

Justice-related impacts and social differentiation dynamics in Nepal's REDD + projects



Poshendra Satyal^{a,b,*}, Esteve Corbera^{a,c}, Neil Dawson^a, Hari Dhungana^d, Gyanu Maskey^d

^a School of International Development, University of East Anglia, UK

^b BirdLife International, Cambridge, UK

^c Institute of Environmental Science and Technology, Universitat Autònoma de Barcelona, Spain

^d Southasia Institute of Advanced Studies, Nepal

ARTICLE INFO

Keywords:

Redd +
Social differentiation
Environmental justice
Benefit-sharing
Participation
Recognition
Nepal

ABSTRACT

Policies and projects aimed at Reducing Emissions from Deforestation and forest Degradation, and the sustainable management of forests and the enhancement of forest carbon stocks (REDD +), have been regarded as an opportunity to improve forest governance while supporting rural livelihoods. However, now that REDD + policies are being increasingly implemented, a number of justice-related challenges have emerged, including how social heterogeneity should be approached to avoid deepening the unequal access to land, resources and livelihood opportunities or even violating human rights in rural contexts. Applying an environmental justice lens, this article analyses the experience of three local communities in Nepal participating in REDD + pilot projects, focusing on how indigenous peoples, women and Dalits have participated in and been affected by such initiatives. Our research shows that the studied REDD + pilot activities in Nepal have been, to some extent, able to recognise, empower and benefit certain social groups, indigenous women in particular, whilst Dalits (particularly Dalit women) had a different experience. REDD + projects have had limited impact in addressing more entrenched processes of political discrimination, male dominance in decision-making, and uneven participation driven by spatial considerations or specific social targeting approaches. While the projects examined here have been partially just, and rather sensitive to existing patterns of social differentiation, the complexity of social differentiation still makes it difficult to operationalise environmental justice in REDD + implementation. Hence, we conclude that deficits in distributive, recognition and procedural justice cannot be resolved without first addressing wider issues of social injustices throughout Nepal, historically inherited along the dimensions of class, caste, ethnicity, gender, and spatiality.

1. Introduction

Reducing Emissions from Deforestation and Degradation, sustainable management of forests and enhancement of forest carbon stocks, the so-called REDD + initiative under the United Nations Framework Conference on Climate Change (UNFCCC), has been implemented at national, sub-national and community levels through national strategies and pilot projects in numerous developing countries (Corbera and Schroeder, 2011; Brenton, 2013; Park et al., 2013; Dunlop and Corbera, 2016; Lund et al., 2017). REDD + implementation is expected to provide an opportunity to improve forest governance and support rural livelihoods in the host countries (Mbatia, 2016). Additionally, REDD + policy rhetoric aspires to address issues of equity and justice in the management of tropical forests by protecting the rights, needs and livelihoods of a variety of forest-dependent communities, including the

poor, women, indigenous peoples and other disadvantaged users (UNFCCC, 2011; Sikor and Hoang, 2016). However, concerns have been raised about the potential and actual impacts of REDD + on forest-dependent communities and marginalised social groups as it can limit their access to land and forest resources (Sikor and Hoang, 2016; Hoang et al., 2019). Increasing numbers of implemented pilot projects have shown these anticipated risks to be very real and carry the potential to undermine forest conservation (Myers et al., 2018; Milne et al., 2019; Lund et al., 2017; Massarella et al., 2018; Bayrak and Marafa, 2016; Larson et al., 2018; Saito-Jensen et al., 2014; Poudel et al., 2015). These studies tend to show that the lack of attention to social differentiation is a major issue, particularly in terms of both the inclusion and relative impacts upon minority and historically marginalised groups. Even where interventions have attempted to target disadvantaged social groups, often it has been the wealthiest, most powerful who tend to

* Corresponding author at: BirdLife International, The David Attenborough Building, Pembroke Street, Cambridge, CB2 3QZ, UK.

E-mail address: poshendra.satyal@birdlife.org (P. Satyal).

<https://doi.org/10.1016/j.forpol.2020.102203>

Received 1 March 2019; Received in revised form 9 April 2020; Accepted 4 May 2020

Available online 15 May 2020

1389-9341/ © 2020 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

benefit from such interventions (Saito-Jensen et al., 2014; Lund et al., 2014; Poudel et al., 2015).

In many countries, rural communities comprise complex, hierarchically structured groups based on race, ethnicity, language, religion, age, sex and income groups both in *de facto* and/or *de jure* forms (Doornbos et al., 2000; Iversen et al., 2006; Jain, 2002; McKean, 2000; Ostrom, 1990). Logically, it becomes more difficult to generate equitable processes and outcomes among groups with diverse socio-cultural backgrounds, economic interests, needs and perceptions about resource access (Agrawal and Gibson, 1999; Dolsak and Ostrom, 2003; Poteete and Ostrom, 2004; Ribot et al., 2008; Hobley, 1996; Varughese and Ostrom, 2001). The enduring challenges for ensuring REDD+ is inclusive and equitable (and thereby most effective) involve not only questions of distributional equity, how costs and benefits are realised (Blom et al., 2010), but also whether and to what extent a diversity of actors get to participate in the REDD+ decision-making process at the national and project levels, and the extent to which social groups with distinct identities and practices and especially those who have been historically marginalised are respected and recognised. Indeed, these three aspects are interrelated and an inseparable part of mounting calls for environmental justice in both biodiversity and climate governance (Schlosberg, 2004; Walker, 2012). Evidence from payments for environmental services (PES) programs operating in complex social contexts shows they have tended to be more environmentally successful where local, customary institutions have been afforded a central role in decision making and these have delivered equitable social outcomes (Mahanty et al., 2013; Torres et al., 2013). However, REDD+ has most commonly brought new governance systems with control primarily exercised by state agencies and national or international NGOs. ‘Social safeguards’ attached to REDD+ policies have tended to comprise generic principles to be implemented by non-local actors while customary institutions are overlooked and limited local participation enacted to explore the political dynamics affecting inclusion and social marginalisation (Poudyal et al., 2016; Duchelle et al., 2017; Dawson et al., 2018; Atela et al., 2015; Svarstad and Benjaminsen, 2017).

Past research on REDD+ has taken benefit distribution and opportunity costs at the core of analysis, while issues of socio-cultural contexts, including the relationship of social differentiation and gender have been less explored (Mbatu, 2016; Blom et al., 2010). Recognising this gap in research, this paper focuses on the dynamics of social differentiation and impacts of REDD+ projects in Nepal, particularly their implications for distribution, recognition and procedural justice in a context of socially-differentiated access to REDD+ activities and forest resources based on income, gender, caste and ethnicity (Saito-Jensen et al., 2014; Lund et al., 2014; Poudel et al., 2015). We explore not only how already existing social differences and interactions affect REDD+ projects but also whether and how REDD+ projects take into account such dimensions.

Nepal is an interesting case study to explore the interactions between REDD+ and issues of social differentiation at a village level due to the country's complex social structure and advanced preparedness for REDD+ implementation. In terms of REDD+, the country got formally involved in the programme in 2008 and it is one of the countries that received support from the World Bank's Forest Carbon Partnership Facility (FCPF), the United Nations-REDD program (UN-REDD), and a host of bilateral and multilateral initiatives, and consequently has made significant advances into REDD+ preparedness. Nepal has been finalising policies (including the endorsement of the country's REDD+ national strategy in April 2018, a legal framework and an institutional mechanism for REDD+ implementation) and has been piloting a number of REDD+ projects in community forests that have been managed by local forest user groups for a number of years (Satyal et al., 2019). These projects have been funded by various actors, including the two projects considered in this article. The country's REDD+ ‘Readiness’ Package was approved by the FCPF, and the country obtained additional funding for a second phase of REDD+ preparedness in 2017.

In this new phase, the REDD+ Implementation Centre, established as the key agency for REDD+ under the Ministry of Forests and Soil Conservation (MFSC), has initiated the development of an Emissions Reduction Program Document (ERPD) for a pilot project at the sub-national level in the Terai region, with a plan to craft an emissions reduction purchase agreement to capitalise any realised emission reductions or increases in carbon stocks (RIC, 2016; Satyal et al., 2019). This progress is likely to set processes and standards for other REDD+ projects to roll out in a wider scale in the country.

Nepal's society is differentiated across a number of complex dimensions - class, caste, ethnicity, gender, religion, culture and spatiality. Besides the dimensions of class and gender, which are also prevalent in other countries, the core feature that defines the complexity of the country's population is its caste and ethnic structure, with more than 127 caste and ethnic groups (63 ethnic groups, 20 Dalit groups, 39 non-Dalit caste groups and 5 others – including Muslims) (CBS, 2011).¹ The articulation of the differences between these various groups and heterogeneity-based inequality has been one of the core themes of the political discourses in Nepal (mainly after 1990s) (World Bank and DFID, 2006). In particular, the dominance of high-caste Brahmin-Chhetri groups (comprising 31.2% of population) in the country's political administration institutions, discrimination against Dalits who sit at the bottom of caste hierarchy (comprising altogether 12.6% of population), marginalisation of various indigenous groups (comprising between 35 and 50% of population), and grievances of Madhesis from Terai plains (comprising of 19.8% of population) have been some of the major concerns raised during the last two decades (Satyal, 2013). For example, the Dalits who see themselves as dispossessed of property and denied access to state services and office positions, have been demanding dignity and equal access to and control over resources, privileges and services (Ahuti, 2004; Vishwakarma, 2002). Similarly, the ethnic movement has advocated for the rights of indigenous peoples and has articulated their marginalisation, non-recognition and difficulty in accessing and controlling resources (RRN and CECI, 2007; Satyal, 2013). Likewise, women's groups have been demanding equal rights and equitable participation in all levels of decision-making processes, regardless of the class they are part of. In short, the issue of social differentiation has been at the core of social justice debates in the country in recent years, with demands for equitable development, inclusive growth and participatory democracy.

This sets the scene for our analysis. Section 2 discusses the issues of social differentiation and forest governance in Nepal and develops our analytical framework. Details about the research methodology and case study sites are provided in Section 3. Section 4 discusses our findings on the distributional impacts of REDD+ projects across a variety of social groups. Section 5 discusses issues of recognition of different social groups and their participation in the community-level structures and processes of local decision-making on REDD+. Section 6 discusses the interplay between REDD+ activities and dynamics of social differentiation in the studied villages and Section 7 concludes the article.

¹ Caste groups are vertically stratified by ritual status on the basis of the traditional Hindu system, in which Dalits (often referred to as “untouchables” by the high-caste people or “occupational caste” by others) lie at the bottom of such hierarchical system (Vishwakarma, 2002). On the other hand, ethnic groups (also referred to as “indigenous nationalities” or “indigenous peoples”) are horizontally distributed in space and have their own mother tongue, native area and religious traditions (Gurung, 2003; Whelpton, 2007). For many years in history, the dominance of high-caste groups (mainly the Brahmin-Chhetri) in almost every apparatus of the state's administration made them the only privileged groups in Nepal whereas others, particularly the Dalits remain politically and economically marginalised (Satyal, 2013; Whelpton, 2007).

2. Seeing through an environmental justice lens: social differentiation and forest governance in Nepal

The highly stratified and hierarchical social structure that characterises Nepal's history and national life also has a significant impact on the way common property and natural resources are accessed, managed and controlled (Gilmour and Fisher, 1991; Graner, 1997). Hence it is important to understand how socio-economic and cultural manifestations of inequality can shape natural resource control and use, including the distribution of benefits from REDD+ projects and participation in decision-making.

REDD+ pilot projects in Nepal have drawn upon the 'success' of a national community forestry programme which has evolved over the years. Community forestry user groups ('user groups' hereafter) are established under Nepal's community forestry policy and are responsible for and authorised to manage community forests handed over to them (Poudel et al., 2015; Yadav et al., 2015). At present, there are more than 22,266 user groups formed across Nepal (of which 1072 are run by women-only executive committee members), managing a total of 2.23 million hectares of forests, and involving 2.9 million households (DoF, 2018). However, despite the popularity of community forestry in Nepal, sustainable management of, and equitable access to, local forests has not been the general rule (Adhikari et al., 2014). Empirical evidence suggests that there have been very limited positive impacts on the livelihood of the marginalised groups (e.g. indigenous people, women and Dalits) who are also more dependent on forests. In some instances, the economically well-off households from these groups have actually benefitted more from forestry activities than the intended and targeted people (e.g. poor and disadvantaged households) (Adhikari, 2002, 2005; Adhikari et al., 2004; Malla, 2000; Neupane, 2003; Nightingale, 2002; Lund et al., 2014). This has ultimately resulted in their low levels of participation due to lack of direct benefits from the forests, despite several years of protection (Malla et al., 2003; Nightingale, 2005; Shepherd and Gill, 1999). Equity and justice issues in community forest management have been further compounded by the social complexities of Nepal (Shepherd and Gill, 1999). Community groups of all types managing local forests tend to be heterogeneous in terms of social, cultural and economic facets (Chhetri et al., 2001; Chhetri, 2006).

Given the gap between promise and reality of the community forestry programme in the face of social differentiation, the environmental justice impacts of REDD+ and community forestry in Nepal need to be seen as something that is intricately linked to the way social, cultural and economic relations have evolved over time. A number of REDD+ related studies in Nepal have already raised some concerns related to social heterogeneity and ensuing power relations, including accessibility to resources, benefits and REDD+ decision-making (see Dekota and Mustalahti, 2018; Ojha et al., 2013; Shrestha et al., 2014; Satyal et al., 2019; Poudel et al., 2015; Khatri et al., 2018; Yadav et al., 2015; Saito-Jensen et al., 2014; Lund et al., 2014). In this paper, we seek to contribute to a better understanding the impacts of REDD+ projects on different social groups through the lens of environmental justice, focusing on three aspects: a) distributive justice issues (fair control and equitable distribution of benefits from REDD+ projects); b) procedural justice issues (representation and participation of diversity of rural communities in decision-making about REDD+); and c) justice as recognition (acknowledging distinct identities, status and histories of various social groups, and eliminating any forms of cultural domination) (Walker, 2012; Guha and Martinez-Alier, 1997; Schlosberg, 2004; Sikor and Stahl, 2011).

Most environment and development projects often tend to focus on distribution of benefits while less attention is paid to the more intricate issues of socio-political discrimination and uneven participation. Recognising such partial and insufficient approaches to justice, various environmental justice scholars have highlighted the interrelated nature of the three dimensions and stressed the importance of linking

distributive justice with the specific values, identities, representation and participation exhibited by social groups, particularly the most marginalised (Nussbaum, 2011; Schlosberg, 2012; Sikor and Newell, 2014; Schlosberg et al., 2017; Sikor, 2014). For example, the capability approach to justice looks not only at distribution or procedural justice but also at the provisions of a range of basic needs and processes necessary for individuals to construct a functioning life (Schlosberg et al., 2017; Nussbaum, 2011). Others argue that recognition and procedural aspects are pivotal core issues without which no justice (including distributive justice) is possible (Honneth, 1995; Wood et al., 2018). Recent theorising on recognition, and environmental justice more broadly, even goes further to urge decolonisation of justice and engagement with critical feminist and intersectional approaches (Pellow, 2016; Pulido and Lara, 2018; Anguelovski et al., 2020).

Amid this diversity of environmental justice concerns and approaches, we start with the question of who gets what with the adoption of REDD+ in Nepal's pilot sites. This was pursued in relation to the 'equity triad', the phrase used here to denote the three dimensions of distribution as identified by Osterle (2002): resources, recipients and principles. Resources are the ones valued and claimed by social actors, including financial resources, capacity building or livelihood support, access to decision-making or bundles of rights over forests. Recipients of the resources comprise the claimants, including collectives, individual households, and even a geographical area. Principles correspond to the standards that guide and help assess the distribution of resources – for example, equality or equity defined in particular contexts. Besides the distributional aspects of REDD+ impacts, we investigate who is recognised as a legitimate actor and critically analyse whether and how they get to participate, ranging from simply informing to more active empowerment (Satyal et al., 2019; cf. Arnstein, 1969).

3. Methodology and case studies

The paper is based on in-depth case studies of three forest user groups involved in two REDD+ pilot project initiatives located in two districts of Nepal (anonymised as user group L-1 in the district of Lamjung and C-2 and C-3 in the district of Chitwan; see Fig. 1 for approximate case study locations). Field research activities were undertaken intermittently between 2014 and 2017. We used a variety of methods for data collection, including key informant interviews (both at the district and local levels), stakeholder interviews and focus group discussions (with local users from different social groups), direct observation and review of existing documents (e.g. forest and REDD+ policies, user group's constitution and meeting minutes). In addition, we also conducted household interviews with a randomly selected households in each user group (16 in L-1 and 14 each in C-2 and C-3) who varied in terms of caste, ethnicity, wealth/income and household type (including some female-headed households). The household interview questions were focused on understanding their socio-economic status, livelihoods and experienced impacts from REDD+ projects. Key informant interviews involved district and user group leaders and those involved in REDD+ actions at the community level. In total, there were five key informant interviews conducted in L-1 and four each in C-2 and C-3. For the stakeholder interviews, participants were identified through a snowball technique but ensuring that diverse local users were represented. We started with informal conversations and undertook open-ended interviews with them by using an interview checklist (conducting in total 11 stakeholder interviews in L-3 and 10 in C-2 and C-3). This was followed by four separate focus group discussions in each case study site (12 in total) with a selected group of users.

Interviews and focus group discussions sought to understand how different kinds of villagers coming from a wide range of socio-cultural and economic backgrounds engaged with the REDD+ projects, the activities they were involved in, and their experience of benefit-sharing and participation in REDD+ decision-making. In the selection of

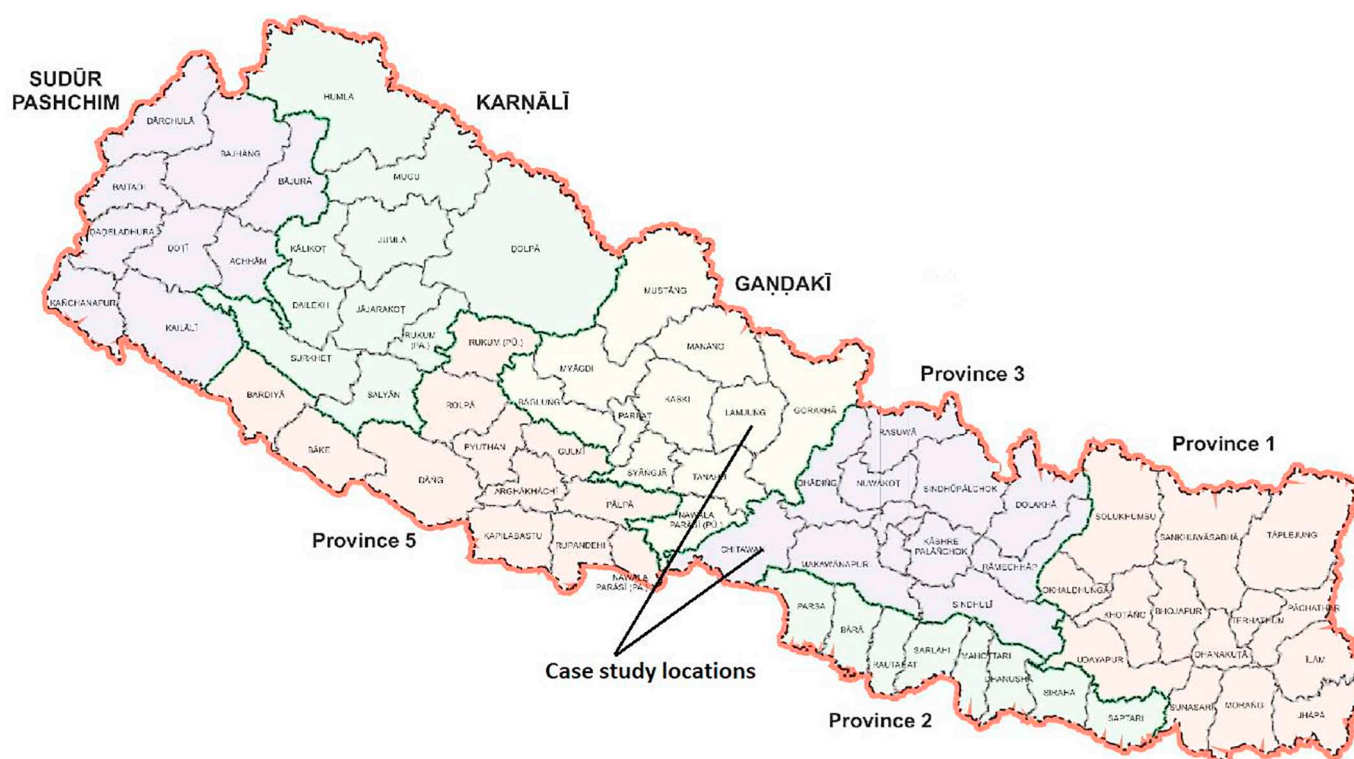


Fig. 1. Map of Nepal showing case study districts - Lamjung and Chitwan. Adapted from <http://dos.gov.np/?albums=maps-of-nepal>

participants for interviews and focus group discussions, we took an inclusive approach to ensure that all types of social groups in the village were represented. For example, focus group discussions included a range of people, including women, indigenous peoples, Dalits as well as “poor” and “poorest of the poor” households (as identified through wealth/poverty ranking categories prepared by the three user groups) and involving separate discussions with them (i.e. indigenous males only, indigenous female only, Dalit males only, Dalit females only).

Additionally, in Chitwan, we also participated in one district-level multi-stakeholder consultation organized by the REDD+ Implementation Centre on various aspects of REDD+ preparedness and forest governance, including issues of social safeguards, participation and benefit-sharing. Data generated from interviews and focus group discussions were recorded in audiotapes and field notes (after obtaining consent from the participants), which were then transcribed and analysed through thematic coding. Besides bringing unique insights from the analysis of research data from these specific REDD+ projects, we also draw on few examples from elsewhere in Nepal to provide a broader picture on the dynamics of social differentiation and REDD+ implementation.

The main criterion for case studies selection was to engage with different types of REDD+ pilot project initiatives and capture a variety of experience and issues pertaining to different resource management and tenure contexts in the two distinct socio-ecological regions of Hills (represented by Lamjung district) and Terai or plain areas (represented by Chitwan district). The first type in Lamjung was a REDD+ pilot project (2009–2016) implemented by the Nepalese Federation of Indigenous Nationalities (NEFIN) under its Climate Change and REDD+ programme, which had received funding from a number of international indigenous networks (e.g. International Work Group for Indigenous Affairs, Asia Indigenous Peoples' Pact, and Indigenous Peoples' International Centre for Policy Research and Education). The project targeted 6 user groups (including L-1) of predominantly ethnic Ghale and Gurung communities (with only two high-caste households) (Table 1) and it was primarily showcased as NEFIN's ‘REDD+

demonstration site’ at the national level, with its main focus on raising public awareness on REDD+ and advancing indigenous concerns and rights in REDD+ development and implementation (NEFIN, 2011). The project also promoted other activities, such as the promotion of traditional skills and practices, and ecotourism development (e.g. home-stay and involving Dalits to welcome and farewell guests through music-playing) with a capacity building component (e.g. training on cookery, weaving etc.).

The second type was led by the International Centre for Integrated Mountain Development (ICIMOD) and it was implemented in three districts of Dolakha, Gorkha and Chitwan during 2010–2013 with funding from the Norwegian Agency for Development Cooperation (ICIMOD, 2011). The REDD+ project targeted 16 user groups (including C-2 and C-3) at a watershed level, covering an area of 8002 ha and predominately inhabited by socially and ethnically diverse communities, as well as other caste groups (Table 1). Among these, C-2 had a majority of indigenous Chepang which is one of the most marginalised groups and continues to practice shifting cultivation in some parts of the watershed and C-3 had a mix of both high-caste and indigenous population. The main objective of the REDD+ project in C-2 and C-3 was to pilot the design and setting up of a governance and payment system for REDD+ implementation in community forestry and was focused on piloting a benefit-sharing mechanism (including direct monetary payment to the user groups for reduced emissions – paid in two instalments in 2011 and 2012 – and indirect benefits such as leadership training for the user group members). The user groups in Chitwan also fall under the Terai Arc Landscape, where Nepal's REDD+ Implementation Centre has got its ERP from the REDD+ project approved in July 2018 by the World Bank.

The three studied user groups were successfully conserving their community forests since 1990s. The forests were officially handed over to them at various dates – for example, L-1 in 1992, C-2 in 2010 and C-3 in 2003. The handover of forests was carried out according to Nepal's Forest Act of 1993, which provides rights for the community to conserve, manage, and utilise forest produce and distribute benefits. All

Table 1
Key features of three case study user groups.

User group	Forest Area (hectares)	Year of hand-over	Number of households by social category				Population		Caste and ethnicity of users	
			Indigenous peoples		High-caste	Total	Male	Female		Total
L-1 (Lamjung) – located in a village ward	337.25	1992	107	29	2	138	539	510	1049	Indigenous group (Ghale and Gurung), Dalits, high-caste Brahmin-Chhetris
C-2 (Chitwan) – located in a village ward	64.8	2010	147	16	8	171	455	446	901	Indigenous group (Chepang, Magar), Dalits, Brahmin-Chhetris
C-3 (Chitwan) – located in two village wards	118.8	2003	122	39	123	284	836	868	1704	Brahmin-Chhetris, Chepang, Magar, Limbu, Newar, Dalits

these groups had their constitution and an operation plan that was normally revised in every five to ten years to guide forest management, including how much produce would be collected, how the produce and funds would be used and distributed in the user group (including provisions for periodic poverty/wealth rankings of the users, with four general categories - “rich”, “medium”, “poor” and “poorest of the poor”). The user groups usually held their general assembly annually and their executive committee would normally meet once a month to discuss and make decisions regarding forest management activities.

With the arrival of the REDD+ pilot projects, these user groups realised that income from their community forests was not limited to the sale of forest products; conserving forest carbon stocks could, in principle, generate new revenues to be invested in other activities (e.g. livelihood support, leadership training). However, REDD+ actions in the two projects involved different resources, recipients, benefit-sharing principles and decision-making mechanisms. For example, in L-1, it was mainly the NEFIN central office in Kathmandu that decided which support activities were to be funded and the amount to be provided for livelihood activities and training. In contrast, in C-2 and C-3, the REDD+ pilot project allocated direct payments to user groups accounting for carbon saved, ethnic diversity, gender and poverty level. Specific activities were discussed and selected at the watershed level by the REDD+ network consisting of the 16 participating user groups. The REDD+ network also mobilized the funds as micro-finance for income generation activities and renewable energy schemes (e.g. biogas and improved cook stoves) for some users (Shrestha et al., 2014).

4. Distributional implications of REDD+ pilot activities

There were different schemes and principles for providing benefits to the local user group members from REDD+ pilot projects in the three user groups. L-1 received funding from NEFIN in the form of livelihood support, awareness raising (e.g. on REDD+ and indigenous rights), leadership development and capacity building (e.g. training on cookery and weaving). As NEFIN targeted primarily the members of the indigenous community in the village, women members (particularly belonging to the indigenous groups) were the major recipients of training activities supported through REDD+. They also received seed funds for local enterprises, especially woollen carpet weaving and homestay (eco-tourism) facility development. The two high-caste households who were also economically well-off did not count as REDD+ project beneficiaries/recipients. Most Dalit members perceived that the support from REDD+ activities was only marginal: there were three Dalit women participants (out of 25) in the training on weaving, and only three (out of 29) Dalit households received support for installing blacksmith ovens, mainly benefitting Dalit males to keep up their traditional occupation. As our household interviews suggest, in L-1, it was mainly the indigenous peoples, including women, and those with “medium” wealth (based on the user group’s wealth ranking) and living in the core village who had positive experience about REDD+ benefits. Dalits and the poorest households, in contrast, often living at the periphery of the village did not perceive the same level of resources and benefits. In many activities, the user group primarily targeted indigenous peoples, which led the Dalit females to report to us: “*the REDD+ is for them (the indigenous people) but not for us.*”

A similar trend of marginalisation (based on caste, poverty and spatiality) was observed in the distribution of indirect benefits. For example, the L-1 user group carried out exposure visits and awareness programs on climate change and indigenous rights for its members. However, there were fixed ceilings for the number of participants and the tendency was to include indigenous groups (both males and females) living in the village “core” and often having “medium” to “high” wealth, while leaving Dalits and poor villagers. Irrespective of different social groups, we also found a pervasive confusion and lack of information at the local level in L-1. Local and district community forestry leaders as well as “ordinary” users in Lamjung mentioned that they did

not have sufficient information about REDD+ projects, and whether the “pilot” projects were “actual” REDD+ activities, especially in terms of the funds pledged from carbon savings for the livelihoods support. Many villagers in the user group did not know how long the REDD+ pilot initiative was going to run for and what expectations they could realistically have about NEFIN support. People were also impatient about the coming of an “actual” REDD+ project, as one user group leader told us in September 2016: *“We have so many pilots here in the name of REDD+ but when is the actual plane coming with the money?”*

In the case of C-2 and C-3, the user groups received direct financial payment as well as additional support on capacity building (e.g. leadership training) and awareness raising from REDD+ pilot activities. A total of NPR 232,000 and NPR 294,000 were respectively paid directly to these user groups in three instalments during 2011–13 (1USD = 100 NPR approximately). As indicated earlier, the ICIMOD consortium paid each user group according to its contribution to reduced emissions, and its level of social differentiation, gender composition and poverty levels, on the following basis (ICIMOD, 2011; Sherpa and Brower, 2015):

REDD+ payment

- = forest carbon enhancement and forest carbon conservation (40%)
- + ethnic diversity (25%: Dalits 15%
- , indigenous peoples 10%) + population of men
- /women (15%) + number of poor households (20%).

This formula above (with 40% weightage to carbon savings and 60% to social indicators) guided the payment of “seed money” to the user groups involved in the REDD+ pilot projects, including C-2 and C-3 (Rana et al., 2012; Saito-Jensen et al., 2014). For example, C-2 received NPR 66,000 as REDD+ payment in the first year while C-3 received NPR 81,000 since the forest area (and hence the saved carbon) and user diversity were higher in the latter. Accordingly, decisions on actual activities, the targeted recipients, or the determination of grants and loans were made through the user group committees. While there was some contestation on whether equality or equity and efficiency or effectiveness should be the main principle for mobilizing REDD+ funds, the participating user groups were allowed to decide on how best to distribute the funds (Sherpa and Brower, 2015).

While deciding on actual allocations of such received money, user group C-2 did not experience local-level contestation, as their users comprised mainly indigenous peoples and Dalits (there were only eight high-caste households, often not falling under the beneficiary groups) and agreed to distribute the funds on the basis of socio-economic criteria (i.e. wealth/wellbeing ranking, caste and ethnicity). Accordingly, the user group disbursed the REDD+ money in a number of activities. For example, it provided buffalo-calf to poor households, giving priority to single women with very young children (both from indigenous and Dalit groups). It also provided funds for a range of activities that often directly benefitted female members of indigenous and Dalit households: vegetable farming, broom grass cultivation, turmeric plantation, and support for improved cook stoves. The user group also leveraged REDD+ funds for biogas installation. While there were previously only 16 households with biogas digesters (out of 171 in C-2), REDD+ activities resulted in 52 new installations (mainly among indigenous and Dalit households). In terms of indirect benefits, while some Dalit households were also included in the awareness raising and capacity development activities (e.g. leadership training to 48 women participants), it was mainly indigenous women (with a majority of “medium” wealth categories) who benefited from these activities.

Unlike in C-2, some members in C-3 complained about the amount paid to the user group and the way money was spent. In fact, the amount provided in the form of pilot payments to C-3 was not significant; it was quite less than the annual earning of the community forest, as the group chairperson told us. Yet, the user group had specific activities dedicated to support “targeted groups” of women, Dalits,

indigenous peoples and the poor households (irrespective of caste and other social groups). For example, the user group provided piglets free of charge for supporting livelihoods of Dalits and supported 30 poorest households with the distribution of buffalo-calf (with 50% grant and 50% loan to each of the recipients). The user group committee also decided to use the funds to support the construction of 10 houses for indigenous people, Dalits and poor people and for biogas installation for “medium” wealth category users. In terms of indirect benefits, most of capacity development and awareness raising activities were not limited to a particular group but included users representing different wealth categories, indigenous peoples, Dalits and high-caste groups.

Support for biogas digesters was provided to the 15 households who were included in the “medium” wealth category of the user group C-3's operational plan, irrespective of caste and ethnicity (five households already had it previously installed). Thus, the main recipients were those who were able to cover part of the expenses and who also had cattle for supply of dung into the biogas. Similarly, support was provided to install improved cooking stoves to five households in the first year of the REDD+ project. The user group also provided NPR 30,000 in the form of a loan to a group of 10 members (belonging to the user group's “poor” and “poorest of the poor” categories) for farming of non-seasonal vegetables with the provision that the amount would be returned in a year while the benefits would remain in the group. However, this scheme did not succeed, and the group had not yet returned the amount borrowed by the time we conducted our research.

The distribution of buffalo-calf to the poor and marginalised groups also did not succeed in providing substantial benefit to its “targeted” beneficiaries (irrespective of social groups they belonged to). Users were still required to pay back half of the cost involved (NPR 10,000) after selling off the buffalo (money was not paid directly due to concerns of being it misused). At least two households from C-3 told us that they could only get NPR 2000 from the buffalo-calf as they had to sell it off soon. A Dalit woman further added that the buffalo-calf proved a burden to her as it became thinner and weaker than when it was bought, as she could not look after it properly (as access to fodder from the forest also became restricted) (interview, March 2016).

Few users from both C-2 (indigenous males) and C-3 (from high-caste group) complained that they had not received any benefits although they contributed to the conservation and management of local forests. They noted that the same households received benefits under multiple headings, for example, for being women and belonging to Dalit group or indigenous peoples, and also categorised as a “poor” household while they received nothing (interview, February 2016). Some local leaders also expressed concerns about whether the support from ad hoc REDD+ activities were effectively used to improve local well-being. A community forest leader from C-3 said:

“The [REDD+] program is good when seen as a whole, but it has not been that effective so far in terms of supporting individual households. While few beneficiaries whom we distributed buffalo-calf, goat or pigs are doing okay, many others have not managed to improve their livelihoods” (interview, July 2016).

In summary, the three case study user groups allocated the direct and indirect resources and benefits of REDD+ in different ways. In general, there was an emphasis to channel benefits to women, indigenous peoples, Dalits and the poor. They also avoided channelling the benefits to “rich” category users while in some activities (e.g. capacity building and exposure visits) the high-caste (in C-3) and “medium” category users also benefitted (in L-1). Nevertheless, the high-caste Brahmin-Chhetri groups received less priority for direct benefits, unless they were poor. The decisions of the user groups reflected the local people's perceptions on who should be supported on one hand and exhibited an attempt to comply with the project's guidelines on the other. However, we also found that there were continuing grievances among user group members regarding benefit distribution and in the process of realising the rights of different social

groups. These grievances were exacerbated when benefits were perceived to be targeted at certain households or those located in the village core, repeated benefits to the same members from different allocation criteria, or when the guidelines for benefit-sharing were not properly followed (MFSC, 2014; RIC, 2016). We also observed some level of elite capture of decision-making in the user group committees, with local villagers not adequately informed about the REDD+ project and its benefits. Difference of views among the users and social groups on how benefits and rights “should” be distributed further aggravated the operationalisation of the benefit-sharing mechanisms employed by the projects and the groups.

5. Issues of recognition and procedural justice

Our interviews made generally evident that there has been an increased recognition of distinct identities and needs of marginalised groups in REDD+ pilots, and environmental governance more broadly, as a result of greater commitment of different REDD+ actors involved (i.e. donors, government agencies, non-governmental and community organizations implementing REDD+ projects) and also due to renewed emphasis in government policies for inclusion of women, Dalits and indigenous peoples (e.g. through amendment in the Community Forestry Guidelines and development of REDD+ Strategy in 2016). Participation opportunities were also generally enhanced in the three user groups, but the level of participation of different social groups varied significantly.

We analysed the level of participation of different social groups in L-1, C-2 and C-3 by looking into the way such groups are recognised and represented as legitimate actors in local decision-making (e.g. in executive committees of user groups that have the power to decide on forest management and REDD+ activities). Table 2 provides the structure of the executive committees of these user groups based on different social categories and gender. As the user group L-1 had predominantly indigenous population (with only two Brahmin-Chhetri households in the entire village), there were no members from the high-caste group in the committee. The representation of Dalits, who were in minority in the catchment villages of the three user groups, varied from 1 to 4 members among the user groups. In terms of gender, the user group C-2 had a women-only executive committee. The representation of female members in the other two user groups varied (7 females out of 19 members in L-1 and 3 females out of 11 members in C-3). Their representation in the executive committee of L-1 and C-3 was about 27%, which was still below the statutory requirement of 33% as per Nepal's new Constitution and also stipulated in the Community Forestry Guidelines.

Irrespective of these figures, female members in C-2 (mostly from indigenous groups) and C-3 (both from indigenous and high-caste groups) reported that they had increasingly attended REDD+ related local meetings, to discuss issues of benefits distribution and the selection of beneficiaries. In the user group L-1, a few women came together to form their own welfare group (consisting of single women members from indigenous group) as they were the main beneficiary of NEFIN's REDD+ project (e.g. in its income generation and training activities). These women are now involved in village management, by promoting

local tourism and developing a micro-finance cooperative in the village. In contrast, Dalits, who are among the poorest and one of the most marginalised groups in Nepal, felt excluded of forest management and REDD+ decision-making in all three user groups. Particularly, Dalit women in the three user groups noted to us that it was extremely difficult for them to gain executive committee positions, evident from “symbolic” representation of only one Dalit female member in each of these user groups. A Dalit female executive committee member from L-1 voiced her suspicion that she was probably invited to become one of the nineteen members only because the regulations required a Dalit or female representation, mirroring observations in other localities in Nepal (Saito-Jensen et al., 2014; Dekota and Mustalahti, 2018; Poudel et al., 2015). She further complained that the concerns of Dalits in particular are generally ignored by others in the village, mainly because they are considered a different group and also “because they live in the periphery” both in spatial and socio-economic terms.

Women representation in key posts of user group executive committees (i.e. chairperson, vice-chairperson, treasurer and secretary) was limited. For example, the executive committee of C-3 had disproportionate dominance of high-caste male members, whereas women, but also Dalits and indigenous groups' members were under-represented (Table 2). Only one woman held a key post (vice-chairperson) out of the 3 female members in the executive committee. Moreover, this woman belonged to high-caste while one executive female member was from Dalit background (as described above). Women's representation in the sub-committees of C-3 was also limited: all 3 members were male in the accounts sub-committee and 2 out of 5 members were female (one high-caste and one indigenous woman) in the advisory sub-committee, with a male member working as the coordinator.

Another issue raised by many interviewees was the heavy influence of major political parties in the formation of executive committees. Due to the lack of local elections over the period 1997–2017, filling up of committees was mainly done through political quotas agreed between these parties. The political influence also affected the renewal of work plans, allocation of funds and the activities adopted by the user groups (e.g. timber sale, forest management and targeted programme for its beneficiaries). As the secretary of user group C-3 elaborated:

“The executive committee needs to be renewed every three years according to our group constitution and the new one was supposed to be formed in 2014. In that year, a general assembly was held, and the name of the proposed candidates were agreed among the three major parties. However, the selection process was halted for a year as another party which had also given two names of its candidates were not included. As a result, only the 2015 general assembly could pass the executive committee as the four parties finally agreed on the names” (interview, March 2015).

Despite these shortcomings, some targeted beneficiaries, particularly indigenous women (albeit, belonging to “medium” wealth category) had a positive experience with decision-making processes in REDD+ pilot projects. Specifically, local indigenous leaders (both men and women) from L-1 reported that they felt more empowered now as they better understood their rights, stipulated by the International Labour Organisation (ILO)-169 (1989) and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (2007). According to these interviewees, such international provisions provided a basis for recognition of their rights and entitlements, which was made more popularised through the implementation of REDD+ projects. As the chair of NEFIN in Lamjung highlighted:

“I feel more empowered being involved in REDD+ for the last three years and can speak with confidence on different issues of indigenous peoples. It is not because of politics but as I am involved in a lot of REDD+ trainings, I got to know more about indigenous rights and provisions” (interview, March 2015).

Similarly, members of the women-managed group C-2 (dominated

Table 2
Structure of executive committees of three user groups.

User group	Number of individuals in the executive committee by social groups				Number of individuals by gender		
	Indigenous groups	Dalits	High-caste	Total	Male	Female	Total
L-1	15	4	0	19	12	7	19
C-2	9	1	1	11	0	11	11
C-3	5	2	4	11	8	3	11

by indigenous women) pointed out that their user group represented a good example of “*how women members when given the opportunity of leadership can equally do everything that male members do or even do it better*” (focus group discussion, March 2016). During the focus group discussion, female members shared the challenges they had to face during the initial phases of the community forestry handover, including the fear of appearing in public speeches, difficulties in administrative processes, and lack of confidence, among others. After their involvement in the user group and REDD+ project, they gradually gained experience through their work on carbon stocks' monitoring, fund distribution, selection of beneficiaries, developing the minutes of the meetings, monitoring group activities, or hosting domestic and foreign visitors who frequented their village for the study of the REDD+ pilot.

Dalit interviewees, however, were less positive than other social groups as regards to participation and recognition issues. For example, Dalit households from L-1 complained that, “*decision-making and benefit-sharing in the user group cannot be considered fair, as it is the user group leaders who decide on behalf of Dalits and poor users while we cannot have a say*” (interview with a Dalit female household head, March 2015). Similarly, the Dalits we interviewed in C-3 suggested to us that, as wealthier and high-caste members hold leadership positions more often, there are less opportunities for the poor and the Dalits to participate in decision-making and raise their specific demands and concerns, which go beyond existing support. Local villagers (including some indigenous members in L-1) also highlighted the domination of certain individual and local elites (from their own group) and agreed that most of the decisions were made by its chairperson (male). However, the user group leaders in L-1 (including its chairperson) contended that Dalits were not participating because they simply “*lacked interest*” since there had not been any significant financial incentives under REDD+ until then. According to the local user group leaders in C-3, knowledge about REDD+ also matters in terms of who gets to participate and who cannot. As their secretary argued: “*Those who know something (about REDD+ and community forest) take interest in participation in the meetings while some (Dalit users, particularly Dalit women) have less knowledge about these issues and do not show interest*” (interview, March 2015). In fact, Dalits and poor users were not aware about REDD+ which was built on existing community forest user group nor they noticed any distinction between the two. As a Dalit woman from C-3 stated:

“I received buffalo-calf from the user group but I do not know anything about REDD+. It's the same user group under which we have been given this support so I am not sure whether the money has come from REDD+ or community forestry” (interview, October 2014).

To summarise, while some social groups (particularly indigenous women) seem to have gained more recognition during the pilot implementation of REDD+ projects in the three user groups studied and have largely experienced increased opportunities for participation in decision-making, other groups (particularly Dalit women) did not have a similar experience. Dalit women still find it difficult to gain key positions in the executive committee and local REDD+ decision-making and their representation and participation remains only symbolic. Even where indigenous women have been represented in the user group executive committee, their real influence in final decision-making is limited and their participation falls short of an empowering experience (except in the case of C-2).

6. Social differentiation and REDD+

While policies and projects aimed at REDD+ have been considered an opportunity to improve forest governance and support rural livelihoods, REDD+ implementation faces a number of challenges, including how social heterogeneity in rural contexts should be approached to avoid reproducing or deepening the commonly unequal access to resources and livelihood opportunities (Myers et al., 2018; Milne et al.,

2019; Lund et al., 2017; Larson et al., 2018). The two sections above demonstrate how social differentiation has affected the distribution of benefits, and the participation of different social groups and their recognition in two pilot REDD+ projects in Nepal. There are mixed experiences among various social groups: indigenous groups (both males and females and those falling under “medium” wealth category under this group) seem to have positive experiences of the REDD+ pilot projects in terms of benefit-sharing (e.g. training in income generation activities, and opportunities for capacity building) and have gained more opportunities for participation and recognition, whilst Dalits (and particularly Dalit women) have felt justice-related grievances. Additionally, and despite the project's efforts to be sensitive to caste, gender and income-related issues, the most relatively well-off households (mostly of “medium” wealth categories) have been those benefiting from REDD+ activities more prominently, at least in comparison to those who belong to the “poor” or “poorest of the poor”. These findings are only partially in agreement with others who have suggested that it is only the high-caste and high-income groups who have benefitted from early REDD+ payments and participated in REDD+ decision-making processes in Nepal (e.g. Dekota and Mustalahti, 2018; Saito-Jensen et al., 2014).

In the studied REDD+ pilot projects, the positive experience of indigenous women suggests that their participation and empowerment has become a more widely accepted social norm in rural Nepal, after the socio-cultural changes that have taken place in Nepal's polity in the last few years (Satyal et al., 2019). In contrast, Dalits' negative experience in the REDD+ pilots suggests the deeply entrenched form of caste-based discrimination that still exists in rural areas of the country as well as other forms of injustices resulting from their continued socio-economic, cultural and political marginalisation. In this regard, we argue that REDD+ implementation needs to go beyond its basic project design to be more sensitive to the cultural specificities and focus on addressing the barriers to participation of Dalits, particularly Dalit women. Our findings also suggest that the emphasis on indigenous peoples may also have worked to discriminate against Dalits and other marginalised groups (also see, Sikor et al., 2019 for similar findings). Some studies have gone further to suggest that emphasis on certain social categories over others (e.g. indigenous peoples over Dalits or indigenous peoples over high-caste groups) can, in some circumstances, intensify competing claims over recognition and entrench social differentiation further (Saito-Jensen et al., 2014; Lund et al., 2014; Fraser and Honneth, 2003). Case studies from elsewhere (e.g. Chomba et al., 2015 in Kenya and Hoang et al., 2019 in Vietnam) also highlight how well-intended REDD+ efforts can inadvertently reinforce past injustices, intensify land use conflicts and entrench a long process of dispossession of marginalised people.

Our results also illustrate that even though the recognition and representation of some groups (e.g. indigenous women) seem to have been largely positive in REDD+ projects, there is still a question on how much influence they can have in decision-making processes (see also Agarwal, 1997; Nightingale, 2002, 2005). While they have been increasingly represented in the forest user group and REDD+ project institutions, political patronage, elite capture, paternalistic traditions and socio-cultural barriers at the village level still prevent their “full and effective” participation, for example in executive committees. The composition of such committees in the studied sites reveals that the decision-making process tends to be controlled by some elite and educated members, including the influential post holders. Even when women and marginalised groups are included in the executive committees, their role appears only as a “token” to legitimise the decisions made by the local elites. Additionally, participation tends to be high for those who can afford the time to go to the user group meetings, whereas the Dalits and poor households continue to be left out. These findings echo other studies focused on forest management and REDD+ implementation in Nepal (see also Dekota and Mustalahti, 2018; Khatri et al., 2018; Paudel et al., 2007; Maraseni et al., 2014; Shrestha and

Shrestha, 2017; Yadav et al., 2015). Some of the grievances of Dalits and marginalised groups have continued to shape their struggles and negotiations at different levels of REDD+ development and implementation (e.g. see Satyal et al., 2019; and Bastakoti and Davidsen, 2017).

The lack of cross-scale communication about REDD+ policies and provisions has also affected the operationalisation of participation mechanisms and processes at the local level. The user groups covered in this study had different experiences of realising the ideals of full and effective participation and potential empowerment of different social groups. The user groups often perceive themselves at the receiving end of the projects and government regulations, thus expected to follow the interpretations about rules and procedure of participation from outside (e.g. government agencies, District Forest Office or civil society organizations, such as NEFIN; see also, Saito-Jensen et al., 2014). For example, there were different views on REDD+ and indigenous rights among the local indigenous peoples at the grassroots in Lamjung and their leaders at district and national levels, with the recognition of indigenous rights being salient locally (see also Dawson et al., 2018; Sikor et al., 2019). There was also a difference of perceptions on what REDD+ is about; for example, for local user groups in Chitwan it was about the carbon money whereas for local leaders in Lamjung it was about advancing indigenous rights.

In a nutshell, our research has shed light on a set of challenges related to addressing social differentiation and promoting environmental justice in REDD+ implementation (Sikor and Newell 2014; Chomba et al., 2015). While REDD+ projects may find it relatively less challenging to address distributional issues once more REDD+ money becomes available in the future, handling more intricate issues of socio-cultural discrimination (the issue of recognition) and uneven participation in decision-making may be more difficult (even though there are efforts to operationalise REDD+ social safeguards). We have shown how caste, ethnicity and gender, combined with wealth and political affiliation, intersect and complicate social differentiation dynamics during REDD+ implementation, which, in turn, also determine recipients' (both individual and group) access to resources and participation in local decision-making (Osterle, 2002; Sikor, 2014). In this regard, we align with Nightingale (2002) when she underscores the importance of integrating gender with other forms of social difference in the study of social power.² We also stress the importance of addressing issues of recognition and procedural justice as a matter of priority and incorporating distributional issues with marginalised groups' capability, i.e. their ability to "function", their well-being, and the substantive opportunities they have "to do and be what they choose" (Nussbaum, 2011; Honneth, 1995).

7. Conclusion

Given the centrality of class, caste, gender and ethnicity jointly shaping power relations, which influence the access to and control of decision-making institutions in Nepal (Satyal, 2013), the question is how the poor and marginalised social groups (women, Dalits, indigenous people) can benefit more equitably and participate fully in REDD+ projects. We have shown that the studied REDD+ pilot activities in Nepal have been, to some extent, able to recognise, empower and benefit certain social groups, indigenous women in particular,

² Just to provide a simple day-to-day example: for a Dalit woman living in village periphery, even fetching village services such as drinking water can be very burdensome. Being domestic household work, fetching water falls customarily under the responsibility of a woman. Living in a harsh and isolated geography, it is not easy to find easily accessible public sources of water. Being Dalit, she is subject to "untouchability", which bars her from getting water from all kinds of public water supplies except an assigned few (see also, World Bank and DFID, 2006).

whilst Dalits (particularly Dalit women) had a different experience. We have also made evident the limited impacts of REDD+ projects in terms of addressing other more entrenched processes of political discrimination, male dominance in decision-making, and uneven participation driven by spatial considerations or specific benefit-sharing approaches. While the projects examined here have been partially just, and rather sensitive to existing patterns of social differentiation, which speaks about the sensitivity of project developers and of local forest user groups towards these issues (including the fact that Nepal's REDD+ implementation builds on the foundation of "community forestry" which can be assumed to have recognised communal tenure with some stake of all users, albeit without an equal decision-making power), the complexity of social differentiation still makes it difficult to operationalise environmental justice in REDD+ implementation.

In rural Nepal, deficits in distributional, recognition and procedural justice in REDD+ implementation represent in many ways the symptomatic features of broad societal and national inequities, historically inherited along the dimensions of class, caste, ethnicity, gender, and spatiality. Social exclusion in Nepal is therefore primarily driven by institutions and processes that uphold or exacerbate these multi-dimensional patterns of discrimination. Hence, inequities in the forestry sector and REDD+ cannot be redressed without first addressing these wider social injustices throughout the country. In other words, we believe that the conditions for the realisation of recognition, and both procedural and distributive fair outcomes in REDD+ projects and forest user groups more broadly require policy reforms and social changes that span beyond the forestry and environmental sectors. Such realisation demands radical changes in the feudal agrarian political structures, as well as progressive action to erode all forms of discrimination, above all the caste- and gender-based prejudices.

Concepts such as equitable and proportional representation have dominated the last decade of political discourse in Nepal and have been enshrined in the 2015 Nepalese Constitution. However, the actual participation by and the empowerment of different social groups in the state's administration and most influential institutions, particularly of those at the bottom of the social hierarchy, is yet to be seen. Through the case study of Nepal's REDD+ implementation, we have highlighted the importance of addressing distributional, socio-cultural (recognition) and procedural injustices i.e. three foundations of environmental justice. We have shown that REDD+ in Nepal, unfolding through policies and projects, needs to be sensitive to the social complexities of the country, and partner with local decision-making bodies, such as the forest user groups, in the design, implementation and monitoring of on-the-ground activities. Specifically, it is critical to pay attention to social differentiation in terms of caste, ethnicity and gender, and to acknowledge its role in determining access to resources and social capital (e.g. kinship, connection to political parties). If ignored and unaddressed by REDD+, social differentiation will continue to (re)produce power, material and social relations that have served to oppress Nepalese marginalised communities for generations.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgments

This research was funded by the 'Conflict and Cooperation over REDD+ in Mexico, Nepal and Vietnam' project, supported by the Netherlands Organisation for Scientific Research (NWO-Netherlands); and the UK Department for International Development (DFID); (Grant No W07.68.415). EC acknowledges the financial support of the UAB-Banco de Santander Talent Retention Programme and of the Spanish

Ministry of Science, Innovation and Universities, through the “María de Maeztu” program for Units of Excellence (MDM-2015-0552). United Nations, World Bank and REDD were not involved. ND acknowledges the funding received from the UK Department for International Development (DFID) and the Economic and Social Research Council (ESRC) (Development Frontiers grant no. ES/N005740/1). We appreciate the comments from the editor and two anonymous reviewers which were useful in refining the earlier drafts of the paper.

References

- Adhikari, B., 2002. Household characteristics and common property forest use: complementarities and contradictions. *J. For. Livelihood* 2 (1), 3–14.
- Adhikari, B., 2005. Poverty, property rights and collective action: understanding the distributive aspects of common property resource management. *Environ. Dev. Econ.* 10, 7–21.
- Adhikari, B., Di Falco, S., Lovett, J.C., 2004. Household characteristics and forest dependency: evidence from common property forest management in Nepal. *Ecol. Econ.* 2004, 1–13.
- Adhikari, S., Kingi, T., Ganesh, S., 2014. Incentives for community participation in the governance and management of common property resources: The case of community forest management in Nepal. *Forest Policy and Economics* 44, 1–9.
- Agarwal, B., 1997. Environmental action, gender equity and women's participation. *Dev. Chang.* 28, 1–44.
- Agrawal, A., Gibson, C., 1999. Enchantment and disenchantment: the role of community in natural resource conservation. *World Dev.* 27 (4), 629–650.
- Ahuti, 2004. The question of Dalit emancipation within a Hindu society. In: Des Chene, M., Onta, P. (Eds.), *Sociological Thought in Nepalese Context*. (Nepali text), Social Science Baha, Lalitpur, pp. 475–521.
- Anguelovski, I., Brand, A.L., Connolly, J.J.T., Corbera, E., Kotsila, P., Garcia-Lamarca, M., Triguero-Mas, M., Cole, H., Baró, F., Langemeyer, J., Perez del Pulgar, C., Shokry, G., Sekulova, F., Argüelles, L., 2020. Expanding the Boundaries of Justice in Urban Greening Scholarship: Toward an Emancipatory, Antisubordination, Intersectional, and Relational Approach. *Annals of the American Association of Geographers* (in press).
- Arnstein, S.R., 1969. A ladder of citizen participation. *J. Am. Inst. Plann.* 35 (4), 216–224.
- Atela, J.O., Quinn, C.H., Minang, P.A., Duguma, L.A., 2015. Implementing REDD+ in view of integrated conservation and development projects: leveraging empirical lessons. *Land Use Policy* 48, 329–340.
- Bastakoti, R.R., Davidsen, C., 2017. Framing REDD+ at national level: actors and discourse around Nepal's policy debate. *Forests* 8 (3), 57.
- Bayrak, M.M., Marafa, L.M., 2016. Ten years of REDD+: a critical review of the impact of REDD+ on forest-dependent communities. *Sustainability* 8 (7), 620.
- Blom, B., Sunderland, T., Murdiyarso, D., 2010. Getting REDD to work locally: lessons learned from integrated conservation and development projects. *Environ Sci Policy* 13, 164–172.
- Brenton, A., 2013. Great powers' in climate politics. *Clim. Pol.* 13 (5), 541–546.
- CBS, 2011. Population Census-2001: National Report. Central Bureau of Statistics, Government of Nepal, Kathmandu.
- Chhetri, R.B., 2006. From protection to poverty reduction: a review of forestry policies and practices in Nepal. *J. For. Livelihood* 5 (1), 66–77.
- Chhetri, R.B., Sigdel, H., Malla, Y., 2001. Country Profile Report for the Forum on the Role of Forestry in Poverty Alleviation: Nepal. Forestry Programme, Food and Agriculture Organisation (FAO) of the United Nations, Rome.
- Chomba, S., Kariuki, J., Lund, J.F., Sinclair, F., 2015. Roots to inequity: how the implementation of REDD+ reinforces past injustices. *Land Use Policy* 50, 2002–2013.
- Corbera, E., Schroeder, H., 2011. Governing and implementing REDD+. *Environ Sci Policy* 14, 89–99.
- Dawson, N., Mason, M., Mwayafu, D., Dhungana, H., Satyal, P., Fisher, J., Zeitoun, M., Schroeder, H., 2018. Barriers to equity in REDD+: deficiencies in national interpretation processes constrain adaptation to context. *Environ Sci Policy* 88, 1–9.
- Dekota, B.P., Mustalahti, I., 2018. Complexities in accessing REDD+ benefits 332 in community forestry: evidence from Nepal's Terai region. *Int. For. Rev.* 20 (3), 332–345.
- DoF, 2018. Database of the Community Forest User Groups in Nepal. Community Forestry Division, Department of Forests, Government of Nepal, Kathmandu.
- Dolsak, N., Ostrom, E., 2003. The challenges of the commons. In: Dolsak, N., Ostrom, E. (Eds.), *The Commons in the New Millennium: Challenges and Adaptations*. Massachusetts Institute of Technology, Cambridge and London, pp. 3–34.
- Doornbos, M., Saith, A., White, B., 2000. Forest lives and struggles: an introduction. In: Doornbos, M., Saith, A., White, B. (Eds.), *Forests: Nature, People and Power*. Blackwell Publishers, Oxford, pp. 1–10.
- Duchelle, A.E., de Sassi, C., Jagger, P., Cromberg, M., Larson, A.M., Sunderlin, W.D., ... Pratama, C.D., 2017. Balancing carrots and sticks in REDD+ implications for social safeguards. *Ecology and Society* 22 (3).
- Dunlop, T., Corbera, E., 2016. Incentivizing REDD+: how developing countries are laying the groundwork for benefit-sharing. *Environ. Sci. Pol.* 63, 44–54.
- Fraser, N., Honneth, A., 2003. *Redistribution or Recognition? A Political-philosophical Exchange*. Verso, London.
- Gilmour, D.A., Fisher, R.J., 1991. Villagers, Forest and Foresters: The Philosophy, Process and Practice of Community Forestry in Nepal. Sahayogi Press, Kathmandu.
- Graner, E., 1997. The Political Ecology of Community Forestry in Nepal. Freiburg Studies in Development Geography, Germany.
- Guha, R., Martinez-Alier, J., 1997. *Varieties of Environmentalism: Essays North and South*. Oxford University Press, Oxford.
- Gurung, H., 2003. Social Demography of Nepal: Census 2001. Himal Books, Lalitpur.
- Hoang, C., Satyal, P., Corbera, E., 2019. “This is my garden”: justice claims and struggles over forests in Vietnam's REDD+. *Clim. Pol.* 19, 23–35.
- Hobley, M., 1996. Participatory Forestry: The Process of Change in India and Nepal. Rural Development Forestry Study Guide 4, Overseas Development Institute, London.
- Honneth, A., 1995. *The Struggle for Recognition: The Moral Grammar of Social Conflicts*. Polity Press, Cambridge.
- ICIMOD, 2011. Operational Guidelines for Forest Carbon Trust Fund. International Centre for Integrated Mountain Development, Kathmandu.
- Iversen, V., Chhetry, B., Francis, P., Gurung, M., Kafle, G., Pain, A., Seeley, J., 2006. High value forests, hidden economies and elite capture: evidence from forest user groups in Nepal's Terai. *Ecol. Econ.* 58, 93–107.
- Jain, N.C., 2002. Heterogeneity and equity: some contradictions and compromises in collective action. In: Paper Presented at the 9th Biennial Conference of the International Association for the Study of Common Property (IASCOP), Victoria Falls, Zimbabwe, 17–21 June 2002.
- Khatri, D.B., Marquardt, K., Pain, A., Ojha, H., 2018. Shifting regimes of management and uses of forests: what might REDD+ implementation mean for community forestry? Evidence from Nepal. *Forest Policy Econ.* 92, 1–10.
- Larson, A.M., Solis, D., Duchelle, A.E., Atmadja, S., Resosudarmo, I.A.P., Dokken, T., Komalasari, M., 2018. Gender lessons for climate initiatives: a comparative study of REDD+ impacts on subjective wellbeing. *World Dev.* 108, 86–102.
- Lund, J.F., Baral, K., Bhandari, N.S., Chhetri, B.B.K., Larsen, H.O., Nielsen, O.J., Puri, L., Rutt, R.L., Treue, T., 2014. Who benefits from taxation of forest products in Nepal's community forests? *Forest Policy Econ.* 38, 119–125.
- Lund, J.F., Sungusia, E., Mabele, M.B., Scheba, A., 2017. Promising change, delivering continuity: REDD+ as a conservation fad. *World Dev.* 89, 124–139.
- Mahanty, S., Suich, H., Tacconi, L., 2013. Access and benefits in payments for environmental services and implications for REDD+: lessons from seven PES schemes. *Land Use Policy* 31, 38–47.
- Malla, Y.B., 2000. Impact of community forestry policy on rural livelihoods and food security in Nepal. *Unasylva* 51 (202), 37–45.
- Malla, Y.B., Neupane, H.R., Branney, P., 2003. Why aren't poor people benefiting more from community forestry? *J. For. Livelihood* 3 (1), 78–93.
- Maraseni, T.N., Neupane, P., Lopez-Casero, F., Cadman, T., 2014. An assessment of the impacts of the REDD+ pilot project on community forests user groups and their community forests in Nepal. *J. Environ. Manag.* 136, 37–46.
- Massarella, K., Sallu, S.M., Ensor, J.E., Marchant, R., 2018. REDD+, hype, hope and disappointment: the dynamics of expectations in conservation and development pilot projects. *World Dev.* 109, 375–385.
- Mbatu, R.S., 2016. REDD+ research: reviewing the literature, limitations and way forward. *Forest Policy Econ.* 73, 140–152.
- McKean, M.A., 2000. Common property: What is it, what is it good for, and what makes it work? In: Gibson, C.C., McKean, M.A., Ostrom, E. (Eds.), *People and Forests: Communities, Institutions, and Governance*. Massachusetts Institute of Technology Press, Cambridge, MA, pp. 27–55.
- MFSC, 2014. Guidelines for Community Forestry Development Program. Ministry of Forests and Soil Conservation (MFSC), Government of Nepal. Kathmandu.
- Milne, S., Mahanty, S., To, P., Dressler, W., Kanowski, P., Thavat, M., 2019. Learning from ‘actually existing’ REDD+: a synthesis of ethnographic findings. *Conserv. Sci.* 17 (1), 84–95.
- Myers, R., Larson, A.M., Ravikumar, A., Kowler, L.F., Yang, A., Trench, T., 2018. Messiness of forest governance: how technical approaches suppress politics in REDD+ and conservation projects. *Glob. Environ. Chang.* 50, 314–324.
- NEFIN, 2011. Nepali Indigenous Peoples' Perspective on Climate Change and REDD+ – Booklet. Nepal Federation of Indigenous Nationalities. Climate Change and REDD+ Programme, Kathmandu, pp. 10–14.
- Neupane, H., 2003. Contested impacts of community forestry on equity: some evidences from Nepal. *J. For. Livelihood* 2 (2), 55–62.
- Nightingale, A.J., 2002. Participating or just sitting in? The dynamics of gender and caste in community forestry. *J. For. Livelihood* 2 (1), 17–24.
- Nightingale, A.J., 2005. The experts taught us all we know: professionalisation and knowledge in Nepalese community forestry. *Antipode* 2005, 581–604.
- Nussbaum, M.C., 2011. *Creating Capabilities: The Human Development Approach*. Harvard University Press, Cambridge.
- Ojha, H.R., Khatri, D.B., Shrestha, K.K., Bushley, B., Sharma, N., 2013. Carbon, community and governance: is Nepal getting ready for REDD+? *For. Trees Livelihoods* 22 (4), 216–229.
- Osterle, A., 2002. Evaluating equity in social policy. *Evaluation* 8 (1), 46–59.
- Ostrom, E., 1990. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press, Cambridge.
- Park, M.S., Choi, E.S., Youn, Y., 2013. REDD+ as an international cooperation strategy under global climate change regime. *For. Sci. Technol.* 9 (4), 213–224.
- Paudel, K., Green, K., Ojha, H., Barnes, R., 2007. Challenges to participation: lessons from action research with community forest user groups in Nepal. *J. For. Livelihood* 6 (1), 70–78.
- Pellow, D.N., 2016. Toward a critical environmental justice studies: black lives matter as an environmental justice challenge. *Du Bois Rev.: Soc. Sci. Res. Race* 13 (2), 221–236.
- Poteete, A.R., Ostrom, E., 2004. Heterogeneity, group size and collective action: the role of institutions in forest management. *Dev. Chang.* 35 (3), 435–461.
- Poudel, M., Thwaites, R., Race, D., Dahal, G.R., 2015. Social equity and livelihood implications of REDD+ in rural communities: a case study from Nepal. *Int. J. Commons* 9, 177–208.

- Poudyal, M., Ramamonjisoa, B.S., Hockley, N., Rakotonarivo, O.S., Gibbons, J.M., Mandimbiniaina, R., ... Jones, J.P., 2016. Can REDD+ social safeguards reach the 'right' people? Lessons from Madagascar. *Global Environmental Change* 37, 31–42.
- Pulido, L., Lara, J.D., 2018. Remaining 'justice' in environmental justice: radical ecologies, decolonial thought and black racial tradition. *Environ. Planning E: Nat. Space* 1 (1–2).
- Rana, E., Karki, S., Karki, B., Kotru, R., Jagdish, P., 2012. REDD+ and Forest Governance in Nepal. *European Tropical Forest Research Network, AE Wageningen*, pp. 167–174.
- Ribot, J.C., Chhatre, A., Iankina, T., 2008. Introduction: institutional choice and recognition in the formation and consolidation of local democracy. *Conserv. Soc.* 6, 1–11.
- RIC, 2016. Cost Benefit Sharing Arrangement for Emission Reduction Program in the Terai Arc Landscape, Policy Brief 14, March 2016. REDD Implementation Centre, Kathmandu.
- RRN and CECI-Nepal, 2007. *Development Strategies for a New Nepal: A National Debate*, Proceedings of a National Conference, 21–22 December 2006. Rural Reconstruction Nepal and Centre for International Studies and Cooperation-Nepal, Kathmandu.
- Saito-Jensen, M., Rutt, R.L., Chhetri, B.B., 2014. Social and environmental tensions: affirmative measures under REDD+ carbon payment initiatives in Nepal. *Hum. Ecol.* 42, 683–694.
- Satyal, P., 2013. The changing discourse of social justice in Nepal. In: Arora, Vibha, Jayaram, N. (Eds.), *Routing Democracy in the Himalayas: Experiments and Experiences*. Routledge, New Delhi, pp. 262–291.
- Satyal, P., Corbera, E., Dawson, N., Dhungana, H. & Maskey, G., 2019. Representation and participation in formulating Nepal's REDD+ approach. *Clim. Pol.* 19, 8–22.
- Schlosberg, D., 2004. Reconceiving environmental justice: global movements and political theories. *Environ. Pol.* 13 (3), 517–540.
- Schlosberg, D., 2012. Climate justice and capabilities: a framework for adaptation policy. *Ethics Int. Aff.* 26 (4), 445–461.
- Schlosberg, D., Collins, L.B., Niemeyer, S., 2017. Adaptation policy and community discourse: risk, vulnerability, and just transformation. *Environ. Pol.* 26 (3), 413–437.
- Shepherd, G., Gill, G., 1999. *Community Forestry and Rural Livelihood in Nepal: Issues and Options for the Future of the Nepal UK Community Forestry Project*. Overseas Development Institute, London.
- Sherpa, D.T., Brower, A., 2015. Equity in sharing the potential benefits of REDD+ in Nepal. *J. For. Livelihood* 13 (1), 10.
- Shrestha, S., Shrestha, U.B., 2017. Beyond money: does REDD+ payment enhance household's participation in forest governance and management in Nepal's community forests? *Forest Policy Econ.* 80, 63–70.
- Shrestha, S., Karki, B.S., Karki, S., 2014. Case study report: REDD+ pilot project in community forests in three watersheds of Nepal. *Forests* 5 (10), 2425–2439.
- Sikor, T., 2014. *The Justices and Injustice of Ecosystem Services*. Routledge, London.
- Sikor, T., Hoang, C., 2016. REDD+ on the rocks? Conflict over forest and politics of justice in Vietnam. *Hum. Ecol.* 44 (2), 217–227.
- Sikor, T., Newell, P., 2014. Globalising Environmental Justice? *Geoforum* 54, 151–157.
- Sikor, T., Stahl, J., 2011. *Forests and People: Property Rights, Governance and Human Rights*. Earthscan, London.
- Sikor, T., Satyal, P., Dhungana, H., Maskey, G., 2019. Brokering justice: global indigenous rights and struggles over hydropower in Nepal. *Canad. J. Dev. Stud.* 40 (3), 311–329.
- Svarstad, H., Benjaminsen, T.A., 2017. Nothing succeeds like success narratives: a case of conservation and development in the time of REDD. *J. East. Afr. Stud.* 11 (3), 482–505.
- Torres, A.B., MacMillan, D.C., Skutsch, M., Lovett, J.C., 2013. Payments for ecosystem services and rural development: Landowners' preferences and potential participation in western Mexico. *Ecosyst. Serv.* 6, 72–81.
- UNFCCC, 2011. The Cancun Agreements Dec 1/cp.16. In: *United Nation Framework Convention on Climate Change*, pp. 1–31.
- Varughese, G., Ostrom, E., 2001. The contested role of heterogeneity in collective action: some evidence from community forestry in Nepal. *World Dev.* 29 (5), 747–765.
- Vishwakarma, H., 2002. The Dalits of Nepal and their struggles for social justice. *Soc. Int. Dev.* 45 (3), 90–92.
- Walker, G., 2012. *Environmental Justice*. Routledge, London.
- Whelpton, J., 2007. *A History of Nepal*. Cambridge University Press, Cambridge.
- Wood, B.T., Dougill, A.J., Stringer, L.C., Quinn, C.H., 2018. Implementing climate-compatible development in the context of power: lessons for encouraging procedural justice through community-based projects. *Resources* 7 (2), 36.
- World Bank & DFID, 2006. *Unequal Citizens: Gender, Caste and Ethnic Exclusion in Nepal - Summary*. World Bank and UK Department for International Development, Kathmandu.
- Yadav, B.D., Bigsby, H., MacDonald, I., 2015. How can poor and disadvantaged households get an opportunity to become a leader in community forestry in Nepal. *Forest Policy and Economics* 52, 27–38. <https://doi.org/10.1016/j.forpol.2014.11.010>.