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*David Eastman, Delia C. Catacutan, Do Trong Hoan, Serena Guarnaschelli,
Dam Viet Bac and Badege Bishaw*



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Abstract

To maximize participation and impact, the design of benefit distribution systems (BDS) for forest conservation programs applying Payments for Environmental Services (PES) schemes should reflect the preferences and contexts of forest stakeholders. The objective of this paper is to analyse through the 'theory of access' lens the perceptions and preferences of stakeholders over the type, timing and distribution of benefits, and whether such preferences are affected by a stakeholder's land tenure status. Six villages in Bac Kan province, Viet Nam, were selected for their tenure status over production, protection and special-use forest land. Forest stakeholder preferences were elicited through a modified 'REDD+ Game'. Village stakeholders' stated preferences over PES benefits were first for cash for inputs for public infrastructure, followed by land-use rights certificates (LURCs) for forest land. Future research should assess the feasibility of including LURCs as a future PES benefit option in Viet Nam, particularly for REDD+.

Keywords: Access, benefit, PES, Bac Kan, Viet Nam, REDD+, environmental services

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Acronyms

BDS	Benefit Distribution Systems
3PAD	Pro-poor Partnerships for Agroforestry Development project, Bac Kan province, Viet Nam
ICRAF	International Centre for Research in Agroforestry (legal name of the World Agroforestry Centre)
IFAD	International Fund for Agricultural Development
LFPD	Law on Forest Protection and Development
LURC	Land-use rights certificate
MRV	Monitoring, reporting and verification
PA	Protected Area
PES	Payments for environmental services
PFES	Payments for forest environmental services
REALU	Reducing Emissions from All Land Uses
REDD+	Reduced Emissions from Deforestation and Forest Degradation plus Conservation
RES	Rewards for environmental services

Introduction

Forest conservation programs affect and are affected by land tenure rights. This relationship has consequences for the ability of more than a billion people to benefit from forest resources and conservation activities (Chao 2012). For example, protected areas (PAs) established to prevent the exploitation of forest resources may be located on lands on which forest stakeholders such as communities and indigenous peoples have had histories of access, defined by Ribot and Peluso (2003) as ‘the ability to derive benefit from things’. In response, forest stakeholders may compensate for lost benefits by violating forest laws and undermining conservation objectives (Colchester et al 2006). Throughout the tropics, several cases have shown that including forest stakeholders in forest management is associated with better conservation outcomes than when PAs are exclusionary (Nelson and Chomitz 2010, Hayes 2006, Sunderland et al 2012). To incentivize forest stakeholders to participate in conservation activities, market-based approaches have emerged such as payments for environmental services (PES) schemes. As described by Wunder (2005), PES schemes are voluntary transactions of benefits between environmental service buyers and sellers, where benefits are conditional on the sellers’ performance. Transactions may be impeded if forest property rights are poorly defined or do not formally recognize histories of access, because performance may be incorrectly attributed and benefits distributed to the wrong sellers. To ensure that payments reach sellers lacking formally recognized property rights, rewards for environmental services (RES) such as community development funds or infrastructure for public goods may be distributed to groups of sellers responsible for a land area, especially where opportunity costs are low for inducing sustainable behaviors (van Noordwijk et al 2007, Swallow et al 2009).

An example of the effects of the relationship between forest conservation and land tenure is seen in the Republic of Viet Nam’s efforts beginning in the 1990s to reverse a 50-year trend of deforestation through the establishment of PAs, reforestation programs and national PES schemes. To establish PAs, the Government of Viet Nam reallocated tenure of primary forest and watershed areas from private to public stakeholders. Changes in tenure affected forest stakeholders’ ability to participate in conservation programs, such as the Five Million Hectare Reforestation Program (also known as Program 661) (PM Viet Nam 1998). Other Vietnamese conservation programs have applied PES-like schemes, including the recent national Payments for Forestry Environmental Services (PFES) scheme for watershed functions, in support of Decision no. 380/QD-TTg of the Prime Minister (PM Viet Nam 2008). The programs had the dual objectives of increasing forest cover and improving livelihoods by distributing benefits for performance in activities such as planting seedlings and patrolling for forest law violations. The State transferred payments directly to citizens who already had State-allocated responsibility for land management that was sanctioned through land-use rights certificates (LURCs). Landless stakeholders’ ability to participate in, and benefit from, program activities was overlooked, or made possible under contracts with tenure holders to provide labour for shares of benefits. In such situations, inequitable forest tenure arrangements contribute to inequitable program participation and distribution of benefits.

Viet Nam's experience with implementing a range of conservation and reforestation programs as well as national PES schemes is valuable to international initiatives such as the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD Programme), which supports nations like Viet Nam in developing and preparing REDD+ climate change mitigation activities. The UN-REDD Programme is expected to transfer funds from the international community through a benefit distribution system (BDS) to country stakeholders who participate in forest conservation activities. In Viet Nam, the UN-REDD Programme plans to support BDS pilots to identify benefit types, timing, and sharing mechanisms that fulfil an equity principle, by which 'costs and benefits are shared fairly and inclusively' (UN-REDD Programme-Viet Nam and Gesellschaft für Technische Zusammenarbeit 2010). However, Cotula and Mayers (2009) have warned that the equity of UN-REDD BDS may be affected by the equity of local land tenure arrangements. Indeed, previous research by Hoang et al (2011) on BDS in Viet Nam that focused on Ba Be and Na Ri districts in Bac Kan province recommended that non-cash incentives, such as defined land tenure and technical assistance, should be given more attention.

Based on this argument, the paper examines forest stakeholder perceptions and preferences over the type, timing and distribution of benefits for participation in forest conservation programs, and whether such preferences are affected by land tenure status. Using Ribot and Peluso's (2003) 'theory of access' as an analytical framework, descriptive statistics, and a REDD+ Game¹, this paper analyses data collected between April and September 2012 in Ba Be and Na Ri districts in Bac Kan province on preferences over benefits of forest conservation programs among forest stakeholders with different forest tenure arrangements.

Theoretical framework

Ribot and Peluso (2003) propose a ‘theory of access,’ in which they define access as the ability to benefit from a resource. Access depends on ‘bundles of powers’ with which actors gain, control, and maintain access to resources. The bundles of powers include rights-based access (such as State-sanctioned land tenure), and structural and relational access mechanisms that include access to capital, authority, social identities, and social relations.

According to the theory, access is different from and more encompassing than property. Having property rights (such as land tenure) is but one mechanism, a ‘strand’ of the bundles of powers that constitute a dynamic ‘web’ of powers among people and affect how they distribute benefits. However, property rights have an effect on benefit distributions and social relations. Property owners have the enforceable right to control access to benefits, which forces people without property rights to maintain access, sometimes by giving up shares of benefits to the rights holders. Furthermore, ambiguous or overlapping property laws can result in problems of ‘means of transfer’, in which resource users must invest in social relations with state agents to maintain access, or of the ‘elite capture’ of benefits by the politically or economically powerful.

Of the ‘things – including material objects, persons, institutions, and symbols’ listed by Ribot and Peluso (2003) that may be accessed, this paper focuses on material forest resources and institutions, namely PES schemes. This paper analyses how experiences of levels of forest access, including property rights and access to PES schemes, affect stakeholder preferences over PES benefits. Thus, our study expands the access theory’s definition of benefits as ‘value’ to include payments, compensation, or rewards such as conditional property rights, public services, or extension services (Swallow et al 2009) that are made in exchange for participation in forest conservation programs such as REDD+. Additionally, this paper expands the definition of benefit distribution from how forest stakeholders divide shares of benefits from resources to include BDS, which are mechanisms to manage financial flows from international buyers to country-level program participants. The theory of access provides a framework to analyse forest stakeholder preferences over BDS types, timing and methods, to ensure that benefits are managed efficiently and transparently and equitably distributed (Peskett 2011).

Methods

Site selection and description

The study site was Bac Kan province, located 166 kilometres (km) north of Hanoi in the northeast part of Viet Nam’s northern midlands and mountain region (Figure 1). Bac Kan province was selected because it has been the site of forest conservation and reforestation programs such as Program 661 that could offer lessons for a BDS design. The province is relatively forested (59.3% of total land cover), 32.1% of its population is poor, and 76.3% are reliant on agriculture and forestry livelihoods (Bac Kan Statistics Office 2011), making it likely to be targeted for PES incentives. Moreover, the province is expected to host a BDS pilot project as part of REDD+ ‘readiness’ capacity building.

Data was collected in Ba Be and Na Ri districts in Bac Kan province. Ba Be district has an estimated population of 49,750 (Bac Kan Department of Natural Resources and Environment 2010) while Na Ri

has 29,100 people. Poor households are common in Ba Be and Na Ri districts (56% and 36% of district households, respectively). Among the districts of Bac Kan province, Na Ri has the largest area of natural, plantation and special-use forests, while Ba Be has the largest area of protection forests (Hoang et al 2011). Livelihoods are constrained for households living in or near the special-use forests of Ba Be National Park and Kim Hy National Reserve in Na Ri district, because people are not allowed to extract forest resources.

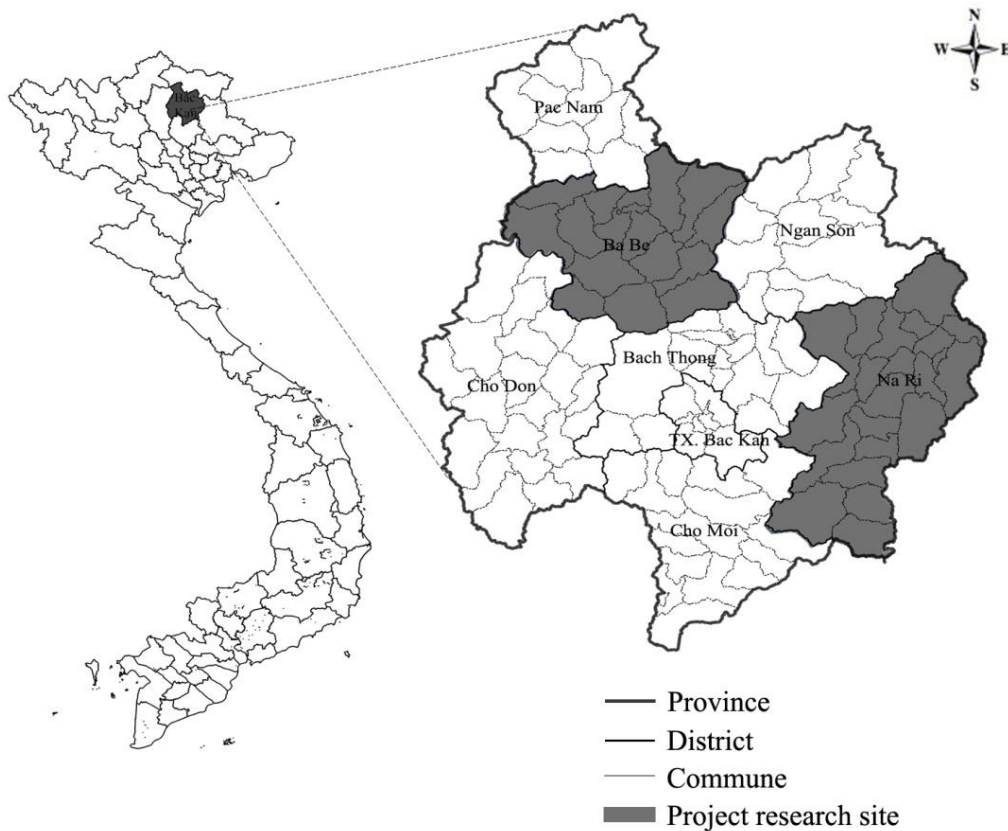


Figure 1. Research sites of Ba Be and Na Ri districts in Bac Kan province

Forest tenure arrangements in Ba Be and Na Ri districts are in line with Viet Nam’s land management policies and institutions. In the mid-twentieth century, the state nationalized all land. Under Viet Nam’s Constitution, forest lands are owned by the people and managed by the State. The State allocates management responsibility to ‘representatives’ of the State, such as individuals or organizations, through LURCs that are valid for up to 50 years. Village units, however, do not have the legal capacity to enter into contracts related to land use, according to Viet Nam’s Civil Code (2005), which complicates participation in PES schemes such as REDD+.

Viet Nam’s protection, special-use, and production forest land types are defined by Article 4 of the 2004 Law on Forest Protection and Development (commonly known as LFPD). The formal rights and duties of LURC holders vary according to the management classification of the forest associated with the LURC. For example, LURC holders of production planted forests may convert them for commercial purposes, whereas holders of LURCs for protection forests, which are often located in watersheds, may not convert the forests and have the duty to prevent their exploitation. Holders of community forest LURCs may be groups of individuals registered as ‘cooperatives’ under the LFPD (but not as village units, which are not legal entities under the Civil Code); the cooperatives are not

allowed to divide community forest lands among themselves. Special-use forest LURC holders are park management boards that have the duty to maintain the forests as PAs. Communities living in proximity to special-use forests do not have the formal right to extract resources.

The majority of production, protection and special-use forest land in Ba Be and Na Ri districts is allocated to individuals or households (Table 1). Portions of land remain unallocated and are minimally managed by Commune People’s Committees (CPCs) without state support, making them ‘open access’ areas. Officially, stakeholders without formal rights in the form of LURCs are unable to extract resources; however, in practice even those without LURCs but with histories of land ownership before nationalization, do access resources on lands illicitly or with the informal permission of government officials or tenure holders. This could be due to a lack of resources and capacity to enforce forest laws, or the result of established social relations between forest enforcers and local people.

Table 1. Ba Be and Na Ri forest area, by manager type (hectares and percent of total area)

District	Total area	Household, individual	Commune		State organization	Economic organization		Other
			People’s Committee	Community				
Ba Be	57,693	25,670 (44%)	19,757 (34%)	-	9,142 (16%)	3,122 (5%)	1 (1%)	
Na Ri	66,992	38,399 (57%)	14,913 (22%)	549 (1%)	-	2,006 (3%)	11,123 (17%)	

Source: Bac Kan Department of Natural Resources and Environment 2010

Data collection

Literature reviews on current land tenure policies and forest conservation programs of Viet Nam were conducted. Likewise, eight focus group discussions and individual surveys were conducted with 66 farmers in the villages of Na Chom, Leo Keo, Ban Pjen and Lung Quang in Ba Be district, and To Doo and Ban Ken in Na Ri district. The villages were selected because together they encompassed all forest types (i.e. production, protection, community protection and special-use forests), and therefore included all types of tenure arrangements (i.e. having or not having LURCs for the forest types), as shown in Figure 2.

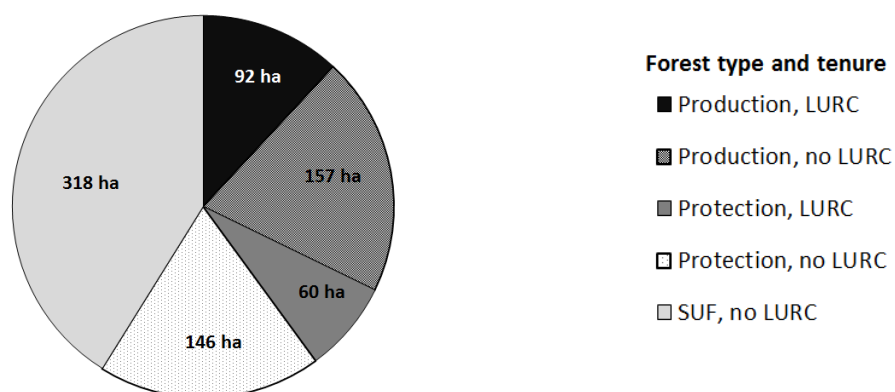


Figure 2. Forest type and tenure in selected villages

The research team organized discussion sessions and selected participants with village leaders. The team asked each village leader to invite the village's economically poorest four male and four female residents to a meeting at the village's community centre. The participation of poor village members was prioritized for two reasons: first, to capture preferences of stakeholders who may have less political influence over land use decisions; and secondly, to understand the willingness of poor households to participate in PES schemes, because in comparison to wealthy households, poor households might have more to gain, especially in locations such as Na Ri where carbon-emitting land-use changes have been found to occur at a low opportunity cost (Hoang and Do 2011). Discussions included a total of 66 participants, of which 53% were male. Seventy six percent were not LURC holders, 15% held production forest LURCs and 9% held protection forest LURCs. In three villages, village leaders joined the group discussions.

Group discussions were conducted to collect qualitative data on stakeholder preferences over forest conservation program benefits and benefit distribution methods. This was done through an adaptation of the 'REDD+ Game' piloted in 2012 by a team of experts with the support of the UN-REDD Programme in Viet Nam, and an individual questionnaire. The REDD+ Game elicited preferences over payment or reward benefits to a hypothetical village where the payments or rewards were conditional on the quality outcomes of a hypothetical forest of 500 hectares (ha). Groups chose benefit types and timing by allocating funds they expected to earn from maintaining the forest's integrity. Their choices for benefit types included cash payments, cash for infrastructure provision (such as roads, schools, electricity or water to households), agricultural inputs, land-use rights certificates for 100 ha of the hypothetical forest, or other benefits they proposed. They could choose where in a five-year contracted program they would prefer to receive the benefits. The modified REDD+ Game included two scenarios. Under Scenario 1, the hypothetical village received a full benefit payoff with certainty, while Scenario 2 involved a lottery so that groups could not foresee the forest's outcome or associated payoffs when choosing benefits.

Individual participants completed confidential questionnaires at the end of the group discussions to rank benefits in order of preference, propose additional benefit types, rate the equity of tenure arrangements in their district (through indicators of 'fairness and inclusiveness' as used by the UN-REDD Programme in Viet Nam because no direct Vietnamese translation of equity was identified); and provide information about their tenure status and gender differentials. Data was disaggregated by forest tenure status using Microsoft Excel to produce descriptive statistics of their preferences over benefits and perceptions of the equity of current tenure arrangements.

Results

Stakeholder preferences over BDS

Preference over cash for infrastructure and LURCs

Stakeholders in discussion groups chose types of benefits by allocating Game funds. Under Scenario 2 of the REDD+ Game, in which benefits were conditional on a hypothetical forest's outcome after a five-year contract period, groups allocated 42% of Game funds for purpose-oriented cash for material inputs for infrastructure projects, and 37% to receive LURCs. Groups allocated only 7% of Game

funds for cash without any purpose (Figure 3). Choices over benefit type were nearly the same under Scenarios 1 and 2.

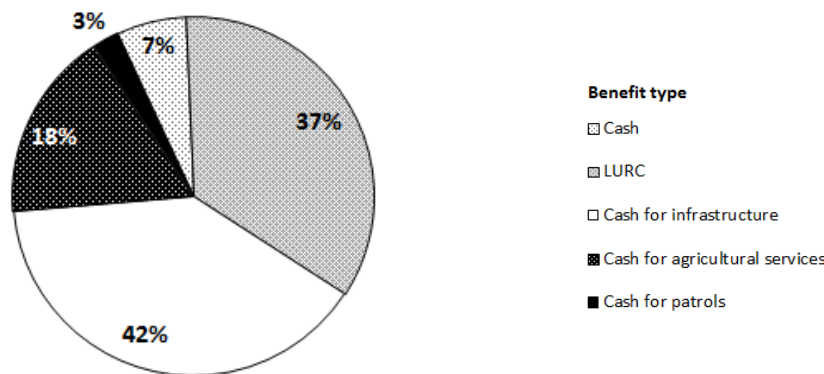


Figure 3. Preferences over benefit type

Five of eight discussion groups proposed ‘purpose-oriented cash benefits’ to spend on inputs for infrastructure projects and agricultural production rather than receive them from the program or the Government. In discussions, participants said that they preferred to manage infrastructure projects themselves and volunteer their labour, or to allow individual households to buy agricultural inputs specific to their needs. Groups preferred purpose-oriented cash or LURCs over simple cash payments because, as one participant from Ban Ken village explained, ‘Everyone likes money for investments, but if we have no land in which to invest, we will use the money ineffectively for a short time.’

Group preferences over distribution systems reflected community-oriented traditions for sharing resources. Participants preferred to distribute cash or LURC benefits equally among households. Groups said they would manage the infrastructure construction efficiently because they would spend funds only for material inputs and organize volunteer labour from every village household. In particular, groups in special-use forests did not choose LURCs as their most preferred benefit. They were concerned that it would be difficult for the Government to allocate land fairly because parcels might be of equal size but of different quality. To overcome this complexity, participants from Leo Keo village proposed that parcels be distributed through a random lottery.

Preferences over the LURC benefit varied with land tenure status

Preferences over benefit types varied by the status of an individual’s forest land tenure. The majority of stakeholders holding LURCs for protection forest (83%) preferred to receive LURCs for production forest, while almost all stakeholders holding LURCs for production forest (90%) wanted cash without purpose (Table 2). Individuals without LURCs from villages located in special-use forests doubted that LURCs could ever be allocated to them; however, when they were reminded that benefit choices in the REDD+ Game were for a hypothetical village, they said they would prefer production forest LURCs. In sum, LURCs for production forest are generally preferred by forest stakeholders, due mainly to higher economic opportunities in this type of forest.

Table 2. First-ranked benefit type, by individual land tenure status

First-ranked benefit	LURC, protection forest	LURC, production forest	No LURC
LURC	83%	0%	32%
Cash	0%	90%	62%
Infrastructure	0%	10%	6%
Agriculture services	17%	0%	0%

Preferences over the LURC benefit varied by gender

Groups with a majority of female participants preferred cash for agricultural inputs, such as fertilizers or seedlings, as much as they preferred LURCs and cash for infrastructure (Figure 4). In contrast, male-dominated groups preferred cash for infrastructure (50%), LURCs (33%) and cash alone (17%). The top choice for the use of cash for infrastructure was road construction.

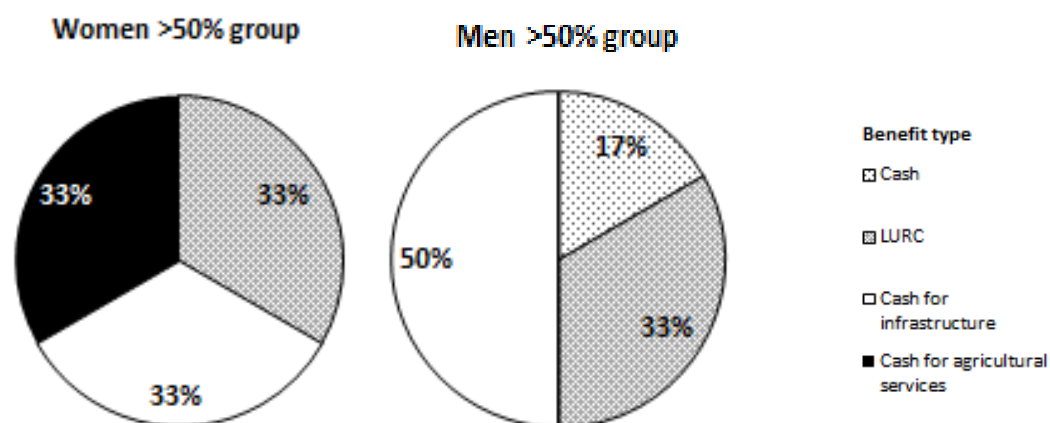


Figure 4. Preferences over benefit type, by gender

Benefit timing changes with results-based reward schemes

In the REDD+ Game, groups preferred a different timing of benefits based on whether payoffs were certain or conditional according to forest outcomes (Figure 5). In Scenario 1, in which payoffs were certain, groups allocated 74% of Game funds to the first two years of the five-year contract period. Participants explained that they preferred to utilize benefits immediately, especially when receiving LURCs. In Scenario 2, in which payoffs were conditional on forest outcomes, groups shifted 17% of funds to the last year of the contract period. Notably, women and participants holding LURCs shifted more Game funds to the last year than did groups on average (27% and 28% respectively, compared to 17% by groups on average).

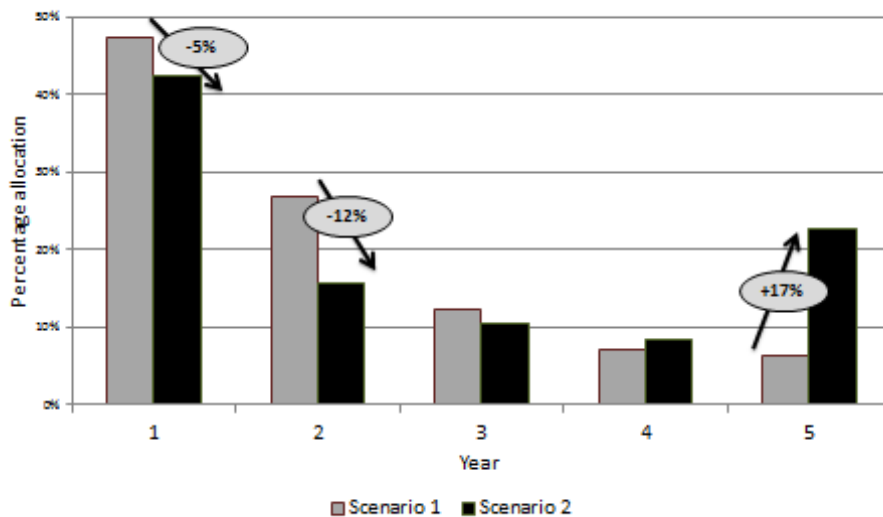


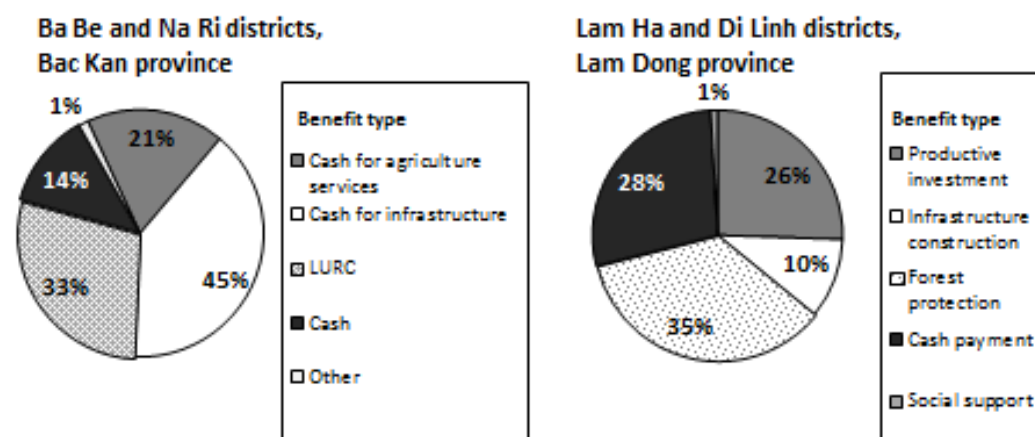
Figure 5. Preferences over benefit timing, REDD+ Game scenarios 1 and 2

Difference in stakeholder preferences between Lam Dong and Bac Kan provinces

Preferences among participants in Ba Be and Na Ri districts in Bac Kan province were different from the preferences of stakeholders from seven villages in Lam Ha and Di Linh districts in Lam Dong province in Viet Nam’s central highlands. The Lam Dong province stakeholders in 2012 had participated in a REDD+ Game piloted by the Netherlands Development Organization (SNV) on behalf of the UN-REDD Programme in Viet Nam.

The Game was conducted with 15 groups that included 221 economically poor, average, and better-off stakeholders. Most stakeholders had already participated in Free, Prior Informed Consent (FPIC) activities conducted previously under the UN-REDD Programme. More than half the villages were involved in contracts for forest protection, and only one village was allocated land for production forest plantation.

Across the groups, the most preferred benefits were funding for forest protection, cash payments to individual households, and support for agricultural production (Figure 6). A group that included poorer stakeholders preferred house construction for poorer households, while a group with better-off members preferred funds for forest protection.



Source: Sikor, et. al(2012)

Figure 6. Preferences over benefit type, Bac Kan and Lam Dong provinces

Different stages of progress between the provinces in Viet Nam’s land tenure reform process and participants’ economic status might be factors underlying the different preferences. First, LURC allocation is occurring at a slower pace in Lam Dong province than in Bac Kan. By 2011, only about 1% of land was devolved to individuals or households in Lam Dong (Nguyen 2011), compared to 60% of land in Bac Kan. Stakeholders in Lam Dong may not have considered LURC allocation feasible, and thus demand for LURC was lower, compared to Bac Kan where LURCs for protection forest were already given to most stakeholders. Secondly, the economic status of the participants may be a factor. While Bac Kan participants were the poorest members of their villages, some Lam Dong participants were economically better off and forest patrols in Lam Dong tended to include average and better off village members, making them more likely to prefer the benefit of financial support for additional protection activities.

Perceptions of equity of land tenure arrangements

When surveyed through individual exit questionnaires, the majority of individual participants strongly disagreed or disagreed with statements that current land tenure allocations were fair or inclusive (71% and 71%, respectively) (Table 3).

Table 3. Individual perceptions on fairness and inclusiveness of land tenure

“Do you agree/disagree with the following statements?”	“Current land tenure allocations in my district are fair.”	“Current land tenure allocations in my district are inclusive.”
Strongly agree	6%	17%
Agree	23%	12%
Disagree	15%	23%
Strongly disagree	56%	48%

Groups in discussion said they felt that government reallocations of tenure from production forest to protection or special-use forests were particularly unfair, but they had no power to reverse the decisions or to change the situation. In Ban Ken, where production LURCs had been replaced with

protection LURCs, a participant expressed powerlessness over the reallocation of lands. Groups in To Dooc also said that households without LURCs often lived in poverty that was exacerbated by the inability to leverage land as collateral for bank loans. Members of villages in special-use forests like Ba Be National Park were frustrated that they could not use resources from forests near their homes. Groups also said that it was neither fair nor inclusive that households lacking LURCs were not able to participate in forest conservation programs such as Program 661.

To improve equity, members of Ban Pjan village in Ba Be district proposed sharing land resources rather than reallocating them, an approach taken in Bac Kan province by the Pro-Poor Partnership for Agroforestry Development Project (3PAD) program for poverty reduction, which is funded by the International Fund for Agricultural Development (IFAD) (Hoang pers. comm. 2012).

Discussion

This section discusses fieldwork findings through the lens of the ‘theory of access’, and finds the stated preferences of forest stakeholders in Bac Kan to be in line with framework predictions. As mentioned above, the theory of access states that access is the ability to benefit from things, including institutions such as PES schemes, and while property rights are but one means of access, they can affect the distribution of benefits and social relations among forest stakeholders. Stakeholders’ power to benefit from forest land resources is entrenched in the social and political-economic context of Viet Nam. The preference of Bac Kan stakeholders over purpose-oriented cash and LURCs may be regarded as examples of the perceived value of social relations and of State-sanctioning of ‘bundles of power’ when accessing forest resources.

Gender, sociocultural, and economic drivers of preferences

Preferences over purpose-oriented cash are rooted in the context of the Vietnamese village’s culturally defined and gendered roles in agriculture and community activities, as well as in the traditions of resource sharing and livelihood experiences, which are the material, cultural and political-economic strands that constitute the stakeholders’ ‘web’ of access powers.

Preferences between women and men suggest differences in gender appreciation of the multi-functionality of forest landscapes, and relates to gendered roles in agriculture and community management activities. As described in the theory of access, a social identity such as being a man or woman or being a village leader or subordinate affects who has access to and control over resources and benefits, and how they are accessed. In Viet Nam, women have dual responsibilities for farm and household management. They contribute to household income through marketing of agricultural products, husbandry, petty trade, food processing and handicrafts, yet have been shown to receive a smaller share of agricultural earnings, with a gender earnings gap of 15% (Viet Nam General Department of Statistics 2004). This explains why women in discussion groups preferred purpose-oriented cash for agricultural inputs, rather than the cash for infrastructure preferred by men, as they are more involved in productive activities than in community work such as road construction. What this implies is that a PES or REDD+ BDS must take into account gendered roles, access and control over forest resources, and their associated benefits.

Preference over purpose-oriented cash exemplifies a Vietnamese village culture referred to as ‘*văn hoá làng*’, which prioritizes localism, kinships and communal norms. Although discussion

participants were the economically poorest members of their villages, and could be expected to prefer cash payments for short-term personal expenditures, in the REDD+ Game's hypothetical village they preferred to invest cash in public goods projects or agricultural inputs for long-term wellbeing, and even work without wages. PES schemes could leverage these villages' strong social capital to achieve broader conservation gains. Rewards in the form of purpose-oriented cash for public goods could be aligned with a landscape approach that includes forests and all land use types in an area where a community lives, as advocated by ICRAF's Reducing Emissions from All Land Uses (REALU) project². REALU recommends that rewards be based on a landscape approach for which communities would be incentivized to collaborate to keep emissions below a reference emission level (REL) for an administrative area (Hoang et al 2010). Communities could participate in planning, monitoring and verifying activities and in managing PES payments. Community participation could support an UN-REDD measurement, reporting and verification (MRV) system that would reinforce benefit conditionality, a mechanism that apparently influenced stakeholder decisions in the REDD+ Game.

Regardless of gender-specific differences, poor access to capital and reliance on small-scale farming for income and subsistence may have driven preferences over purpose-oriented cash benefits that would improve productivity, such as cash for fertilizer or materials to build roads for transporting goods between farm fields, villages, and trade centres. Furthermore, as farmers or forest people, participants may have been more accustomed to making tangible investments in land or infrastructure than in savings, and therefore did not propose benefits in the form of financial services.

Preferences over production forest LURCs may have been driven by intentions to increase access to benefits and improve livelihoods through timber extraction for commercial purposes. Therefore, there is a risk that the allocation of LURCs as a PES benefit could result in reduced above-ground carbon stocks, contribute to leakage, and undermine carbon sequestration objectives. On the other hand, carbon losses might be reduced in comparison to current trends if LURCs were provided for unallocated forests that are currently managed by CPCs and exploited as 'open access' areas.

Value of State-sanctioned access rights

Preferences over LURC benefits indicate the importance to forest stakeholders of formalized resource access rights. LURC holders have the State-sanctioned power to use lands as collateral for loans, and extract certain amounts or volumes of forest products from both production and protection forests. The State sanctions their power to exclude others from using the resource. As such, it is not surprising that stakeholders who already held production forest LURCs preferred cash, but it is notable that holders of protection forest LURCs preferred production forest LURCs over cash, indicating that use rights given in production forest LURCs have economic value to them.

Access maintenance through investments in relationships

Stakeholders' relations with land management agencies were affected when parcels were reallocated from private to public managers, particularly for the establishment of protected areas. While formal powers of access are sanctioned through LURCs, informal access to land and information about tenure rights is maintained through stakeholder investments in social relationships with government authorities. From group discussions, it appears that officials may be lenient in forest law enforcement towards households who are poor or had historical claims to protection or special-use forest areas, exemplifying how social identity may affect access to benefits. As another example, households with historical land claims were said to be prioritized as future LURC recipients. Therefore, protection

forest LURC holders, such as in Ban Ken village, have invested in relationships with officials and volunteer forest protection labour in hopes that the Government might reallocate the land to them as production forest.

Influence of policy context on stakeholder preferences

The experiences that stakeholders described regarding changes in land tenure arrangements illustrate how resource access rights are affected by their policy environment. Overlapping systems of legitimacy, such as conflicting land laws (particularly the LFPD and the Civil Code), make it difficult for rural stakeholders to know their rights, and the structural and relational mechanisms they could use to improve their access to tenure or benefits. The dynamic context of the implementation of changing policies may affect preferences over benefits. They may also affect perceptions of the feasibility of receiving benefits like LURCs, as found from discussions with stakeholders living in proximity to special-use forests and the differences in preferences between REDD+ Game participants in Bac Kan and Lam Dong provinces.

Access to resources and institutions and stakeholder preferences

The stated preferences over benefits and BDS by forest stakeholders reflect their ability to access not only forest resources but also institutions such as PES schemes. In the access theory, such ability exists through formal or informal rights over forest resources, social relations, and all the material things that make up a web of power to access and benefit from a resource. The common preference over LURCs indicates that the ‘access’ issue is crucially important to forest stakeholders. Furthermore, the extent that cultural values, social relations and past experiences in a socialist society interplay with formalized institutions such as a PES or REDD+ schemes, and influence stakeholders’ preferences over benefits, is an important consideration in the design of a BDS.

Conclusion

Our study findings offer insights to designers of BDS of future PES schemes such as REDD+. The Bac Kan case provides a good example where forest stakeholder preferences over benefits and over distribution systems largely hinge on their access to resources, although different forest tenure types and socioeconomic and cultural factors such as gender specifically also played a role in the stated preferences. The choice of LURCs indicates the importance of formalized access rights to Vietnamese forest stakeholders, regardless of their different characteristics and preferences. This further implies the need for PES or REDD+ BDS designers to give priority attention to tenure, in consideration of context-specific preferences.

This study suggests two recommendations and one contextual consideration for BDS design in Bac Kan province. Firstly, a BDS where villages receive a purpose-oriented cash benefit that they manage as a community development fund (CDF). This approach fits well with the Vietnamese socialist tradition, and would improve the likelihood of sustainable forest management. Secondly, capacity development among forest stakeholders and local agencies and feasibility assessments should be implemented before distributing benefits. PES sponsors, whether the Vietnamese Government or UN-REDD, should support technical assistance for local government land allocation operations and for managing the CDF. Finally, BDS designers must recognize that the provision of public goods infrastructure and the allocation of LURCs are the official responsibilities of the Vietnamese Government, and therefore, the political feasibility of including these preferred benefits in a PES scheme needs to be assessed. These assessments, and further research on locally specific stakeholder preferences, could be conducted through broader, systematic applications of the REDD+ Game or the UN-REDD process to obtain Free, Prior and Informed Consent (FPIC).

REDD BDS has been debated at the global level, and has been a bottleneck for countries to access funding. The lessons learned through our research in Bac Kan may be applicable beyond Viet Nam so as to ensure that stakeholder preferences are accounted for in REDD+ BDS.

Endnotes

The REDD+ Game is described in the 2012 report, *Piloting local decision making in the development of a REDD+ compliant benefit distribution system for Viet Nam*, by Thomas Sikor, Adrian Enright, Nguyen Trung Thong, Nguyen Vinh Quang and Vu Van Me, for the Netherlands Development Organization (SNV) on behalf of the UN-REDD Programme in Viet Nam. It is found online at:

http://www.snvworld.org/sites/www.snvworld.org/files/publications/bds_piloting_report_final_report_to_unredd_-snv.pdf.

REALU is based on the argument that a broad-based approach to carbon management can lead to greater emissions reductions and larger benefits for local people than REDD+. Hence, the REALU goal is to develop a fair and efficient financial co-investment in effective approaches to reduce greenhouse gas emissions from land use in tropical countries, including but not restricted to deforestation and forest degradation, as part of the post-Kyoto United Nations Framework Convention on Climate Change regime, leading to reductions in global emissions, enhancement of resilience to climate change, and respect for the rights of local stakeholders.

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The World Agroforestry Centre is an autonomous, non-profit research organization whose vision is a rural transformation in the developing world as smallholder households increase their use of trees in agricultural landscapes to improve food security, nutrition, income, health, shelter, social cohesion, energy resources and environmental sustainability. The Centre generates science-based knowledge about the diverse roles that trees play in agricultural landscapes, and uses its research to advance policies and practices, and their implementation that benefit the poor and the environment. It aims to ensure that all this is achieved by enhancing the quality of its science work, increasing operational efficiency, building and maintaining strong partnerships, accelerating the use and impact of its research, and promoting greater cohesion, interdependence and alignment within the organization.



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