

# Equity in Sharing the Potential Benefits of REDD+ in Nepal

*Doma Tshering Sherpa<sup>1</sup> and Ann Brower<sup>2</sup>*

<sup>1,2</sup>Department of Environmental Management, Lincoln University, Canterbury-New Zealand

Corresponding author: sherpa.doma100@gmail.com

**Abstract:** Reducing Emissions from Deforestation and Forest Degradation (REDD+) is an incentive based climate change mitigation measure that focuses on reducing carbon emissions by rewarding communities' efforts in the conservation, sustainable management of forests and enhancement of carbon stocks. Assuming REDD+ revenues are generated, there is a question about how the benefits should be distributed. This paper uses the 3Es (Effectiveness, Efficiency and Equity) criteria in sharing the benefits of REDD+ to examine a case study in one of Nepal's REDD+ pilot projects implemented in community forests. While concerns about equity in REDD+ are getting attention worldwide, the literature is not clear on which principle of 3Es should be given priority to achieve overall effectiveness in reducing the carbon emissions. Our research finds that equity should be prioritised to achieve efficiency and effectiveness of REDD+. Further, we find distributive equity to be the most important. Distributive equity is understood in three different ways in Nepal: rights, needs, and performance. But there is a debate on which equity should be given priority. The issues of needs vs. performance in determining what is equitable should be solved by the formulation of guidelines for how benefits should be shared at two levels in Nepal. First, the vertical distribution of benefits should be based on the ownership of carbon benefits and performance criteria. Second, at the community level, the community itself should determine the form of horizontal benefit-distribution, based on its definition of needs.

**Key words:** REDD+, benefit sharing, equity, communities, community forestry

## INTRODUCTION

Reducing Emissions from Deforestation and Forest Degradation (REDD+) is an incentive based mechanism aiming to mitigate climate change by conserving and managing forests sustainably and enhancing forest carbon stocks (UN-REDD 2015). Advocates suggest REDD+ as an innovative approach that rewards local communities' efforts to conserve forest resources and prevents deforestation, which will enable communities to derive benefits from overseas.

Assuming REDD+ revenues are generated, there is a question about how the benefits should be distributed. The decision on the benefit sharing mechanisms within the country is left to the national government (Pettenella and Brotto 2012; To *et al.* 2012). However, no international rules or guidelines for how benefits are to be shared within countries have been established. While much research is focused on getting ready for the

implementation of technical requirements (e.g., monitoring, reporting, and verification system; setting up reference scenario) of REDD+, it is essential to investigate what kind of benefit sharing mechanism would meet political, ethical, and practical goals (UN-REDD and Department of Forestry Viet Nam 2010). Further, research suggests that any options for a legal framework at the national level for benefit sharing mechanisms should be assessed against the 3 Es (Effectiveness, Efficiency and Equity) framework.

This study adopted the 3Es framework to determine important criteria for sharing REDD+ benefits. Research suggests that efficiency and effectiveness in REDD+ are well understood and can be achieved with better management of forests, but equity is complicated since it can be interpreted in many ways (Skutsch 2013). Further, while concerns about equity in REDD+ are getting

attention worldwide, the literature is not clear on which principle of 3Es should be given priority to reduce carbon emissions (Skutsch 2013). Besides, there are many controversies around the distribution of benefits. For instance, 'who gets the rewards' is a major concern of equity. Likewise, how equity can be achieved at the national level is unclear.

Nepal is implementing REDD+ programmes in community forests. Community forests are national forests handed over in perpetuity to user groups for development, conservation, management, and utilisation for the collective interest (HMGN 1993). Although the community forestry (CF) programme is considered as one of the biggest success stories in forest management (Agrawal and Ostrom 2001), there are still several unanswered questions such as "who benefits from these forests - and who gets left out; how can community benefit poor and marginalised people?" (McDermott and Schreckenber 2009). Further, documentation about CF in Nepal showed that power, wealth, and capacity not only influence the resources and opportunities but also causes inequity in local benefit distribution (Mahanty *et al.* 2009). Moreover, it is feared that adoption of REDD+ could compromise the CF program if existing rights to manage and use forest products are controlled by central actors (Phelps *et al.* 2010).

With these outstanding issues, participation of communities in the REDD+ might aggravate the existing issues of benefit sharing. A question also remains about whether the 3Es can be achieved in an acceptable manner when distributing the benefits of REDD+ among local partners.

The goals of this paper are to highlight the impact of REDD+ activities on benefit-sharing, and to provide insight into following questions by assessing the outcomes of a REDD+ pilot project in Nepal which was implemented from 2009 to 2013:

- How do participants in Nepal consider equity in the process of distributing benefits from REDD+?
- What kind of benefit sharing mechanism should be set up to bring effective outcomes of REDD+?

This paper aims to provide more insights into i) the relative importance of different aspects of distributive equity in benefit sharing of REDD+; ii) the mechanisms that could help to advance an equitable sharing of benefits; and iii) the contextual factors that affect the sharing of benefits of REDD+ in Nepal. The results of this analysis suggest that equity should be promoted to achieve efficiency and effectiveness in REDD+. Specifically, needs-based equity should not be overlooked while allocating and distributing the benefits of REDD+. In other words, need-based equity is the first step towards achieving REDD+ success and the 3Es rely on it.

We organized the paper as follows. We present the importance of effectiveness, efficiency, and equity in REDD+ in section 2 while in section 3 we include the case study sites and research methods. In section 4, we present the results while we present discussion in section 5. The section 6 concludes the paper with some implications of the findings for enhancing equity in REDD+ benefits sharing.

## **EFFECTIVENESS, EFFICIENCY, AND EQUITY IN BENEFIT-SHARING**

According to UN-REDD and Department of Forestry Viet Nam (2010), an effective benefit sharing mechanism should enforce clear rules and processes to distribute the benefits under performance based system. Likewise, an efficient benefit sharing mechanism should ensure that REDD+ activities are completed in a timely and cost effective manner by minimizing inputs and maximizing outcomes. Finally, an equitable benefit sharing mechanism should confirm that the transfer of benefits and costs is inclusive and fair among stakeholders

involved by REDD+ programme. However, combining these criteria often requires trade-offs. For instance, changing behavior that degrades forests to achieve effective and efficient outcomes in the long-term needs to be sufficiently rewarded individually and collectively. However, if too many people benefit from the program without their active contribution, it undermines the legitimacy of the payment mechanism (Lindhjem *et al.* 2010).

Furthermore, Angelsen *et al.* (2012) discuss the question of who should benefit from REDD+. They emphasize the importance of efficiency and effectiveness by suggesting that benefits should be distributed according to the contributions of the people or communities that bring reduction in emissions by change in behavior. On the contrary, equity focuses on which actors should have the rights to benefits from REDD+, paying less attention to their contributions to reducing carbon emissions. While trade-offs might need to be made amongst the 3Es, Angelsen *et al.* (2012) find which of the 3Es has great implications in designing benefit sharing mechanisms.

### The Question of Equity

This research focuses on equity because it is a fundamental condition to achieve the objective of REDD+ (UN-REDD and Department of Forestry Viet Nam 2010; Gebara 2013). While there are many discourses, ideologies, and definitions associated with equity, Mcdermott *et al.* (2011) identified three inter-related dimensions of equity: distributive, procedural and contextual. Distributive equity looks at policy outcomes in terms of who gets how much and compares those outcomes to the goals. It also addresses the basis of allocation of benefits: equal shares, net social welfare, merit, or needs. Procedural equity is fairness in the political process that allocates benefits according to representation,

recognition/inclusion, voice and participation of marginalized people with respect to natural resources in decision-making on the allocation and distribution of benefits. Contextual equity combines distributive and procedural equity. It recognises that pre-existing conditions in communities affect their capacity to access power and resources.

Some authors argue that most of the policy discourses on climate change relate equity only to distribution (Cattaneo *et al.* 2010). However, Mcdermott *et al.* (2011) argue that it is not possible to separate how distribution, procedure, and the nature of access contribute to the degree of (in) equity in the social condition. This paper adopts the view that three dimensions of equity are interdependent, and should be considered together to achieve equitable outcomes.

### Benefit Sharing Mechanisms

In REDD+, benefits originate from ‘incentives’ (monetary or non-monetary benefits transferred to a stakeholder to enable or motivate a particular behavior) or ‘forest rents’<sup>1</sup> (FCPF 2012). The funding mechanisms that enable countries to receive incentives are driven by donors or by markets (international trade of carbon credits).

Three options to coordinate accounting and reporting of international financial inflows are under consideration in international negotiations (Costenbader 2009). They are i) a national approach (provide accounting at the national level); ii) project or sub-national accounting; and iii) a hybrid approach (integrates sub-national projects into a national accounting framework). Even though a national approach appears cost-effective in terms of transactions and measurement, reporting and verification (MRV), there is concern about the risk of recapturing the local ownership of user groups of community forests and projects (Costenbader 2009; Torres

<sup>1</sup> Forest rent includes distributing the revenues among stakeholders obtained from the management of resources for carbon emissions reductions (FCPF 2012).

and Skutsch 2012). Likewise, a sub-national approach incorporates wider participation of poor people and attracts more investors. However, it cannot address drivers of large-scale deforestation and forest degradation (Costenbader 2009). The hybrid approach with double accounting addresses the national and sub-national issues and therefore is the most appropriate for REDD+ implementations (Pedroni *et al.* 2009).

Nepal has proposed a hybrid approach to channel the REDD+ benefits to communities from international markets and donors. However, it sometimes creates more complexity and disparity in carbon accounting, risk-sharing, institutional arrangements, and disparity in benefit sharing because good performance in one region of the country could be negated by losses elsewhere (To *et al.* 2012; Torres and Skutsch 2012). To address these issues Lindhjem *et al.* (2010) and To *et al.* (2012) recommend that a well-functioning benefit sharing mechanism should: engage the right stakeholders; determine the right forms and level of incentives that reach communities; enforce effective transparency provisions; develop effective dispute settlement mechanisms; and clarify the basis of allocation and distribution of benefits between different stakeholders.

## METHODS

Data were collected by semi-structured interviews. The questions were developed on the basis of key concepts in benefit sharing mechanisms. The interviews were conducted in Gorkha district from 29 May to 3 June 2013 and in Kathmandu from 11 to 31 June 2013. Thirty-one participants were selected through purposive sampling on the basis of knowledge of sample and the purpose of the study (Babbie 2010). Participants were categorized into 4 types: i) experts from Nepal REDD+ project (9 participants); ii) members of community forest user groups

(CFUGs) participating in REDD+ project (15); iii) central and local government officials (4); and iv) independent researchers (3). The interviewees from the pilot sites were selected on the basis of amount of funds they received from the project. The rest of the research participants were identified from domestic and international non-governmental organisations and government agencies that are working in the field of REDD+. All the interviews were recorded, translated and finally transcribed. Transcribed documents were analyzed using NVivo – 10, which is designed to analyze non-numerical data.

We selected the pilot project ‘Design and Setting up of a Governance and Payment System for Nepal’s Community Forest Management under REDD+’, which was implemented by the International Center for Integrated Mountain Development (ICIMOD) in partnership with the Federation of Community Forest Users, Nepal (FECOFUN), and the Asia Network for Sustainable Agriculture and Bio resources (ANSAB) from 2009 to 2013. The main objective of the project was to empower local communities in monitoring the carbon in forests and later providing them the opportunity to claim rewards for their efforts in conservation and enhancement of carbon stocks. Also, the pilot project was designed to provide its learning and outcomes to policy makers in implementing REDD+ at the national level. This project is a pioneer among REDD+ projects in Nepal, which disbursed payment to communities for their efforts to achieve the major objective of REDD+. The project covers over 10,000 hectare of community forests in three watersheds: Ludikhola, Kayarkhola, and Charnawati in Gorkha, Chitwan and Dolakha districts, respectively.

Ludikhola watershed of Gorkha District was considered for this study. Out of 31, 6 CFUGs<sup>2</sup> were selected from the project. In

<sup>2</sup> The CFUGs were selected on the basis of the fund they received which was graded as highest, medium and lowest during 2010 and 2011

Ludikhola watershed, the project created the Forest Carbon Trust Fund to guide the management and distribution of the funds among participating CFUGs. Under the trust fund, the payment mechanism was developed on the basis of following criteria:

*REDD payment = f (forest carbon enhancement and forest carbon conservation + ethnic diversity (households) + population of men/women + number of poor households)<sup>3</sup>*

### Box 1. Weightage for financial benefit allocation

- Forest carbon enhancement: Annual quantity of carbon sequestered as a result of community forest management – 40%
- Ethnic Diversity: Number of households of Indigenous peoples and *Dalits* (so called untouchable groups in Nepal) – 25%
- Sex Ratio: Number of women population in CFUG and in the watershed – 15%
- Poverty: Number of poorest households categorized by participatory wellbeing ranking with a set of indicators in CFUGs and in watersheds – 20%

Different weightage were given for financial benefit allocation to each of these basic elements and their sub elements (Box 1).

## RESULTS

### The 3Es and the Primacy of Equity

When asked about 3Es in benefit sharing, most interviewees connected equity with sharing of benefits through either performance or needs of the communities. Likewise, the majority of respondents believed that effectiveness and efficiency of REDD+ would be achieved by carbon increment and maximum output with least cost. One of the REDD+ experts mentioned that efficiency and effectiveness could be achieved with better forest

management and proper use of forests. In the case study site, the project looked more for equity after some concerns from stakeholders were raised. However, at the same time, the project received much criticism for paying attention to socio-economic condition of the communities. Regardless of these criticisms, many respondents stated that local communities should participate in REDD+ only after addressing the issues of equity.

As found in the literature, there are trade-offs among 3Es (Lindhjem *et al.* 2010; UN-REDD and Department of Forestry Viet Nam 2010). All interviewees stated that it is difficult to achieve 3Es simultaneously. One interviewee stated that the project must favor equity more than efficiency to connect with communities, although priority is given to efficiency at the international level.<sup>4</sup> However, there are controversies on how to achieve equity.<sup>5</sup>

Interviewees expressed concerns that use of forest products might be restricted after joining REDD+. This restriction would increase the efficiency and effectiveness of REDD+ scheme but to maintain equity, the project should compensate communities for their forgone use of forest products. Also, interviewees desired equitable distribution of the compensation among communities.

We found that the interviewees' conception of equity fell into three categories, based on rights, needs and performance. In terms of rights-based equity, ownership of carbon rights was found to be one of the major issues for equitable allocation and distribution of benefits among stakeholders of REDD+. Regarding the question of 'who has rights to carbon', the majority of interviewees expressed the view that local government and communities should own the carbon rights. However, interviewees were unclear on who gets what percentage of the ownership of

<sup>3</sup> Adapted from Operational guideline of Forest Carbon Trust Funds

<sup>4</sup> B. Karky, personal communication, May 13, 2013

<sup>5</sup> D. Khanal, personal communication, July 2, 2013

carbon. Nevertheless, one of the REDD+ experts stated that 'local people should have the right to carbon as part of the forest products'.<sup>6</sup>

Communities favored needs-based equity in the allocation and distribution of benefits. For communities, poverty is the most important social issue that can affect anyone from high caste society to women and other groups that are classified in the payment criteria. So, most of the CFUGs distributed the fund to poor people identified through local well-being ranking process.<sup>7</sup> As a result, majority of CFUGs complained that they had difficulty in finding the poorest. One of the interviewees described the situation as: 'Everyone was expecting to get the funds at the same time, and everyone said he/she is poor.' Although the project focused on socio-economic condition of households in the payment criteria, most of the CFUGs allocated the received funds to the poorest households. It indicates that the identification of real needs of communities before developing the guidelines for sharing the benefits is very important (Gebara 2013).

This research found that performance and contribution based equity are connected to ownership of carbon. Interviewees believe that whoever (communities or government or communities and government) manages and enhances carbon stock should be the owner of carbon rights. Moreover, one expert argued 'whoever performs better in managing forests should get more benefits'.<sup>8</sup> One of the government officials stated that although equity is taken as providing more benefits to needy people, it should be based on the contribution and performance of forest managers<sup>9</sup>.

Given the differences between the three aspects of equity identified in the study, it is difficult to determine which method of benefit distribution would yield the most

equitable outcomes. However, it is clear that carbon rights need urgent attention. Solving the issues of rights-based equity would yield a complementary benefit of contributing to resolving to contribution-based equity. However, performance versus needs based equity is quite a contentious matter between experts and communities in Nepal. Nevertheless, international negotiations are focusing on performance-based system for REDD+. Therefore, even though there is a performance-based system, it is imperative to consider the genuine needs of communities to enhance their capacity in implementing REDD+.

### Benefit-sharing Mechanism

This research found rules and processes of allocating benefits as the most important feature of effective benefit-sharing mechanisms. Most current discussions about benefit-sharing focus on which processes- vertical or horizontal- of equity should take priority. In vertical benefit-distribution, benefits are distributed from international sources or markets to CFUGs via central and local government. Rules and processes are needed to address issues of carbon rights, and to allocate and distribute the benefits according to performance of communities in achieving the objectives of REDD+. Nevertheless, one interviewee from government organization mentioned that 'payment to the national government would be based on international negotiations'.<sup>9</sup> As such, the payment criteria developed in an international forum would determine the basis of benefit distribution to the CFUGs. However, central government and concerned stakeholders are likely to guide preparation and implementation of guidelines on sharing the received benefits. As a result, communities are going to be affected, as these guidelines will determine which communities

<sup>6</sup> L. Joshi, personal communication, June 15, 2013

<sup>7</sup> Operational guideline of Forest Carbon Trust Funds

<sup>8</sup> U. Sharma, personal communication, May 27, 2013

<sup>9</sup> N. Chand, personal communication, June 5 2013

would qualify for the funds. It is emerged from the discussions that issues related to forests size and leakage (non-participating communities of forests nearby contributing to enhancement of carbon emissions) are equally important to be included in the guideline.

In horizontal benefit distribution, interviewees revealed that it would be best to keep the payment criteria for local communities simple with clear guidelines of how the benefits should be distributed. This would let the locals decide on how to use the money. It would get complex if the government or REDD+ project imposes the same guidelines for all, as 'the priority of needs and issues related with community forest may not be same everywhere'.<sup>10</sup>

It was revealed in the case study sites that the executive committees of CFUGs were allowed to decide on how to distribute the received funds in the community. It was found that all CFUGs distributed the benefits to the poorest households in their community. However, there were some complaints that the benefits did not reach the targeted groups. One of the respondents mentioned that there was an attempt by elites and people who have been controlling power to gain indirect benefits instead of strict monitoring of the project.

Also, it was found that 'differences in interests and traditional culture of communities affect how they utilize the benefits'.<sup>11</sup> Most of the communities invested the received money on installing biogas or improved cooking stove and animal farming. But in some communities, such as *Chepang* (nomads), these options of investments were not appropriate because of the use of their own traditional heating system from a natural plant called *Chiuri*. Similarly, providing seed money for animal farming was not effective, as they do not have any grazing lands.

Other goals, such as transparency in allocating and sharing the benefits, effective dispute settlement mechanisms to resolve any disagreement among participants of REDD+, and engaging the right stakeholders are significant for equitable benefit-sharing mechanisms. Among all these goals, rules and processes to allocate the benefits equitably is the most critical and challenging goal to achieve.

## DISCUSSION

By adopting the 3Es framework, it was revealed that equity is important for devising benefit sharing mechanisms under the REDD+ scheme in Nepal. The 3Es framework also recognises that trade-off among 3Es are to be made. In terms of relative importance of these three criteria, this research found that equity is more important than efficiency and effectiveness for local communities. Communities practicing CF in Nepal strongly stated that equity is crucial to achieve the effective outcomes of REDD+. Also, Gebara (2013) suggests that equity is essential to the achievement of other two principles. However, REDD+ experts in Nepal argued that effectiveness and efficiency should be prioritized in REDD+ because international negotiations on REDD+ are focused on cost efficiency and effectiveness of REDD+. In the context of fear of market based instruments such as REDD+ outweigh the issues about equity (Skutsch 2013), this research found that equity should be given priority at the grass-roots level to bring real impact on forest management and thereby mitigate the climate change impact.

## Understanding Equity

Out of the three dimensions of equity, we found distributive equity to be the most important. Further, the study demonstrates that three distinct interpretations of distributive equity are present in Nepal. However, communities

<sup>10</sup> L. Joshi, personal communication, June 15, 2013

<sup>11</sup> D. Khanal, personal communication, July 2, 2013

and experts still disagree on which form of distribution and equity (rights, needs, or performance-based) yields best outcomes of REDD+.

In terms of rights-based equity, ownership of carbon rights is the most contentious issue as most of the REDD+ participating countries, including Nepal, do not have explicit laws regarding the carbon rights (Skutsch 2013). The debate on this issue has the potential to generate conflict among the communities practicing different models of forest management in Nepal. Community ownership of carbon rights would be less appropriate for other forest management regimes in the country such as Collaborative Forest Management and Leasehold Forestry<sup>12</sup> because each regime has different systems of property rights and benefits sharing. Although communities preferred local government to share ownership of carbon rights along with them, they strongly argued that their existing rights should not be centralized or compromised when they participate in REDD+. Further, 'who gets how much on what basis' is another question that needs attention while allocating and distributing the benefits. At present, it is not clear who will decide the ownership of carbon and how these decisions will be made.

Communities preferred need-based equity for allocation and distribution of benefits. It is found that the project attempted to satisfy communities' needs to some extent. Also, addressing poverty within the community was a main priority for them. Also, due to lack of consensus among the CFUG members in finding appropriate method for identification of poor households, there were disagreements in benefits sharing. What the "real" needs of the communities should be identified with the help of suitable approaches before developing

guidelines for benefits sharing to avoid disputes in the future. Although communities aspire to allocate and distribute the benefits on the basis of their needs, experts in Nepal contest this view. Instead, they suggest that performance based allocation and distribution of benefits would bring equitable outcomes.

The different perspectives on what equity means to communities and experts are related to the pre-existing contextual factors such as socio-economic, political, and institutional conditions amongst and within communities, and in the nation. As Di Gregorio *et al.* (2013) also found, these existing contextual factors are the main roots of inequity in the country. Although all three dimensions of equity are interrelated, this study found distributive equity to be of special importance.

## Sharing Benefits

A benefit-sharing mechanism focusing on the rules and processes to allocate and distribute the benefits equitably is important to make REDD+ work in Nepal. Both rules and processes are crucial for both vertical and horizontal distribution of benefits. We argue that the vertical distribution of benefits should be based on the performance-based equity, and the horizontal benefit distribution within the communities should focus on need-based equity. Moreover, we found that horizontal benefit distribution is more critical than vertical.

Many interviewees were interested in continuing the existing CF guideline<sup>13</sup> for REDD+ benefit sharing as well. If a new guideline is developed (e.g. pilot project developed), the 'real' needs of communities should be taken into account at the early stage. However, finding the real needs of communities is also a challenge as each of them has its own priorities and perspectives over needs.

<sup>12</sup> Different forest management regimes in Nepal: Community Forests, Leasehold Forests, Religious Forests, Collaborative Forest Management, Buffer zone community forests

<sup>13</sup> In community forestry, 25 per cent of the benefits are spent on conservation, management and development of forests; 35 per cent on poverty reduction, empowerment of women, indigenous people; and, rest of the 60 per cent on social developmental activities.



Even though a payment formula was developed for the pilot project, the CFUGs did not have any standard guideline to identify the poorest households within the communities. So giving communities alone the authority for making decisions may bring risks of elite capture and result in chances of benefits not reaching targeted beneficiaries, as found in the some research sites. This may lead to conflict within and among communities in the future regarding benefit sharing. If communities make simple and clear guidelines for distributing the benefits in collaboration with local government, transparency and accountability of CFUGs activities increases that result into equitable benefits sharing.

## CONCLUSIONS AND RECOMMENDATIONS

This research reveals that equity should be given priority when tradeoffs among efficiency, effectiveness and equity are required in sharing the benefits among communities. The research also found that the communities aspired need-based equity while experts supported performance and contribution-based equity in benefits sharing. We suggest the guidelines at two levels would help the decision-makers so as to address equity envisioned by both communities and experts. First, the benefit distribution from national to communities (vertical distribution) should be coordinated by the government and concerned stakeholders on the basis of performance and contribution. Second, the benefit distribution within the CFUGs (horizontal distribution) should be managed by the communities themselves on the basis of genuine 'needs' considering the contextual factors that affect communities' ability to capture and benefit from the received funds.

The finding that equity is more important than efficiency and effectiveness in REDD+ has broader implications. Although the research is conducted in Nepal, the finding applies to other countries practicing community based forest

management. A clearer understanding of the issues of equity is important to design other incentive-based mechanisms such as Payment for Environmental Services. The needs of communities should not be overlooked to achieve their effective contributions in the conservation and sustainable management of forests and enhancement of carbon stocks.

As benefit sharing is a political process, equity in it depends on who decides and how the (potential) benefits are to be shared. This paper answers 'how' the potential benefits should be shared in Nepal while the question of 'who' decides on benefits sharing remain unanswered and therefore warrant future research.

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