of private sector, Dalits, women and landless people are missing from the REDD Working Group. Additionally, there is no systematic approach and transparency when hiring the consultants. Likewise, the observers are usually special interest groups, experts, donors and consulting firms invited haphazardly (Lang, 2014).

Top-down approaches to policy formulation fail to understand the local contexts and the serious concerns of the local and indigenous communities. Many national policies and regulations have restricted the access and sustainable use of natural resources including forest resources, such as prohibition of traditional livelihoods practices of shifting cultivation or rotational agriculture. This has led to food insecurity, loss of biodiversity and associated knowledge and cultures. Thus, REDD+ has serious implications on indigenous peoples in Nepal and other developing countries.

Lack of Human and Technical Capacity

Because of the lack of human and technical capacity, only a few bureaucratic personnel, experts and hired consultants are dominant in the REDD+ process in Nepal. It is mostly accomplished by outsourced experts as guided by funding agencies. The agencies are highly influenced in setting the agenda, networks, timeline and even in the consultation process (Bastakoti & Davidsen, 2015). It is highly technical to measure data on carbon sequestration and establish the mechanisms to receive and disburse international finances for forest conservation. Thus, the human and technical capacities at the subnational and local level are crucial for effective accounting and monitoring of forests, carbon and effective benefit sharing.

Lack of Fair and Equitable Benefit Distribution Mechanism

The economic feasibility and sustainable finance in REDD+ is still unknown. The payment of REDD+ varies with the forest types and ownerships. The cost of REDD+ implementation and the price of carbon credits are uncertain. The payment distribution mechanism for REDD+ is largely dependent on the system adopted at the international level. The GoN/MoSFC has identified two options for the REDD payment – direct payment to the local communities and international payments to the national government and then to the communities. The RPP has established the District Forest Coordination Committees (DFCCs) for the channelization of payments from national to district levels. The government believes that existing multi-stakeholder institutions are ideal, but it has been criticized for being non-inclusive of non-state actors such as indigenous peoples, women, Dalits and forest dependent communities. Some researchers have emphasized land tenure for determining the financial benefits to communities (Rosenbach *et al*., 2013).

Lack of Mechanisms to Protect the Rights of Indigenous Communities

The indigenous peoples, forest dependent communities, women and Dalits have been living in the forest and surrounding areas for generations. Forests provide livelihoods, food, shelter and other multiple benefits to these people. Thus, if REDD+ is implemented in the forests without their consents and consultation, the rights and welfare of these communities will be in danger. These issues and concerns are continuously highlighted and negotiated by them in different national and international forums, events and conferences. Thus, indigenous peoples, women and marginalized communities have suggested the operationalization of accountable and accessible grievance mechanisms

Lack of Access to Reliable Information and Effective Participation

The policy document specifically emphasized the stakeholders' participation in the planning and decision-making process in Nepal. However, the REDD+ process in Nepal is extremely dominated by the embedded interest of forestry bureaucrats, consultants, experts and donors. In the process, the interests and voices of marginalized groups such as indigenous peoples, forest dependent communities, women and Dalits are often largely excluded. It is highly top-down in nature as marginalized groups are generally considered as the recipients, rather than actively and effectively voicing their issues and concerns in the process (Bastakoti & Davidsen, 2015). The reality is that the level of knowledge and access to reliable information about REDD+ and the understanding of associated terminologies among many groups in Nepal is comparatively low, leading to misunderstandings and false expectations (Milledge, 2014).

Conclusions

In conclusion, indigenous peoples are the first to face the climate change impacts. It is realized that climate change negotiations at the regional and international levels are dominated and influenced by the developed and capitalist countries. REDD+ is primarily imposed by the developed countries for their benefits. It is executed in the developing countries without minimizing the carbon emissions at the sources, and instead, it promotes purchasing of equivalent carbon credits, which is very mystifying, complicated and difficult to understand by the general public. However, the developing countries are also following the developed countries because of their interests in the REDD+ finance, which in reality is still uncertain. Since the beginning, many issues, concerns have been raised by different groups mainly on safeguards, REDD+ financing, rights of indigenous peoples and accessibility to the forest resources, non-carbon benefits etc. Furthermore, there are many insincere and criminal cases of land grabbing, evictions, human rights violations for the promotion and execution of REDD+, plantations and carbon credits in Asia, Africa, Latin American and Caribbean countries guided by developed countries and corporations.

The governments in developing countries have initiated and implemented REDD+ without proper respect and resolution of the issues and concerns of indigenous and forest dependent communities. To some extent, the participation of representatives of indigenous and civil society organizations have been ensured, however, their voices and issues are continuously being ignored. REDD+ in Nepal is strongly dominated by a small number of experts and development consultants who portray it as an opportunity to receive benefits from carbon markets and a contribution to the sustainable forest management. It has the limited representation of marginalized groups, including indigenous and forest dependent communities. There is substantial evidence of false practices of REDD+, which impacts the people's lives, livelihoods and welfare even within the national boundary in developing countries. The governments should understand and learn from these situations so that similar cases can be prevented. Instead it is important to focus on meeting the needs and priorities of the most vulnerable groups, including indigenous and forest dependent communities.

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