

Challenges for pro-poor benefit sharing schemes in the implementation of REDD+ in Mexico



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Acronyms

ATREDD+	REDD+ Early Actions areas (<i>Acciones Tempranas REDD+</i>)
BMUB	German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety.
CCMSS	Mexican Civil Council for Sustainable Forestry (<i>Consejo Civil Mexicano para la Silvicultura Sustentable</i>), Mexican NGO.
CDM	Clean Development Mechanism
CO ₂ e	Carbon dioxide equivalent
CONAFOR	Mexico's National Forestry Commission (<i>Comisión Nacional Forestal</i>)
COP	Conference of the Parties
CTC	Technical Advisory Committee on REDD+ in Mexico
D&D	Deforestation and forest degradation
ER-PIN	Emission Reductions Program Idea Note
ENAREDD+	Draft of Mexico's National Strategy on REDD+, the final version is not yet available
FCPF	Forest Carbon Partnership Facility
FIP	Forest Investment Plan
IRE	Mexico's Emission Reductions Initiative
MREDD+	Alliance Mexico REDD+
MRV	Monitoring, Reporting and Verification
NGO	Non-governmental organisation
NORAD	Norwegian Agency for Development Cooperation
NTFP	Non-timber forest products REL/RL Reference emission level/reference level

PAGeREDD+	Action Plan for Mainstreaming Gender in REDD + Mexico (<i>Plan de Acción para la Transversalización de la Perspectiva de Género para REDD+ en México</i>)
PES	Payments for environmental services
PRONAFOR	National Forestry Programme (<i>Programa Nacional Forestal</i>)
REDD+	Reduced emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
TFD	The Forests Dialogue
UNFCCC	United Nations Convention on Climate Change

Executive Summary

The implementation of REDD+ in developing countries is expected to produce many environmental and social benefits when these countries receive results-based cash rewards from international sources. These rewards will be measured in terms of emission reductions or increases in carbon removals over the whole country. In this context, it is necessary to create ad hoc institutional frameworks and design equitable and transparent benefit sharing schemes such that the rewards may be distributed among all the many stakeholders within the country who have in some way participated in the achievements. The Forests Dialogue (TFD) has organised four international events to discuss the design of benefit sharing schemes in Vietnam, Ghana, Peru and Mexico. A preliminary version of this report was prepared by the authors for IUCN and presented at the most recent dialogue held in Mexico in June 2014, which gathered more than 50 specialists on forest management and REDD+ from 20 countries. This report presents a summary of the gaps and problems in the design of benefit sharing schemes, focusing particularly on the need to develop pro-poor schemes, and includes the Dialogue's main recommendations and suggestions. An assessment of both the challenges and the potential paths for implementation is included in the example provided by the case of implementation of REDD+ in Mexico.

1 Introduction

Many environmental and social benefits will result from implementing activities to tackle emissions from deforestation and forest degradation and to promote the conservation of forest carbon stocks, as well as from the sustainable management of forests and carbon enhancements in developing countries (REDD+).¹ The nature and scale of these benefits will depend on the specific contexts and the specific REDD+ activities that each country develops. The prevalence of different drivers of deforestation and forest degradation will require the design and implementation of different REDD+ activities in different regions (Buss et al., 2013a). These activities will generate costs and benefits that diverse stakeholders might bear and receive. At the international level, the term ‘REDD+ benefits’ refer to the compensation that will be received by countries when they implement the activities referred to in paragraph 70 of decision 1/CP.16², assuming they result in reduced emissions or increased carbon removals. Benefit sharing in REDD+ in this report refers to the ways in which the financial benefits resulting from these activities will be distributed among different local stakeholders within a country and to the design of the institutional arrangements needed to implement such distribution within the formal framework of national REDD+ programmes (Hou, 2013).

Many issues need to be considered in the design of benefit sharing schemes in REDD+. These include: the criteria used to identify the beneficiaries, the basis on which benefits should be shared, their forms, their distribution channels and the decision-making mechanisms adopted (Hou, 2013). It is expected that the benefits at country level will be directly proportional to national carbon performance and that compensation at this level will be in cash, although at the sub-national and local levels there may be options for in-kind compensation as well. In the context of sub-national distribution of benefits, civil society has raised questions on equity

1 Among others, expected benefits derived from REDD+ implementation include the mitigation of climate change through the reduction of emissions from deforestation and forest degradation and from carbon enhancements. Non-carbon benefits include aspects such as the maintenance of environmental services such as hydrological services, protection against landslides and biodiversity; the enhanced or sustainable production of timber and NTFP; social benefits as strengthening of social capital and better forest governance, capacity building and conservation of cultural sites.

2 (a) Reducing emissions from deforestation; (b) Reducing emissions from forest degradation; (c) Conservation of forest carbon stocks; (d) Sustainable management of forests; (e) Enhancement of forest carbon stocks.

matters and on whether this policy will be beneficial for the poor in rural areas. There are public concerns that REDD+ might hurt the poor and those without formal rights over forest resources by excluding them from the forests as soon as forest climate services have an exchangeable monetary value (i.e. by preventing the uses and access to non-monetary benefits that informally derive from forests). This thinking later developed into calls for needs-based, pro-poor REDD+ benefit distribution systems. Civil society stakeholders in many countries, including Mexico, may not consider REDD+ as legitimate and acceptable unless it is able to deliver benefits to the poor (UN-REDD, 2012; Essam, 2011; Enright et al., 2012).

The Forests Dialogue (TFD) is an initiative hosted by Yale University that started in the late 90's with the objective of gathering different stakeholders from around the world to discuss various issues related to sustainable forest management and development (e.g. forest product businesses, social and environmental groups, private sector organisations)(TFD, 2014a). Since late 2012 TFD has started to organize events for discussing the challenges for benefit sharing schemes in REDD+ as part of its Forest and Climate Initiative. In the last two years, IUCN and the TFD have been promoting a global dialogue on REDD+ benefit sharing, including four field dialogues which were held in Vietnam, Ghana, Peru and most recently in Mexico (TFD, 2014b). The Dialogue held in Mexico in June 2014 was organised in collaboration with CONAFOR and CONABIO, and built on the previous events to move the discussion on the design of benefit-sharing schemes forward. This document presents a summary of the challenges and opportunities for REDD+ benefit sharing schemes as presented at the Dialogue in Mexico, along with the main conclusions and recommendations produced by the participants at this event.

The objectives of this paper are: (a) to describe the current state of the discourse, design and implementation of benefit sharing schemes for REDD+ in Mexico; (b) to present an overview of issues associated with benefit sharing, including the question of equity and pro-poor benefit sharing; and (c) to indicate the gaps or pending decisions in regard to a benefit distribution system for Mexico, based in part on the outcomes of the benefit sharing Dialogue. The paper is structured as follows:

Section 2 starts by briefly explaining the process of how REDD+ has been developed in Mexico, and then focuses on the debate that has been carried out on benefit sharing, with reference to its national/jurisdictional programme. National and jurisdictional programmes, in which benefits need to be distributed *vertically* from the centre downwards, pose very different challenges from those at project level REDD+ (where the distribution is *horizontal*) (Buss et al., 2013a). While there is considerable experience and literature already at the project level, there is not much understanding about how benefit sharing could work in a national/state system.

Section 3 identifies a number of gaps or challenges faced by systems that aim at distributing REDD+ benefits within a national/jurisdictional framework.

Section 4 proposes a set of criteria to evaluate different benefit-sharing systems (e.g. environmental effectiveness, economic efficiency, political legitimacy, and social goals of equity including gender equality and pro-poor opportunities).

In *Section 5* we outline a number of possible distribution systems, and make an analysis of their strong and weak points using the criteria mentioned.

Section 6 summarises the comments and suggestions that were made on the original draft of this paper at TFD.

Finally, *Section 7* concludes with the outline of the current position of the Mexican National Forest Commission (CONAFOR), highlighting the questions that still need to be resolved.

2 REDD+ benefit sharing in Mexico

Mexico has actively supported the UNFCCC agreement on REDD+ and embarked early on the development of its National REDD+ Strategy. Since its Vision on REDD+ was published in 2010 (CONAFOR, 2010), Mexico has been involved in revising the final draft of the National Strategy on REDD+, initially distributed for discussion in 2012 (ENAREDD+: CONAFOR, 2012). This document has been drawn up in a process in which a large number of civil society actors such as NGOs, academics and other local stakeholders as well as some state governments have contributed, through different participatory platforms, such as the Technical Advisory Committee on REDD+ (*Comité Técnico Consultivo*) (CTC REDD+), which first met in 2008 and is still on-going. Although neither the Vision nor the ENAREDD+ draft have a specific chapter on benefit-sharing schemes, both provide general principles on how to design benefit sharing. Additionally, REDD+ Early Actions³ are being implemented in a number of regions, including the Yucatan Peninsula, and a results-based payment approach will be launched in the same areas through the Emission Reduction Initiative, for possible funding within the framework of the Carbon Fund of the FCPF.

2.1 Vision on REDD+

The Vision initially states that the goal of REDD+ is to eliminate emissions from land use change by 2030 and to enhance the quality of carbon reservoirs while incentivizing ecological restoration and biodiversity conservation, thus contributing to food security and enhancing living standards (CONAFOR, 2010). Emissions from degradation should be reduced through sustainable use of resources, natural regeneration and controlled use of fire with incentives for implementing such sustainable practices. The main action lines defined in the Vision are: the creation of institutional arrangements; baselines and an MRV system; capacity building and mechanisms for communication and participation.

3 REDD+ Early Actions (ATREDD+) are institutionally coordinated efforts at the sub-national level (regional and local) aimed at addressing the causes of forest and forest carbon loss through a variety of public policy instruments that create economic and social development opportunities for communities.

The Vision points out the importance of learning from successful experiences, respecting landowners' rights and recognizing that control of emissions in the forestry sector might include interventions beyond forested areas (e.g. reducing pressure on forests from the agricultural sector). The role of the government would be that of a promoter and regulator to ensure respect for property rights and to foresee the institutional needs associated with REDD+ given the ongoing process in which the framework is being built at both national and international levels.

The Vision states that in REDD+, forest owners (communities, individuals or firms) should receive *fair* and *direct* benefits, which *should not threaten land rights or the potential to use land sustainably*. The strategies should then consider the drivers of emissions and should correct distortions in the valuation and management of carbon services. Incentives should aim at stimulating the sustainable management and natural regeneration of forests, particularly at the community level (CONAFOR, 2010).

The Vision recognizes *MRV as a key element* in REDD+ in providing information for policy design, evaluating results-based actions, *claiming and distributing benefits/incentives*, and generating the information that has to be reported as part of national commitments to the UNFCCC (national communications, updates, REDD+ related reports, etc.). The development of an internal voluntary carbon market is envisioned as a possible mechanism for generating incentives for REDD+ (CONAFOR, 2010).

The Vision aims at promoting an *equitable distribution of benefits based on social agreements*, whose guiding principles include gender equity, grassroots participation and respect for landholders' property rights, among others. It also indicates that the finance derived from results-based activities should be integrated within a *fair* system for benefit sharing. In the third phase of REDD+, which refers to the implementation of results-based actions that should be fully measured, reported and verified, Mexico should have a *fair and equitable* system for benefit sharing.

2.2 National REDD+ Strategy

In recent years, the commodity boom has increased both competition for land and the opportunity costs of forests, and approaches such as PES usually provide insufficient incentives for sustainable management given the costs involved (Hou, 2013). An alternative is to adopt a landscape approach to include the mitigation of climate change in different land uses (not only in forest land) and to promote a rural sustainable development model with low carbon emissions. This is Mexico's approach as expressed in the most recent draft of the ENAREDD+ (CONAFOR, 2014). The spirit behind the ENAREDD+ aims at promoting rural sustainable development based on a territorial approach (CONAFOR, 2014). The ENAREDD+ follows the General Law on Climate Change (2012), which contains a mitigation target of zero emissions in original ecosystems. The objectives also include emission reductions from forest

degradation, increase of forest areas under sustainable and natural regeneration management, and enhancement and conservation of carbon stocks.

The strategy recalls that Mexico's legal framework establishes that since vegetation and forest soils capture carbon, the carbon-related property rights lie with the legal land owners (e.g. *ejidos*, communities, indigenous groups, individuals, firms). The General Law on Sustainable Forest Development also explicitly mentions the '*posesionarios legales*', who are community members with land but without full rights (LGDFS, 2012). The strategy includes objectives and action lines within the following components: i) Public Policies and Legal Framework, ii) Financing Schemes, iii) Institutional Arrangements and Capacity Building, iv) Reference Levels, v) MRV, vi) Social and Environmental Safeguards, and vii) Communication, Social Participation and Transparency. Benefit-sharing schemes are not described or elaborated in the ENAREDD+, although they are mentioned in the Financing Schemes chapter (chapter V.2, p 42-45). However, the most relevant section is Carbon Property Rights and Benefit Sharing ('*Propiedad de carbono y distribución de beneficios*') in chapter III, p 33. It is clear that carbon which is locked up in forest resources or isolated as a result of forest management should be seen as the forest owners' property. However, carbon from emission reductions cannot easily be assigned to forest owners because it is never entirely clear whose activities have led to reductions in deforestation and degradation. While the forest owners and other inhabitants of the region should be beneficiaries of payments related to such savings, this cannot be on the basis of carbon ownership. Moreover, payments made from funds relating to such reductions are to be used to promote further forest management and conservation activities.

One aim of the benefit sharing scheme is to promote a development model that allows a permanent end to the deforestation and forest degradation processes. The ENAREDD+ includes as part of its action lines, the establishment of *financial mechanisms to operate resources that ensure the fair and equitable distribution of benefits to forest resource owners, and the identification of mechanisms and schemes to promote, facilitate and monitor the equitable distribution of benefits* (CONAFOR, 2014). REDD+ will involve those activities that generate *more social benefits and support rural sustainable development*. The ENAREDD+ (CONAFOR, 2014) specifies that incentives (funded by public sources) and the financial benefits derived from effective reduction of emissions from deforestation and degradation will be used to stimulate conservation, sustainable forest management and increases in forest reserves. The institutional arrangements that will take place as part of REDD+ will include strategies and measures to provide long-term certainty for the actions implemented. Strategies include the use of *community land use plans*, the promotion of actions to reduce the effect of disturbances and actions to promote ecosystem restoration and enhancement. Different economic instruments will be designed and promoted to facilitate the implementation of activities in REDD+. Some of these will include the use of domestic funds to subsidize sustainable community forest management, the financing of sustainable activities based on *best practices*, measures for increasing the *access to credit* for productive activities and the creation of a *voluntary market* for carbon sequestration. It will be important to address the issues of

permanence, buffers and leakage, and to create synergies with the private and social sectors. It will also be necessary to finance actions to *create capacities* that might enable local communities to engage in implementation.

2.2.1 Safeguards

The strategy includes principles and guidelines for the implementation of social and environmental safeguards as defined in the UNFCCC decisions adopted at Cancun and Durban. Furthermore, the ENAREDD+ contains reference to the safeguards as included in the national legislation. Safeguards should ensure the *equitable* distribution of benefits, respecting gender considerations and guaranteeing the *certainty over property rights and economic competitiveness*. The participation of *indigenous* groups is a challenge; the ENAREDD+ recognizes 62 indigenous groups with their own languages. The strategies for participation and communication should engage and empower different social actors for REDD+ participation and implementation of safeguards (i.e. gender, cultural, economic, political, ethnic groups). CONAFOR is taking the first steps to develop a national system to guarantee compliance with REDD+ safeguards in collaboration with other agencies of the government and relevant stakeholders. There are also two pilot projects in development (one in the inter-municipal associations of Jalisco, and the second in the Yucatan Peninsula) based on the REDD+ Social and Environmental Standards (REDD+SES, 2012). The experience from this pilot will be used to draw conclusions and lessons learned.

2.2.2 Views expressed by the Technical Advisory Committee on REDD+

It is widely understood that it is necessary to inform different stakeholders about how issues such as performance-based MRV could shape REDD+ and what the implications of this are for shaping future benefit sharing schemes. This is also necessary to engage with stakeholders outside the forestry sector and identify the required incentives (Buss et al., 2013b). By engaging different stakeholders, it will be possible to facilitate cross-level and cross-sector linkages to design benefit-sharing schemes and to address drivers of deforestation and forest degradation (Buss et al., 2013b).

In Mexico, debate on benefit sharing has taken place within the CTC, and these discussions have been vigorous, with diverse and divergent opinions. In 2012, a sub-group was set up to deal with this topic and present findings to the main CTC meetings, because of the complexities of the topic. Most of the subgroup members seemed to think that ALL the financial benefits of REDD+ (i.e. from sales of carbon credits internationally) should belong to the communities/*ejidos*/landowners who participate in REDD+. However, it seemed that the CTC overlooked the fact that it may be very difficult to identify who has not deforested but would have done so without REDD+ (the additionality problem, see Figure 1). Moreover, the CTC

did not accept the argument that other parties (i.e. other than forest owners) who undertake REDD+ actions might deserve REDD+ benefits. This was because it was feared that many who do not really ‘deserve’ rewards (including e.g. ‘governmental agencies’) would try to claim them. The view of the subgroup was that the government should bear the responsibility of providing the investments needed and that all the benefits should flow to the forest owners. The idea of different systems of benefit sharing for the enhancement credits and the emission reduction credits was considered, but a clear decision on the topic was not reached.



Figure 1. Example showing the difficulty of identifying who should receive benefits relating to the reduction of deforestation within a large geographical area.

2.3 Initial activities and initiatives

The implementation of REDD+ in Mexico will follow a nested approach that includes the national, sub-national (i.e. state level), regional (i.e. inter municipal associations) and local levels (i.e. *ejido* and municipalities) (CONAFOR, 2012). Baselines and MRV activities at state level will be aggregated to national level. As part of a step-wise implementation, Mexico has started to prepare activities in REDD+ Early Action areas at sub-national level (ATREDD+) where different efforts and initiatives are ongoing. ATREDD+ activities have taken place in Campeche, Chiapas, Jalisco, Quintana Roo and Yucatan. The outcomes of these experiences will generate lessons learned to implement the third phase of REDD+ nationally.

Many different initiatives are being implemented as part of REDD+ preparation in Mexico. Initial efforts include the project “*Strengthening the process of preparing for REDD+ in Mexico*”

and the promotion of South-South Cooperation” financed by NORAD (Mexico-Norway project) and the “Implementation of REDD+ early actions in priority watersheds in Mexico through the construction of governance mechanisms at the local level” (LAIF project), financed by the French Development Agency and the Spanish Agency for International Cooperation and Development through the Latin American Investment Facility (LAIF) (CONAFOR, 2013). USAID is financing capacity building for REDD+ and the implementation of projects in an initiative led by The Nature Conservancy, in the Mexico REDD+ Alliance (MREDD+) (Alliance, 2013); other partners of MREDD+ include Rainforest Alliance, the Woods Hole Research Centre, and *Espacios Naturales para el Desarrollo Sustentable*. In addition, MREDD+ in collaboration with IUCN is supporting other processes such as the integration of gender considerations of REDD+ in the PAGeREDD+ and the analysis of the programmatic and legal framework on gender considerations for REDD+. The Climate Investment Funds are supporting Mexico through projects in the Forest Investment Plan to improve the profitability and sustainability of community forest enterprises in rural areas as part of the initiatives for REDD+ preparedness (FIP, 2013). In parallel there are other initiatives financed by BMUB and led by IUCN to assist in the evaluation of options for benefit sharing schemes; TFD is part of this project. IUCN is also starting a regional process in Yucatan Peninsula to strengthen capacities for the transversal inclusion of gender considerations in the State Level Strategies of REDD+.



Figure 2. Nicolas Bravo, Quintana Roo, Mexico. Source: IUCN

There are a number of other initiatives looking specifically at different features of benefit sharing schemes, for example an opinion survey on options for benefit sharing within the Mexican national REDD+ strategy was commissioned by MREDD+ and conducted by the NGO CCMSS. This has produced policy recommendations for benefit sharing in Mexico.

2.3.1 The CCMSS report

During the period that the present document was being drafted, a parallel study was underway by the *Consejo Civil Mexicano para la Silvicultura Sostenible* (Mexican Civil Council for Sustainable Forestry, CCMSS by its acronym in Spanish), which is the local NGO currently managing the CTC process in the country. The study was commissioned by MREDD+, and funded by USAID. The draft of the report was distributed in May 2014 (*Elementos para el diseño del mecanismo de distribución de beneficios para REDD+ en México: informe final de consultoría* - Elements to design a benefit sharing mechanism for REDD+ in Mexico: Final Consulting Report).

The study's purpose was to determine the range of opinions on benefit sharing between different parties and actors engaged in the REDD+ process in Mexico, and ideally to reach a consensus view. The draft states that following an extensive literature review, the work was carried out using workshops to discuss different aspects of benefit sharing, with groups of people taking part on the different topics being examined. Unfortunately no information is provided as to who participated in the process (which organisations, how many people), but we understand that CONAFOR was an active participant and it is likely that members of the CTC were involved. The study aims at making an analysis of the principles and conceptual elements associated with benefit sharing schemes. The principles considered for the characterisation of benefit sharing schemes are: legality, legitimacy, effectiveness, efficiency, equity, additionality and transparency. These issues overlap with those we have used in the current study; however, the CCMSS draft report defines equity of benefit sharing schemes in terms of 'fair compensation to stakeholders participating in REDD+' as well as to those who have rights to carbon (i.e. forest land owners). This approach would exclude the poorer groups from REDD+ benefits. There are no specific references to pro-poor schemes.

The document describes options to identify the beneficiaries and to establish principles for benefit sharing schemes. It discusses the general institutional and financial arrangements for the distribution of benefits and gives a general description of the associated legal aspects.

The proposed framework establishes definitions to differentiate between "REDD+ actions" (which are those with direct measurable impacts on carbon stocks and emissions) and "REDD+ activities" including more diffuse interventions (e.g. alignment of public policies). Unfortunately this may cause some confusion since in the general policy documents relating to REDD+, the term "activities" refers to the five general options to mitigate climate change listed in paragraph 70 of Decision 1/CP.16 (i.e. reducing emissions from deforestation, reducing

emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks) (UNFCCC, 2011). In terms of compensation, the report differentiates between *incentives*, which are not necessarily linked to performance-based carbon funding and may not require compliance with additionality conditions, and *benefits*, which stem from international carbon finance, and are performance-based and subject to the additional requirement.



Figure 3. Communal forest in Quintana Roo, Mexico. Source: IUCN.

The report proposes classifying potential beneficiaries on the basis of their experience and possibilities for implementation of REDD+ actions. Resources granted to the least experienced communities could be used to build the basic governance arrangements and skills for forest management (e.g. local land use plans), while the more advanced communities could use the funds for more advanced purposes such as the capitalisation of local forestry enterprises. However, communities and *ejidos* should be allowed to determine internally how to use the resources they receive from participating in REDD+. These agreements may also include provisions for the transfer of benefits to those community members without formal rights to carbon. The report also states that transaction costs of the benefit distribution system should be kept as low as possible.

In evaluating the advantages and disadvantages of potential benefit sharing schemes the report presents two alternative scenarios. The first scenario considers the situation in which

carbon rights are unclear and all benefits are initially attributed to the federal government. Under this scenario the government is able to assign resources to different actions or actors, including the poor, but this involves high levels of discretion and lack of transparency. The second scenario portrays the opposite situation in which carbon rights are clear and all benefits are allocated to the rights holders (forest owners). This may be seen as a more legitimate mechanism to channel resources to the local level, but the government would still have to manage the resources since the international payments will be made at national level. Moreover this approach would leave no room to allocate resources to stakeholders outside forest areas. The process would also be contingent to the effectiveness of local governance processes.

The report presents an estimate of the potential carbon benefits Mexico could gain. Based on an initial review of the literature it is estimated that around 20 to 25 million tCO₂e per year could be valorised at a carbon price of 6 USD/tCO₂e (in contrast to the 25 USD/tCO₂e used in the ER-PIN, see Section 2.4.) When compared to CONAFOR's current budget (4.5 billion pesos for subsidies per year, around 346 million USD) and particularly to that of other ministries engaged in promoting rural development (nearly 300 billion pesos a year, around 23 million USD), the potential REDD+ benefits seem small (1.2 to 1.5 billion pesos per year). The report recommends that benefits should be distributed in monetary form, rather than in kind. The argument is that it would be up to communities or *ejidos* to decide how the cash received should be used. This is rather different from CONAFOR's statement that the funds are essentially intended for strengthening forest management (e.g. to be used to pay for technical assistance and perhaps for silviculture-related labour wages). The report argues that it would be difficult for communities to request the in-kind services which they require (e.g. health or education facilities or new infrastructure) and that the provision of in-kind rewards would increase the difficulties of the management and decision-making process. The report also suggests maintaining funds from REDD+ benefits separately from those of other public programmes. While this may help to establish the additionality of actions implemented, it would also require new structures to manage the reward system, generating additional transaction costs. Schemes for nesting institutional arrangements and benefit sharing would follow a top-down approach. The model envisages a nested system in which the performance-related benefits are transferred downwards from the national level to owners, businesses and organisations which are active in the field of promoting REDD+ actions. The individual states are regarded as having an important intermediary role in this, and so are regional organisations within the states. The report insists that activities supported by REDD+ benefits should be additional but it does not discuss the implications of potential mechanisms to evaluate performance, quantify carbon benefits or the challenges related to issues such as the aggregation or nesting of baselines and MRV systems.

According to the CCMSS report, benefits should reach all those inhabitants who take part in actions that result in improved forest resources and not just those who are formal owners of forest. The models do not clearly state whether the performance-related benefits include

those for forest enhancement, or whether they are limited to those for reduced deforestation and degradation.

2.4 The FCPF Emissions Reduction Program Idea Note

Mexico, as a REDD+ country, is requesting funding from the FCPF Carbon Fund and submitted an Emission Reductions Program Idea Note (ER-PIN) containing the proposal for a national Initiative to Reduce Emissions (IRE) (ER-PIN, 2014). The IRE will be implemented in Chiapas, Jalisco and the three states of the Yucatan Peninsula (CONAFOR's early action states for REDD+). It estimates that IRE implementation could reduce emissions by 1.75 Mt-CO₂e/year (about 8.75 MtCO₂e for the period 2016-2020). The ER-PIN proposes that 27% of the emissions reduced could be assigned to the Carbon Fund at a price of 25 USD/tCO₂e. Thus the total benefits obtained from the Carbon Fund would amount to nearly 60 million USD for the period 2016-2020 (12 million USD per year). It is still necessary to determine what other funding sources will be used for the remaining 73% of expected emission reductions (e.g. local or voluntary carbon markets, PES or other policies).

The ER-PIN defines certain elements for benefit sharing of REDD+ that are also consistent with the ENAREDD+ draft. The ER-PIN states that Mexico will fund local capacity building to manage forests and will continue to provide its regular public forest-related programmes (e.g. the National Forest Programme, Programa Nacional Forestal-PRONAFOR). Public policies will provide funding for the incremental cost of sustainable management in comparison with common practices, but they will not cover opportunity costs. The country will continue to provide funding for its public programmes from domestic resources and hence, any payments received for results from reduced emissions would be additional to these programs and will not be used to fund them. The objective is also to balance benefits of individual and community interventions. In this context, funding schemes stemming from the IRE will benefit different stakeholders, including women, young people and inhabitants who may not have rights to forest land but whose efforts are contributing to reduce emissions.

Rights. Based on Mexican legislation, ENAREDD+ and the ER-PIN state that the ownership of carbon stocks, (carbon within vegetation), lies with the legal forest owners given that these benefits are inherently linked to trees and vegetation existing in the land. One important challenge in many countries is how to collaborate with stakeholders when land or other statutory or customary rights are unclear (Hou, 2013; Buss et al., 2013b). An option is to create contracts for REDD+ activities under the existing law until unclear rights are resolved (Buss et al., 2013b). However, statutory rights to land in Mexico are generally clear: nearly 60% falls within the territory of *ejidos* and indigenous communities and as such, they have rights over it; 30% is private property. There are some cases of border disputes between *ejidos* where conflicts over forest have arisen, but this involves only a small number of cases.

The rights of other parties (i.e. people who do not have rights to forests, or those whose activities outside the forest could affect pressure for deforestation) as regards REDD+ are far from clear, but are important because in order to address the drivers of deforestation and forest degradation, it is necessary to engage them as stakeholders, even though it may be difficult to quantify what the carbon impact of their activities is.

Non-Carbon Benefits. The ENAREDD+ and the ER-PIN acknowledge that REDD+ has the potential to produce non-carbon benefits such as: hydrological services, biodiversity, poverty alleviation, employment, social capital, transparency and participation.

Principles. As stated in the ER-PIN, the objective is to advance in the design of an equitable, transparent and effective benefit sharing scheme to address the drivers of deforestation and forest degradation.



Figure 4. Women at Las Palmas Lagoon, Quintana Roo, Mexico. Source: IUCN.

Scope. The ER-PIN indicates that the IRE will generate result-based payments only for reduced emissions (i.e. see section 16.1 of the ER-PIN on reduced deforestation and degradation). Thus it is our understanding that benefit sharing schemes in this context do not include or reward carbon enhancements. Moreover, the implication is that the rewards for reduced emissions will be the basis of input payments rather than output payments (see Table 1). It is not clear how any carbon gains achieved by local forest enhancement will be dealt with. The

possible implication (given that the ER-PIN recognises that such increases in stock can be attributed to individual communities) is that communities could sell credits relating to forest enhancement directly, for example, in the voluntary carbon sector. However, this still needs to be clarified.

Table 1. Characteristics of output and input-based benefit sharing schemes

	Output-based reward systems	Input-based reward systems
Basis for allocation of rewards	Rewards are proportional to the production rate (carbon saved, increased volume of water in river, number of trees planted and surviving).	Rewards reflect the effort made; the activities undertaken in forest management and time invested.
Assessment of level of rewards required	A quantitative baseline against which improvements can be compared, and quantitative measures of the outputs.	Proof that activities have been undertaken properly.
Additionality	Only performance that would not otherwise have occurred is subject to rewards. Hence owners who have never deforested would not be able to claim rewards.	All approved activity intended to improve forest management may be rewarded, hence owners who have always protected the forests may receive rewards as well as those who start such activities as a result of the programme.

General Procedure. The implementation of the IRE as described in the ER-PIN indicates that in the project areas, local implementing agencies will propose investment plans to be approved by state-level committees which would be made up of a broad spectrum of advisors. The proposal presents the idea that the funds will go from the Carbon Fund to the national fund and from there to local (state or interstate) and sub-state regional funds to cover the costs involved. The approved investment plans will initially receive up-front funding by the federal government from current subsidy and non-subsidy programmes. These start-up funds will not be recovered through carbon results-based finance but are part of the Mexican government’s commitment to undertake activities in the forestry sector. After one to three years carbon benefits will be assessed (i.e. reported and verified), credits ‘sold’ to the FCPF’s Carbon Fund and the money raised will be used to fund new activities included in the plan in subsequent years. Institutional arrangements will be made both regionally and locally between government, implementing agencies and relevant stakeholders to decide how to share the benefits at regional level. Benefit sharing schemes will encourage local stakeholders (communities and *ejidos*) to implement top-priority activities. It is important that investment plans and local benefit sharing schemes stemming from the ER-PIN and the IRE consider the guidance notes on gender awareness REDD+ to identify “gender-based risks or unequal benefits” during preparation activities and the implementation of safeguards (e.g. gender inequality in land tenure would need to be addressed in order to ensure equitable REDD+ outcomes) (UN-REDD+, 2013), although this is not specifically stated in the Mexican texts. The main requirements related to safeguards come from the methodological framework of the Carbon Fund.

3 Identification of problems and gaps

In order to support discussion of the issues associated with benefit sharing schemes, it is important to have clarity on some basic concepts related to the definition of benefits in REDD+ and specific elements associated with eligibility for receiving carbon payments (e.g. what activities can be included, as well as the origin and control of performance-based funding). This section discusses some of these concepts.

3.1 Defining ‘benefits’ in the national REDD+ approach

Following the implementation of national REDD+ activities in Phase 3, countries should be able to access result-based carbon funding from international sources (through ‘sale’ of carbon credits, or what is generally considered ‘carbon finance’). In Mexico’s official documentation on REDD+, this is what is meant by ‘REDD+ benefits’. However, there may be other sources of benefits in the early phases of implementation, which are not based on performance. For example, there may be benefits related to investments in capacity building, and in addition, there are non-carbon benefits. Annex 1 provides a description of these potential benefits in REDD+.

In this report we use the term ‘REDD+ benefits’ in the formal sense as given above. However the other kinds of benefits are of course also important. REDD+ was originally focused on the reduction of carbon emissions as a means to mitigate climate change, but it has gradually evolved to include measures to enhance non-carbon benefits. In Doha in 2012, the COP decided that the work programme to define results-based finance should encourage non-carbon benefits as well, and the SBSTA was instructed to work on the associated methodological issues (UNFCCC, 2013). This was quite a radical departure from earlier policy, and there have not yet been any decisions adopted on this topic under the UNFCCC. The new idea will certainly raise considerable challenges for the design and implementation of REDD+ activities and benefit sharing schemes. There are methods to assess carbon performance, but measuring performance of non-carbon outcomes is not easy (Buss et al., 2013b). In selecting the activities to be implemented, countries or local/national stakeholders may make trade-offs between carbon and other benefits. However, if REDD+ activities

produce non-carbon benefits at the expense of carbon benefits, a lower-carbon-based payment would be made, in comparison with the most carbon effective option available (e.g. if local multi-purpose tree species are planted, which do not maximise carbon sequestration). It should be acknowledged though that there could be cases where carbon and non-carbon benefits are complementary.

3.2 Identification of eligible activities for quantifying benefits

Country programmes or national REDD+ strategies will have to link reductions in emissions and increases in removals to specific activities and geographical areas, partly for the purpose of benefit sharing and partly to provide feedback on the success of REDD+ activities. This will contribute to the adjustment and proper targeting of internal policies. It is clear that different types of activities might be included, such as:

Type A. Activities developed within the forests. These are activities taking place in forestland, i.e. the forest management and conservation activities that will be considered eligible for REDD+, including silvicultural procedures, improved harvesting techniques, fire control, conservation measures, etc.



Figure 5. IUCN and CONABIO working in the generation of socioeconomic indicators for REDD+ in Yucatan Peninsula. Source: IUCN.

Type B. Activities developed outside forests. These are activities which are essentially outside the forestry sector but which may indirectly affect specific forest areas and their biomass density. For example, lengthening the cycles of shifting agriculture may increase average forest biomass density used for this type of production; stall feeding of cattle instead of forest grazing should improve regeneration rates; improved stoves and charcoal kilns may reduce the extraction of woodfuels. These activities might be implemented to address specific drivers of deforestation and forest degradation.

Type C. General Policies (transversal, cross-sectorial). In addition, there are activities which may affect forest cover and density over large and ill-defined areas. For instance, agricultural research institutes which investigate and then promote lengthening of shifting cultivation cycles, stall feeding, and improved stoves, might claim that their activities are also having an effect on forests. Beyond this, there could also be sectorial and macro-economic policies and planning laws which have a broad impact on deforestation rates (for example, the ministry of agriculture might change its policies on subsidizing clearance for agriculture). These activities might also be implemented to address specific drivers of deforestation and forest degradation.

In the international discourse on REDD+, there is increasing emphasis on a 'landscape' approach to REDD+ (Bernard et al., 2013; CIFOR, 2013). Our understanding is that a landscape approach would include activities inside and outside forests (i.e. it would have to include at least Type B if not also Type C activities), since success in reducing deforestation and forest degradation locally will be achieved only by addressing the underlying as well as the immediate drivers.

3.3 Identification of beneficiaries

Since carbon performance is to be quantified within forested areas in relation to a baseline, it can be argued that owners of the related benefits should be those individuals, groups or organisations holding rights over forest land. However, these people may not be the only stakeholders who should receive compensation as part of REDD+. An integral intervention would include actions outside forest area and some activities and costs would then have to be covered by stakeholders other than forest owners. This is necessary to properly address the drivers of emissions (e.g. in the agricultural sector). The implementation costs of REDD+ therefore include the costs related to the implementation of activities of Type B and C, and these costs will be borne by stakeholders other than forest owners, who would need to be identified and compensated. Moreover, among the forest owners, it is difficult to identify who is responsible for the reduction of emissions (see Figure 1). There is in fact a fundamental, but little understood, problem of identifying who should receive benefits for not deforesting (see Figure 1). Where baselines are constructed at a regional level (or at any level higher than the individual property), it is not possible to identify which forest owners should be rewarded for having avoided or reduced deforestation. However, it is easier to identify those responsible for increases in sequestration (forest enhancement) (Balderas Torres and Skutsch, 2012).

3.4 Criteria for benefit sharing between beneficiaries

As mentioned above, it is necessary to devise horizontal and vertical benefit sharing schemes. It is often implicitly assumed that the financial benefits that accrue from international sources should simply be shared between eligible stakeholders according to each participant's performance, calculated in terms of the tons of carbon each participant saves. This model is generally referred to as an 'output-based benefit sharing scheme' (Table 1). However, there are alternative metrics for distribution of REDD+ benefits in which benefits are tied to performance in terms of inputs and effort, rather than (carbon) outputs. These can be identified as 'input-based benefit sharing schemes'.

As we have mentioned above and in Figure 1, it is impossible to identify the beneficiaries for the case of reduced deforestation unless each property has its own baseline. Moreover, output-based systems would not reward owners who have practiced conservation earlier and continue in such activities (Box 1), since if the baseline is based on historical trends, the owners cannot show any additional carbon gains. Input-based systems, on the other hand, require much less data on performance at the local level, but they spread the benefits more evenly over a much larger number of participants. It is crucial to choose between these two fundamentally different approaches to REDD+ benefit sharing, as they have divergent environmental, economic, political and social implications.

Box 1. The difficulty of rewarding conservation

Under UNFCCC REDD+ policy, conservation is included as one of the five activities of REDD+. This was introduced into the international agreement as a result of lobbying by a number of countries, led by India. The reason for this was that India and a number of other countries have taken steps several decades ago to reduce deforestation rates, bringing them down to nearly zero in the last period. This means that they cannot reduce deforestation any further and would not be able to participate in REDD+. This injustice was clear to all the negotiating Parties, and India's claim that conservation should also be encouraged and rewarded was accepted. However, no mechanism for rewarding conservation has been developed at the international level. The essence of REDD+ is additionality –forests are saved that would otherwise be lost, meaning that less CO₂e is emitted, or forests are increased, meaning that more CO₂e is sequestered. If a country conserves its stock, there is no change in carbon stocks or rate of carbon flow, and so there is no basis on which to assess its value. Although some instruments have been proposed ('Stock and flow', for example, in which a proportion of the credits from reduced D&D and enhancement of stock would be set aside to pay for conservation), no one has yet come up with a way of deciding on what basis this money should be distributed among countries who conserve their forest stock. The problem is equally difficult to resolve within countries. The simplest solution is to divide the credits 'earned' by those participants who have reduced emissions or increased sequestration rates, among all those who are managing forests well, including those who are just conserving. This would mean that far more people would get a share of the rewards, but given that there is a fixed amount of reward available, each would get much less.

In regard to horizontal distribution of local benefits, other difficulties arise. If the forest has a single owner, it may be relatively clear that this person should be eligible to receive compensation. However, if it is community-owned forest, questions about internal distribution of benefits may arise. In Mexico, for example, even though 60% of the forest is legally owned by clearly defined communities, up to 30% of the families living in these communities do not have formal land rights or common property rights, with different categories of exclusion involved. This might complicate the distribution of the benefits.

3.5 Source of the funding for carbon performance-based payments

In Phase 3, the funding for REDD+ payments is expected to come from international performance-based mechanisms. It is not clear yet whether these resources will in the long run be provided through a UNFCCC compliant market with off-sets, a global fund, or an expanded voluntary carbon market. COP19 in Warsaw established that for the time being REDD+ should not be considered a market mechanism but rather as an incentive mechanism. If a market mechanism is to be adopted later, this would have to be negotiated under the agenda relating to market mechanisms under UNFCCC (see decision 9/CP.19 p.6, 7, 18; UNFCCC, 2014). However, as with any incentive-based programme, participation in REDD+ is expected to bring net benefits to the participating countries since they would be worse-off without it.

In any case, funding will be directly related to the number of carbon credits a country can deliver, which is measured against national baselines. The use of a national baseline implies that the total credits that a country would be eligible to receive in a given period would reflect its overall achievements in emissions reductions and removals during that period. Such gains in some parts of the country could be wiped out by losses in other parts. This is related to the issue of leakage or shifting of emissions to other locations when one area implements REDD+ activities, which is the reason a national approach is essential to maintain the environmental integrity of the system. In a more general sense, this also raises issues of equity, since performance and compensation to stakeholders in one area will be contingent on other parties' performance elsewhere.

A key question is to define whether implementation of REDD+ would rely only on international funding or whether it will be supplemented by domestic resources. In the case of Mexico, on-going programmes will clearly continue operating and channelling resources for forest management. However, for most countries it is not clear whether these domestic funds would be performance-related in the same sense as the international funding. It is also unclear whether these funds would meld with existing subsidies associated with forestry programmes or set apart from them. Internal voluntary markets may also be created, although it is not clear how the internal carbon credit accounting would relate to external

accounting and national baselines. A critical challenge here is to ensure environmental integrity and avoid double counting. Other challenges include the fact that REDD+ funding will be relatively low, hence additional resources would be required; and that a performance payment system implies *ex post* finance, meaning that upfront costs would need to be allocated from other sources.

3.6 Controlling the flow of benefits based on carbon performance

Although it is not yet clear exactly how financial resources will be transferred to REDD+ countries, it seems that international funding will flow through the national government. Depending on the way sub-national implementation of REDD+, nested baselines and MRV are put in place, performance in specific regions could be assessed and benefits attributed to them on this basis (i.e. *vertical* benefit sharing). Within these regions, benefit sharing schemes would then distribute benefits *horizontally* among corresponding stakeholders (Buss et al., 2013b).

This implies a centralised system in which performance is measured at sub-national level and aggregated to the national level. It implies that stakeholders would not be able to exchange their own carbon credits directly with international markets or buyers (at least for the case of credits related to reductions in deforestation and degradation).



Figure 6. Analysing forest dependence in Mexico. Source: IUCN.

There could however be considerable public resistance to a model in which all the credits are claimed centrally by a government agency, even with assurances that the resulting fund will be disbursed to registered participants. Neither Mexico nor any other REDD+ country has resolved this dilemma yet. There have been counter suggestions from agencies working in the voluntary carbon market (usually under the term 'nested REDD+') that each stakeholder or individual project should be allowed to sell their own credits, independently of the national government. In order to deal with the problem of leakage, they would have to put a credit buffer aside (say 20%), to cover any nationally-incurred losses. This system has not been widely accepted, not least because it is not clear to many individual project owners why they should have to 'pay' for losses elsewhere in the system, which seems 'unjust' and inequitable to them.

3.7 Social targeting

There have been many calls for 'equity' in REDD+ benefit sharing, most of which envision social targeting so that poor and marginalised communities and individuals get special attention and inclusion. It is clear that there could be major difficulties in designing a 'pro-poor, needs based' system for the distribution of benefits. This is because (1) the resources (forests) are more frequently in the hands of the richer community members (*avecindados* and *posesionarios* are part of the lower socio-economic classes in Mexican *ejidos*/communities: they are day-labourers or renters) and hence (2) in general, it is not the poor but the richer members who are involved in activities causing most deforestation and degradation and who have thus the most opportunities to reverse this (e.g. clearance for permanent agriculture and urban development, unsustainable logging activities, placing of large cattle herds in the forest for grazing).

If REDD+ is to be efficient and effective in reducing emissions but also in including poor people, very specific activities would have to be selected, to focus on the scarce uses that the poor make of the communal forest resources. This might involve cycles of shifting cultivation, and woodfuel gathering, for example. Indeed, REDD+ actions targeting *poor people's* activities may seem easier and cheaper to implement than those related to wealthier rural population. This is because the opportunity costs of poor people's activities may be lower than those of richer people (e.g. the financial returns to grazing of a few head of cattle in the forest is very small compared to that of turning a hectare of forest into an avocado plantation). However, this type of intervention would be unlikely to be very effective in reducing overall emissions, since, as we have noted, the activities of the poor are by large not the main cause of deforestation.

A much better strategy to ensure that poor people get at least some benefits from REDD+ would be to ensure that this group in particular is accorded priority for any wage employment that REDD+ generates. Labour will certainly be required for silvicultural activities and e.g. for

patrols. Protocols could be established in the community for the more marginalised part of the population to get the priority in REDD+ employment opportunities.



Figure 7. Implementation of the Poverty-Forests Linkages Toolkit. Source: IUCN.

Social targeting as a public policy is clearly not optimal from a pure carbon saving perspective, but this has precedents. Mexico's PES programme put social criteria high on the agenda in the selection of communities to receive support, and essentially paid communities a flat rate per hectare, regardless of the real risk of deforestation or the real opportunity costs. As a result, it has been heavily criticised for being ineffective (Alix-Garcia et al., 2005, 2012; Muñoz Piña et al., 2008), or at least highly inefficient, in reaching its environmental goals, as most of the funds went to communities which would not have deforested in any case, or to those parts of the forests within communities' territories that were not under threat (i.e. the most inaccessible parts of their forest). On the other hand, it is a strategy that is likely to be considered by the general public and civil society organisations as 'equitable', at least at the inter-community level (the focus on social criteria for PES was to a large extent the result of a public consultation process in which rural interest groups were heavily involved).

It is less clear whether distributive policies of this kind would be acceptable at the intra-community level, where internal conflicts often occur between social groups. Moreover, given that *ejidos* and communities in Mexico have the right to manage their own resources and draft the rules for this to a large extent, it is not clear whether rules for internal distribution of REDD+ benefits could be imposed from outside.

Social targeting for gender is another issue which has arisen in equity discussions in REDD+ in international circuits. Ensuring that women are treated equitably with men under REDD+ faces the same problems as pro-poor targeting: in general, women are not much involved in the activities which cause deforestation (agricultural clearance) or degradation (logging, grazing in the forest, charcoal production) although they are engaged in woodfuel collection in many countries.

3.8 Other elements in designing benefit sharing schemes

The previous sections discussed some of the aspects that need to be included in the design of benefit sharing schemes for REDD+. However, there are a number of other elements of distribution systems that need to be considered, such as distribution timing (*ex post* or *ex ante* payments or a mixture of these), the method for delivery of reward (in cash or in kind), and whether or not there should be restrictions on how the benefits are used (e.g. for purposes of further forest management, for community facilities, etc.). These factors need to be considered in the design of benefit sharing schemes (for a thorough description and discussion of these topics, please see previous papers published as part of TFD, e.g. Hou, 2013, and Buss et al., 2013b). Table 2 below presents a list of issues yet to be resolved in the design of benefit sharing schemes for the specific case of Mexico, but which may be relevant also in other countries and regions.

Table 2. Summary of problems associated to the design of benefit sharing schemes for REDD+ in Mexico

Problem	Nature of problem/gap	Brief discussion of challenges for further development in Mexico
1. Scale of carbon benefits for different REDD+ activities.	There is very little understanding about how much carbon is likely to be saved by different kinds of REDD+ activities. At the national level, issues 3 to 7 below also contribute to the problem of determining the scale of potential carbon benefits that could be generated.	There have been almost no studies, which look into the effectiveness of different REDD+ activities in saving carbon; it will be some years before such information can be generated. Preliminary regional estimates are provided in the ER-PIN for the pilot areas, but these do not include carbon enhancements.
2. Unclear or no-rights to carbon.	Rights holders form only 50-70% of the population of rural communities. Poorer non-rights holders may be excluded from forests and from REDD+ benefits if only legal rights holders are eligible for benefits. If activities are also implemented outside forests, such landowners might not have carbon rights.	In order to prevent an inequitable outcome, the ENAREDD+ establishes the need to create benefit sharing schemes including also stakeholders with no rights to land and then to carbon benefits. However, this might be in direct contradiction with the Law on Sustainable Forest Development.
3. Internal offsetting of results in areas with good performance by poor performance elsewhere.	As described in the text, in some places gains may be offset by losses in other areas. It may not be possible to reward states for their full performance, or to provide second year funds from the sales of credits, if losses cancel out gains at the national level.	It is not clear which considerations will be adopted to prevent this issue within and across states implementing the IRE. Without clear rules for benefit sharing, the additionality and equity problems will emerge, given the difficulty of measuring local performance for the case of reduced D&D.

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Problem	Nature of problem/gap	Brief discussion of challenges for further development in Mexico
4. Scope of benefit distribution systems not including carbon enhancements.	The ER-PIN deals with reductions in D&D but not with credits that might be earned from forest enhancement. It has not been made clear if communities are free to measure, certify and sell carbon in markets, independently of the national REDD+ strategy.	There is a national guidance for a voluntary forest carbon market under development that might define how communities might participate in markets. However, up-front finance might be required to cover transaction costs. Data from MRV systems and baselines can help to reduce informational transaction costs and enable participation. Specific provisions are needed in the text of the ENAREDD+ or documents stemming from the implementation of the IRE.
5. Inclusion of REDD+ activities in non-forest land.	If drivers of emissions need to be tackled, this could involve implementing activities outside the forest and incentivizing actors who are not 'in' the forest (but e.g. in agricultural land). Such a holistic approach calls for inclusion of Type B and Type C off-forest activities.	The landscape approach stated in the ER-PIN/ENAREDD+ implies that activities promoting sustainable rural development will include interventions also outside forestland. This needs to be considered in the estimation of possible carbon gains. A clear definition of eligible activities in guidelines for the preparation of investment plans is needed.
6. Additionality of REDD+ activities.	Carbon additionality is a major problem in REDD+. For cost effectiveness, funds need to be directed to places which are seriously in danger, but this may not be seen as legitimate by communities which have maintained their forests well in the past, this might also exclude the participation of poorer members of communities.	Schemes need to define if benefits will be distributed everywhere, or only in areas with high risk of deforestation and/or degradation. Systems might need to promote actions increasing carbon savings, but also they should include rewards to those who have long managed their forests well. A balance needs to be found. Performance and additionality are measured against the REL/RL in a nested system; it is critical to create these baselines considering local development trajectories and needs for the different REDD+ activities including incentives for pro poor activities.
7. Incentives for conservation.	It is clear that conservation needs to be rewarded but it is not clear how. It can be argued that on-going conservation practices might be non-additional, but this will depend on how the baselines are set considering the expected route for the different REDD+ activities in different regions.	Baselines can be designed in such a way that payments for well-conserved areas could be made equal to payments in degraded/deforested areas (e.g. Balderas Torres et al., 2013). Another alternative is to promote productive activities that do not reduce forest carbon stocks. It is necessary to identify specific policies that can be aligned to promote conservation.
8. Financial additionality.	It is not clear if financial additionality is an issue in REDD+ as it was for example with the CDM. All activities reducing emissions or removing carbon benefit climate, but given the scarcity of resources, it is necessary to consider the additionality criteria to avoid 'wasting' resources in activities that would take place anyway (e.g. Engel et al., 2008). In carbon markets, carbon is rarely the sole source of funding but it provides resources to make sustainable practices economically competitive.	In agreement with the ENAREDD+ in Mexico, the concept of financial additionality can be used to state that carbon finance would be used to pay for the <i>incremental</i> cost of transforming BAU practices into a competitive model with lower carbon emissions. Adopting this approach would facilitate the merging of domestic resources devoted to REDD+ and forest management and those from international results-based mechanisms.
9. Inequitably stemming from distribution of land.	Forest area is not evenly distributed, so that some regions have much more opportunity to participate than others. If rewards are paid for conservation (setting aside forest), it will be much easier for communities with large areas to participate, and their returns will probably be much higher. This might increase the poverty gaps. Differences in productivity per hectare for common agricultural practices and in terms of carbon stocks in natural ecosystems need to be considered.	One alternative distribution mechanism would be to include investment in community facilities rather than individual payments for performance. This scheme would also likely benefit a wider range of the population including non-right holders and poorest groups.

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Problem	Nature of problem/gap	Brief discussion of challenges for further development in Mexico
10. Limited access for women to benefits.	Most women are not rights holders and would benefit only as part of a rights holding family. Only about 19.8% of landholders with legal land rights are women (PRO-GUADAD, 2013). The lack of land rights also prevents women's access to credit and programmes to improve their livelihoods and excludes them from formal decision-making processes. Views regarding gender are deeply entrenched in rural communities and REDD+ cannot change society completely.	It is necessary to acknowledge women's rights as users and landholders to design an equitable benefit sharing scheme to adapt customary norms to include gender considerations (Nhantumbo, 2013). Specific programmes for health, food-production, nutrition, education, and off-land productive projects can be promoted to empower women and improve their livelihoods. Part of REDD+ benefits can be directed to fund these activities while adapting the formal and informal frameworks and rules.
11. Distribution of non performance-based benefits (e.g. capacity building or co-benefits).	Should distribution of other benefits such as (1) capacity building investments and investments made by government to stimulate/support implementation of activities; and (2) non-carbon benefits resulting from REDD+ implementation, also be subjected to discussion of benefit sharing?	In our view the question of who receives or should receive capacity building to enable them to participate in REDD+ is not a 'distribution' problem, although it does have implications for equity. It is a policy question which needs to be considered separately. Co-benefits will flow automatically from implementation; there is no need to develop a separate 'distribution' system for these, instead planning of activities is critical to implement these in areas delivering more co-benefits. There are initial distributional implications stemming from the selection of eligible areas for the implementation of REDD+ early actions.
12. Trade-offs between equity and efficiency.	An option to integrate the principles of effectiveness, efficiency and equity in the optimization of benefit sharing schemes is to give more weight to different principles at different temporal stages in the implementation of REDD+ (Buss et al., 2013b). It is necessary to be cautious about disregarding equity in the early phases of REDD+ (Buss et al., 2013b).	Instead of designing initial benefits sharing schemes focused on efficiency while sacrificing equity issues (i.e. by targeting areas/activities to minimize costs), we consider that if systems are equitable from the beginning it will be more likely they remain so in later stages (i.e. inclusion of pro-poor options). Later it will be easier to adapt the system to gain efficiency and effectiveness in learning by making processes.
13. Trade-offs between input and output based benefit sharing systems.	Performance-based financing portrays a market with some countries paying for the carbon produced by REDD+ countries. However, there is not a market yet, and it is not known how much carbon countries will be able to produce or how much will be demanded. Hence negotiations cannot take place on an output-based approach. However, if the objective is to implement specific activities, while the exact carbon benefits associated cannot be known in advance, implementation costs can be known.	The selection of input or output-based benefit sharing schemes could be alternated in the step-wise realisation of REDD+. At first, benefit sharing schemes could be based on input-based approaches. This would be an implicit <i>ex ante</i> agreement between buyer-producer. Later, when <i>ex post</i> carbon results become available, real costs per ton of CO ₂ e can be obtained, and opportunities for creating more effective and efficient output based options can be explored. The initial input-based system can help to set up a learning-by doing process. Later in Phase 3, compensation could migrate to an output-based system.
14. Designing pro-poor REDD+ activities.	It is not the poorest that deforest or degrade the forest most. Activities which could help them might have very little impact on carbon emissions/stocks so investments targeted to the poor would be inefficient economically and environmentally. At community level, there is no evidence that poorer communities as a whole are deforesting/degrading more than richer communities, with ditto conclusions.	Since the activities carried out by the poor do not usually contribute significantly to emissions from D&D, it is very likely that benefits from successful implementation of REDD+ will reach better-off groups, thus widening the poverty gap. Non-monetary distribution of benefits as investment for community facilities and possible income from wages, could target specifically poor groups, and special provisions to ensure that those with no rights are given priority in employment in forest management activities could be implemented. This can be defined within the strategy for local rural sustainable development.

continues

continued

Problem	Nature of problem/gap	Brief discussion of challenges for further development in Mexico
15. Evaluation of early actions in absence of performance-based mechanisms.	Since many countries will remain in the first implementation phases of REDD+ for the time being, this imposes the challenge of how to measure performance before the third stage, when activities will be fully MRV and performance will be assessed on a carbon basis (Buss et al., 2013b). Then, the question is how to assess performance in the early phases.	It is possible to verify if initial REDD+ interventions have accomplished the objectives/goals they established (e.g. number of persons trained, institutions created, pilot projects established). Thus financing granted would still be based on performance and compliance with the objectives of specific interventions and in this sense it would be conditional even though mechanisms to reward carbon performance are not in place.
16. Mechanisms for evaluating performance of non-carbon benefits.	For non-carbon benefits, it is necessary to develop indicators of compliance. Methods for this are being developed by the UNFCCC. It is necessary to consider the challenges of preparing specific baselines and integrate non-carbon benefits into MRV systems (e.g. hydrological services, biodiversity, NTFP).	An option is to follow a no-regret approach, and to develop performance-based mechanisms for non-carbon benefits with close linkages to carbon (Hou, 2013). One option to incentivize specific non-carbon benefits could be to differentiate carbon prices for projects promoting different benefits (e.g. a premium for 'social' or 'biodiverse' carbon).
17. Criteria to approve investment plans and nest baselines and MRV systems.	Local investment plans will start implementation and might receive <i>ex post</i> results-based finance from the carbon fund following a sub-national verification process. The ER-PIN does not provide specific details about the steps to nest baselines and monitoring. It does not describe either the procedure for the verification of emissions reductions (i.e. Figure 15 in ER-PIN does not refer to the 'V' in MRV); however, it is understood that the lowest level in Mexico at which a baseline is to be created will be at the level of individual states.	In the absence of baselines at local level, it is not clear how carbon performance will be evaluated and verified. Estimates in investment plans will rely on <i>ex ante</i> expected costs and predictions regarding outcomes. It is necessary to define if investment plans will be approved based on financial and/or carbon feasibility criteria.
18. Non-cash benefits.	Benefits will be used to support forest management activities, but it appears that they will mostly be earmarked for technical assistance and e.g. to pay wage labour within the community. It is not clear to what extent their use will be at the discretion of the community. It is possible people in the ground who could find it unfair might not accept this. It is not clear if the government in the first and subsequent years will absorb the up-front costs.	It is important to clarify these concepts. If carbon removals were to be incentivised via carbon markets, some cash incentives would need to be involved. It is necessary to define if wages and labour costs related to implementation will be considered as cash benefits or not. An alternative (non-monetary) distribution mechanism would be investment in community facilities.
19. Managing expectations.	Expectations of communities can be high, but their rewards might be small and in the form of support to forest management rather than in cash.	Communities need to have real facts. It is important to clarify first, that it cannot be guaranteed that implementation of REDD+ will lead necessarily to payments for result-based actions at the local level, and second that eventual payments made to forest landholders might not be equivalent to the full value of the carbon credits per ton of CO ₂ e as received by the country (i.e. considering the variety of transaction costs and stakeholders that will be involved, including those not holding rights to land).

4 Criteria for evaluating benefit sharing schemes

Principles for the design of benefit sharing schemes include effectiveness, efficiency and equity, but there are often trade-offs among these (Hou, 2013). This section presents a set of possible criteria for comparing and evaluating different benefit sharing systems (environmental effectiveness, economic efficiency, political legitimacy, social and gender equity, potential to reach the poor, and technical feasibility). Each principle can be measured by different variables or metrics. The criteria are of course open to discussion, and we propose them here only as a preliminary set, which could be developed and adapted from other countries' experience. We cannot expect win-win scenarios on all six criteria, and hard decisions may have to be made at some point. We do not attempt to make such trade-offs here, merely to present in a clear way what the trade-offs might involve and what kind of information would be needed to make such decisions.

4.1 Environmental effectiveness

Although REDD+ is widely seen as needing a broad approach including social, economic and environmental considerations, we should not lose sight of its primary goal, which is to mitigate climate change. Environmental effectiveness of a benefit sharing scheme would be achieved when it results in high performance in carbon terms.

Metrics for Effectiveness. How much carbon can be delivered. It is still unclear how much carbon can be saved from different REDD+ activities (e.g. from emissions reduction or carbon enhancement from improved timber extraction practices, from lengthening shifting cultivation cycles, from PES to prevent deforestation, etc.). Hence it is difficult to assess in advance how effective a particular system of benefit sharing will be. We believe that the only way to overcome this at the moment is to experiment with different REDD+ activities and monitor them very closely for carbon effectiveness. Apart from this, 'effectiveness' will also depend on what aspects of REDD+ are included (i.e. reduced deforestation, reduced degradation/disturbances, sustainable forest management, carbon enhancement/increased sequestration,

conservation). It will further depend on what carbon pools are included and the extent to which non-CO₂ gases are included.

4.2 Economic efficiency

Economic efficiency refers to the cost per ton of carbon saved. An efficient system would have low transaction costs and would pay those who are in reality would deforest without such payments: it implies careful targeting. Economic efficiency also implies that although transaction, implementation and even some opportunity costs could be compensated, profits would not be made (Hou, 2013).

To ensure low transaction costs and economic efficiency in that sense, it has been suggested that direct linkage to beneficiaries should be created (eliminating bureaucracy and intermediaries).

Metrics for Economic Efficiency. Low transaction costs; most funds go directly to stakeholders on the ground (more direct link); activities are selected/rewarded by lowest cost per ton carbon; payments are paid to stakeholders who make real contributions to reduced emissions/enhancements.

4.3 Political legitimacy

Political legitimacy means that the benefit sharing scheme is perceived as being fair. One of the dangers implicit in REDD+ is that those with a past history of deforestation may be able to earn large benefits by reversing their practices, while those who have conserved their forest in the past have no such opportunity. This will be seen as unfair (not legitimate). The choice of eligible participants also raises legitimacy questions: it is unlikely that large Mexican governmental agencies will be seen as legitimate recipients of REDD+ benefits. At the same time, questions are being raised about the legitimacy of paying people not to deforest, given that deforestation is formally illegal. Moreover, the question about whether only those community members with formal rights should benefit from REDD+ (as stated by law), or whether all inhabitants should be eligible, could still be debated.

Metrics for Political Legitimacy. A clear definition of who is eligible for REDD+ benefits is made and accepted at all levels, including within communities, and the reward system respects this. No perverse incentives are included in the benefit sharing scheme. The method of selection of REDD+ activities is participatory and transparent.

4.4 Equity and gender equality

It is well known that equity can mean different things and that the definition of 'fair' is very subjective. There are at least three clearly different interpretations of equity of relevance

to REDD+ benefit sharing, these refer to compensation based on merits, rights or social needs (Box 2). The idea of equity can be applied both to the process by which programmes are designed ('procedural equity'-i.e. the extent to which different groups of people get to participate in the decision making about the programme), and to the characteristics of the outcome of the programme ('distributional equity'-who benefits from the programme when it is carried out).

Gender equality implies equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not mean that women and men must get equal compensation under REDD+ but that women's and men's rights, responsibilities and opportunities will not depend on their gender per se (UNREDD, 2013). According to the Concise Oxford Dictionary (7th ed., 1982) equity means fairness and it is also a recourse to principles of justice to correct or supplement law. It is in this sense that specific measures must be designed to eliminate inequalities between women and men, to avoid discrimination and to ensure equal opportunities (UNESCO, 2003).

It is clear that although equity is usually much desired, it is very hard to achieve, not least because the underlying resources (forests) are not equally distributed. Forest area per capita in Mexican *ejidos* can vary from 0.1 ha to more than 10 ha, which means that the physical potential to participate in REDD+ is not equitable itself, and there is nothing that a REDD+ benefit sharing scheme can do about this.

Most fundamentally, the question of equity in REDD+ benefit distribution comes down to the choice of principle: should people be rewarded because they are saving carbon, in proportion to their achievements, or should they be rewarded for their participation (efforts)? And within the second of these scenarios (given that not all social groups are equally able to participate, see above), should the benefits be managed in 'socially progressive' ways so that they are distributed to specific groups even though they have a lower contribution to emissions reductions? The question of regional equity also arises in the sense that if one region performs well while another does badly, the carbon finance available to the first will be diminished by the losses in the second. Whether this is significant will depend in part on the proportion of the overall REDD+ benefits which are financed from the exchange value of the carbon credits, how much from regular government budgets.

Metrics for Equity. Clear and transparent choice as to the underlying principles (as outlined in the previous paragraphs); identification of groups considered specially deserving (women, the young, the elderly, minorities etc.); robust ways of dealing with variations in regional performance; actions eliminating social, cultural and political barriers hampering gender equality (UNDP, 2009). Effect of activities on life-spans, health, access to knowledge and income differentiated by gender; gender related issues such as time devoted to water and woodfuel collection, or food production; statistics on violence; rights and access to natural resources and environmental services, participation in decision-making processes (UNDP, 2009).

It is important to note that the term 'equitable distribution of benefits' does not necessarily mean 'pro-poor' - there are at least 3 different conceptions of equity that might be applicable in REDD+ (Gregorio et al., 2013):

1. Equity in the sense of: benefits go to those who merit or earn the benefits (i.e. those who reduce emissions or increase removals of CO₂e from the atmosphere). This is essentially a performance or output-based model: the benefits are proportional to the actual savings in carbon; hence the majority of the benefits go to those communities (and possibly to those individuals within communities) who are able to deliver positive carbon benefits.
2. Equity in the sense of: benefits go to those who have rights to them. This tends to tie benefits to those who have rights over the resources that would be used in REDD+ to reduce emissions. In Mexico, the rights to 59% of the forest are in the hands of *ejidos* and communities and around 30% in private properties (some small, some large). However, within communities, the *avecindados* and *posesionarios* (i.e. those inhabitants who are not *ejidatarios/comuneros*) might well have no claim to benefits since officially they have no rights to the communal forests, no vote in land use decisions and in the case of *avecindados*, no land themselves. They comprise a considerable proportion of the population (up to 50% in some *ejidos*, but typically 30%). Most *ejidatarios* are male; in the traditional way, it is assumed (rightly or wrongly) that women members of the family will receive the benefits indirectly.
3. Equity in the sense of responding to social needs, which is usually seen in the context of REDD+ as the 'pro-poor' approach (see: Gregorio et al., 2013). In REDD+ there are two main options for this:
 - (a) Ensuring that (at least some of the) REDD+ activities promoted by the programme are deliberately directed at reducing and reversing the specific kinds of deforestation/degradation processes in which poorer communities or individuals are involved, and perhaps giving priority to these activities.
 - (b) Promoting REDD+ activities which will deal with deforestation and degradation across a geographical area regardless of who is actually involved in the deforestation and degradation, but ensuring that there are rules regarding the distribution of the resulting financial benefits such that poorer communities and poorer people within the communities also receive a share (thus decoupling, at least to some extent, the payment from the performance).

4.5 Pro-poor potential

In the design of REDD+ mechanisms, there is a particular concern that benefit sharing schemes should be 'pro-poor'. However, there may be major difficulties in designing a pro-poor system for the distribution of benefits. Although Mexican forests are to a large extent community-owned, in general, as mentioned earlier, it is not the poor but the better-off within the community who are involved in activities resulting in most of the deforestation and degradation, and they thus have a greater chance to reverse this. The poor are usually those who have become landless and have no rights to the common property forests, although they are often permitted to gather woodfuel, etc. What is not entirely clear is whether communities that are on average poorer, have a greater tendency to deforest than those which have higher average incomes, and if so, whether it would be possible to target REDD+ activities in a progressive way to such communities.

Metrics for Pro-Poor schemes. Local non-carbon outcomes which benefit all, including the poor (environmental services, water, NTFPs, timber, local climate), activities which provide income for poorer members (e.g. wages, brigades, employment); changes in poverty gaps; benefits in the form of enhanced social services which are available to all including the poor (e.g. education, health); affirmative action (deliberate selection of poorer member of the community for capacity building exercises); clarification of rights; benefit sharing schemes that maximize the net present value of compensations in poorer areas (i.e. up-front payments given high discount rates in marginal areas).

4.6 Technical feasibility and transaction costs

As previously noted, identifying who has created additional carbon savings through reduction of deforestation and degradation is very difficult, if not impossible, to ascertain. Moreover, the transaction costs of associated with some benefit sharing options could be so high as to compromise their viability. For example, benefit sharing schemes that require greater efforts in administration will have higher overhead costs (higher costs in measurement of carbon, verification of data, provisions for dealing with grievances, etc.) and will be more expensive to run than those which need less of such services. High transaction costs will limit the competitiveness of the REDD+ activities undertaken and mean that less of the overall benefit can be distributed among participants.

Metrics for Transaction Costs: scale of transaction costs; share of the resources spent in transaction costs; transaction costs covered by communities and the government; costs associated with the creation of institutional agreements, negotiation of contracts, coordination of collective action, monitoring and enforcement of agreed plans. Share of the transaction costs that stays within the communities (e.g. wages for monitoring). Estimating transaction costs is considered as a difficult task.

5 Models proposed for the distribution of carbon benefits

We suggest that taking into account the aforementioned elements there are in essence three fundamentally different models for sharing REDD+ benefits, where these are defined as the funds derived from international performance-based payments (Type B benefits in Annex 1). Each of them provides some room variation.

5.1 Model 1 ('Each one for himself': rewarding individual performance)

In this model, the distribution of benefits to individual stakeholders within a country is directly related to measured and monitored performance in achieving carbon savings (both reduced emissions and increased sequestration) within each forest property and the benefits accrue directly to the owners of the forest (in the case of Mexico, this will be mostly in communally owned forest). The owners do not have to define the activities that result in these savings: it is sufficient simply to demonstrate that savings have been achieved. This model is similar to the second scenario described by CCMSS, and could work provided that carbon rights are clear and that there is an institutional framework enabling local actors to receive rewards. A baseline would be required for each and every forested property to measure carbon performance. No benefits will be paid to people carrying out activities outside forested areas since they would not be considered to have rights to carbon, and also because there are no carbon baselines for such activities. All carbon savings would be reported to the national database and a credit buffer would be incorporated to cover any losses incurred elsewhere in the country. The benefits would be paid *ex post*, since they rely entirely on performance measurements, and in the case of communally owned forest, the owners of the forest would have the right to distribute these benefits internally in any way they choose.

5.2 Model 2 ('All Aboard': rewards for participation)

In this model, forest owners/communities register their participation and agree to carry out a set of activities, which are designed to improve forest management or reduce deforestation/degradation. They receive a fixed amount of benefit per hectare in exchange for participation (which may be paid in part upfront, but usually only after checks show that the activities have indeed been carried out). No local baseline is needed. The amount paid may vary depending on the kinds of activities agreed, the type of forest, the local opportunity costs, and/or the risk of deforestation/degradation in that area, but this amount is known and fixed in advance. The activities could include Type B and C activities and thus the participants could include people who are not owners of the forest. The payment could be in cash or in kind, and could include increased access to services (e.g. community facilities, health services). There could be some restrictions as to the internal payment distribution (e.g. safeguards to ensure members without forest rights get a share). Carbon performance is measured at a regional or national level. The financial value of these performance-related payments is used to create a fund to cover the benefit payments. This fund may be topped up by other sources. This model has certain similarities to the first scenario described by CCMSS in which the government is the main administrator of the benefits derived from REDD+.

5.3 Model 3 ('Two can Tango': a hybrid model)

This model is a judicious combination of Models 1 and 2, and is based on the idea of 'Splitting the Difference' (Balderas Torres and Skutsch, 2012). Reductions in deforestation and forest degradation are measured and monitored at regional/national level, and the national baseline covers only deforestation and degradation, not forest enhancement (i.e. the baseline is a reference emission level). As in Model 2, a fund is created from the performance-related payments to pay agreed sums for agreed activities at the local level, which are expected to lead to reductions of emissions. This could include activities outside the forested areas (Type B and C, see Section 3.2). However, growth of forest stock may be measured within the forest property (for example, through community monitoring) and any increases may be converted to credits and sold directly by the owners of the forest either internationally or to local brokers through an internal market development.

Thus, forest owners and communities could receive benefits from two different credit systems. This is a mixture also of the two scenarios described by CCMSS. It involves a system in which benefits from carbon removals are attributed directly to landowners while benefits from reduced emissions (which are more difficult to attribute, see Figure 1) would be attributed initially to the government and then locally distributed through flat rate incentive payments. Table 3 presents a summary of strong and weak points of the three models in terms of the criteria outlined in Section 4.

Table 3. Evaluation of three models for benefit sharing schemes

Model	1. "Each one for himself"	2. "All aboard"	3. "Two can tango"
Environmental effectiveness	Willingness to participate will depend on market price of carbon vis-à-vis opportunity costs. However, the returns per ha of forest are higher in this model than in the others since only additionality is rewarded. It responds only to type A activities (inside forests).	Unless the benefit fund is topped up from other sources, payments per ha will be much lower than in model 1 and may not be able to compete with opportunity costs, meaning low environmental effectiveness. However, it allows for the inclusion of type B activities (outside forests)	Environmental effectiveness depends on the balance between carbon savings due to reduced emissions and carbon savings due to forest enhancement.
Economic efficiency	All payments go to carbon savings which are additional. Minimum involvement of state authorities.	Low economic efficiency given that many parties who would not have deforested are paid anyway. However, overhead costs would be lower per ton of carbon.	Moderate economic efficiency: some payments would not be for additionality but others would; MRV costs would be moderate too.
Political legitimacy	Those who have not deforested in the past will be excluded, while those who 'broke the law' earlier will be paid to stop doing so. It is likely to be considered as highly unjust and politically unacceptable.	Much more acceptable politically than model 1 as everyone who participates will get some money, but communities which successfully reduce deforestation may feel cheated of part of their 'rightful benefits'.	A balanced approach that may be considered more politically legitimate than either 'each for himself' or 'all abroad' on their own.
Equity	Responds to concept of 'merit-based' rights.	Responds to the concept of social and gender equality, all who participate get benefits, and can be engineered to include marginalised groups,	Combines merit-based with social and gender equity concepts.
Potential for pro-poor orientation	Steering towards pro-poor distribution is not possible as system is market-based.	It can be to some extent geared to target poor communities and (some) activities involving poorer people, as it deals with subsidies rather than payments tied to carbon results.	Provides different funding channels, one of which can be used for pro-poor subsidies.
Technical feasibility/ transaction costs	Impossible to assess local carbon savings without a baseline for each property. High MRV costs and need for detailed verification of results of each property.	Relatively limited MRV and associated transaction costs required at local level (evidence of compliance with conditions agreed). No carbon data needed at local level.	In regard to reduced deforestation and degradation see comments relating to: 'all aboard'. Communities that choose to, may measure their carbon stock increases and market the credits independently. However, the associated transaction costs of such marketing need to be covered.

6 The Forests Dialogue on benefit sharing in Mexico⁴

6.1 Organisation of the Dialogue and key observations

The Field Dialogue⁵ on REDD+ benefit sharing in Mexico took place in Chetumal, Quintana Roo from 2nd to 5th June 2014 and gathered 57 participants representing around 40 different organisations and agencies from 20 countries (28 men, 29 women). The agenda included field trip observations and dialogues with different local stakeholders already working in REDD+ projects in the Yucatan Peninsula (i.e. projects working on charcoal production, beekeeping and pepper plantations in the Biosphere Reserve of Calakmul; the chewing gum cooperative factory Chicza; the *ejido* Noh Bec; and the *ejido* Felipe Carrillo Puerto). After the field visits, two days were dedicated to discussing key ways forward for advancing in the implementation of benefit sharing schemes for REDD+ in Mexico. Work included plenary sessions and break-out groups. The participants were organised in four different working groups that addressed the following questions:

- 1) How can gender considerations be more integrated in REDD+ benefit sharing?
- 2) How to identify the beneficiaries of REDD+?
- 3) How to select eligible activities for REDD+ when resources are limited?
- 4) What should be the principles/guidelines for the design of investment plans?

The questions selected reflect the prioritization of issues to be discussed in the benefit sharing system for Mexico. These factors were selected because they are related to the design of the necessary institutional framework for REDD+ implementation. However, it must not be forgotten that there are many other issues yet to be considered (see Section 3.8).

4 The content of this section is a summary of the outcomes of the field dialogue, under The Forests Dialogue (TFD) initiative, that took place in Mexico and the Co-Chairs report (Graf-Montero et al., 2014).

5 <http://theforestdialogue.org/dialogue/field-dialogue-redd-benefit-sharing-mexico>

6.2 Reflections on benefit sharing following the field visits

After the two days dedicated to the field visits, the participants of TFD produced five key observations summarizing this part of the workshop (Box 3). In Mexico, the agenda for local rural sustainable is being implemented through various agencies (e.g. CONAFOR and CONABIO through land use planning, SFM, agroforestry and silvopastoral management). Regarding the question of the activities that may be eligible for REDD+ benefits, participants expressed the view that a wide range of activities including some outside the forest should be included, for example, activities which seek to stabilise the agricultural frontier and diversify and support more integrated forms of agriculture. By promoting a multipurpose use of forests, these policies aim at diversifying income of communities while ensuring forest conservation and the provision of other environmental benefits (e.g. through ecotourism, sale of certified products).

However, incentives are still needed to shift land uses towards more sustainable practices when they are not economically competitive (e.g. honey production and cosmetics production by women). Financial support might also be needed to address permanence issues in the form of insurance against disturbances (e.g. hurricanes, fires, pests). There are different strategies that can help to improve the profitability of sustainable practices, including the provision of loans and guarantees to access markets; development of new markets; and activities to support local enterprises (e.g. to favour entrepreneurship, competitiveness and long-term profitability). These strategies can be complemented by public campaigns and educational efforts to communicate the benefits of SFM and help creating domestic markets for certified/sustainable products. In this context, carbon payments might become an additional benefit for sustainable management. However, it is important to avoid creating perverse incentives for those with previous good forest management.

Box 3. Key observations produced by TFD participants following two days of field visits

- Secure rights over land and natural resources enable flow of benefits to local level.
- Integrated conservation and development approach at landscape level ensures livelihood improvements for local communities while delivering environmental benefits including carbon benefits.
- Capacity building over sustained time periods enables local communities to manage benefits collectively and sustainably.
- More proactive and affirmative actions are needed to ensure equitable sharing of benefits among women and men.
- Existing programmes need to be aligned to reward previous good forest stewardship without producing perverse incentives.

On the question of how to reward earlier good stewardship (i.e. on-going, non-additional conservation efforts), it was acknowledged that this is very important for the legitimacy of REDD+ and that such efforts should also be rewarded under REDD+, e.g. using a Stock and Flow approach. In addition to this, REDD+ investments should focus on developing/strengthening/enabling conditions for sustainable management in these areas. Thus public programmes should be reoriented to reward good forest stewardship.

The field visit also showed that securing rights over land and forests has been an important condition enabling the development of strong local/community enterprises managing natural resources. The existence of these local companies offers the opportunity to engage and target different actors, including those without formal land rights, in benefit sharing schemes. Nevertheless, it was recognized that women often have few or no rights at all over land and natural resources, which complicates their access to benefits. It was also acknowledged that policies are not sufficient to address gender issues and that it is important to support the participation of women in decision-making processes, economic activities and benefit sharing. REDD+ can integrate gender screening into the formulation and evaluation of local investment plans and national and sub-national plans and budgets as means to address this issue. It is important to build institutional capacities and monitor the performance of institutions regarding gender related targets.

Participants at the TFD also agreed that REDD+ policies need to adopt a long-term approach to building local social capital and capacities required to form successful community enterprises (e.g. more than 20 years). Given the age dynamics in rural Mexico, these programs need to engage younger members of the communities. Other enabling conditions for the promotion of successful local action in the management of natural resources include: the adoption of participatory and transparent decision-making processes; design of conflict resolution mechanisms; adoption of strategies to create added-value in community enterprises; education; training and capacity building for rural sustainable development; information sharing; and governance strengthening. These processes require know-how, technical support and continued investment from NGOs, government and communities themselves.

6.3 Ways forward for REDD+ benefit sharing in Mexico

6.3.1 Gender roadmap

The issue which raised most interest during the TFD discussions was how to ensure that gender considerations are integrated in benefit sharing. It was noted that Mexico already has progressive gender policies but that these are often not enforced. There were calls for capacity building for women to enable them to become more active participants in REDD+. It was suggested that women should be selected and trained as monitors and that a strong communication strategy addressed to men and to women should be developed. A gender road map was developed

by one group tracing the steps that would need to be taken at national, sub-national and local monitoring and implementation levels to ensure better gender participation.

The discussions on gender issues in benefit sharing schemes for REDD+ resulted in suggestions related to the following topics: *type of research needed; capacity building; policies and regulations; communications; and compliance and accountability*. Research is necessary to understand the contributions and roles of men and women in sustainable forest management and identify best practices for addressing gender issues. Once these activities are identified, they can be prioritized to promote implementation. It was recommended that investment plans should address the participation of women in the different stages involved (i.e. preparation, implementation, monitoring and benefit sharing). Capacity building efforts need to target young women to enable their participation in the management of natural resources as well as their collaboration with the local leadership.

In addition, it is necessary to build capacities of key decision makers at local, regional and national level on gender transformative options in order to formulate appropriate policies and plans (e.g. Congress members, civil servants, NGOs, local management bodies). These policies should consider the provision of resources for monitoring and auditing gender issues alongside the creation of a multi-sectorial independent platform to evaluate and monitor the compliance with gender indicators. Other activities that can contribute to dealing with this issue are the preparation of practical guidelines and plans for the inclusion of gender in REDD+ benefit sharing and in communication strategies for public education (e.g. toolkits, materials, public recognition of gender champions). Figure 8 below presents the roadmap for gender integration in REDD+ benefit sharing schemes, based on the TFD outcomes.

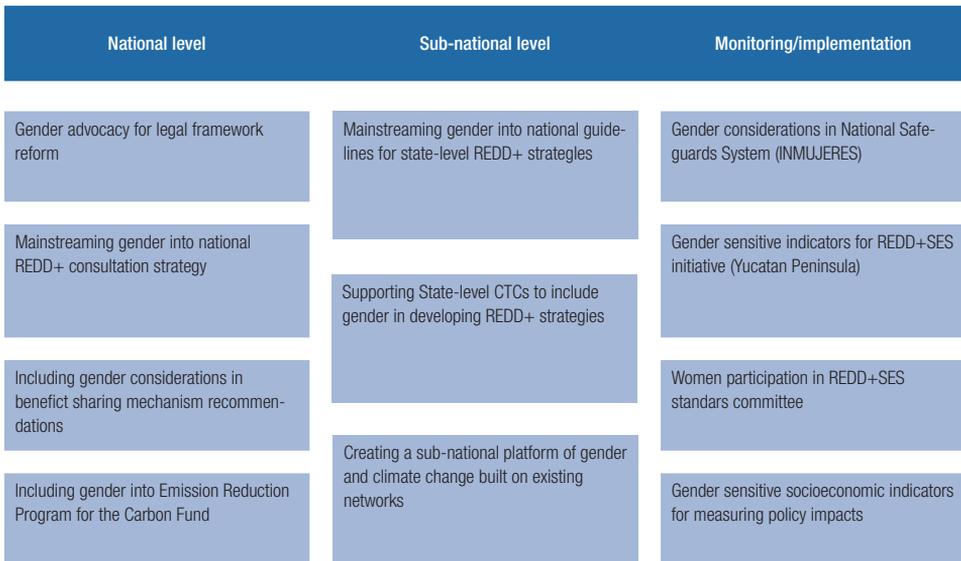


Figure 8. Roadmap for the integration of gender concerns into REDD+ benefit sharing schemes in Mexico. Source: Co-Chairs Report of Mexico TFD, Graf-Montero et al. (2014).

6.3.2 Identification of REDD+ beneficiaries

The initial implementation of REDD+ will require public funding to target activities addressing drivers of emissions and to invest in the development of enabling conditions. Beneficiaries will be identified, with participation at sub-national level in local investment plans and with central government support (i.e. principles and guidelines). Participants clearly stated that the government should not be a beneficiary itself, and most of them considered, with a few voices raised in opposition, that beneficiaries should not be limited to those with existing rights to forest. Guidance would be needed to help local agencies in the transparent identification of beneficiaries. No specific suggestions were made on how to do this, however. The implementation of safeguards could ensure the equitable distribution of benefits to women, the young and indigenous people. Activities will promote the participation of various stakeholders including those from non-forest sectors. Thus the framework will entitle and empower actors to address drivers and to access benefits, even if they do not hold land rights, for instance via negotiated contracts. In order to account for local differences, the planning of local investment needs to include all the different governance layers (i.e. *ejido*/community authorities, local, regional and national government).

6.3.3 Prioritization of activities

Participants also expressed concerns regarding the cost-effectiveness of REDD+ activities and a suggestion was made to select activities on the basis of regional and territorial planning. Given budget constraints for the initial funding of investment plans, it is important to define clear and transparent criteria for assigning resources to carry out REDD+ activities. Initially it is necessary to evaluate how existing and previous processes and projects are contributing to the implementation of REDD+ in line with the guidelines established in Mexico's Low Carbon Development Plan. Investment plans should include activities aiming to tackle drivers of emissions and promote sustainable development in forests and outside forestland. The proposals should include indicators to measure the engagement of and benefits for vulnerable groups and to target areas where communities are receptive and willing to develop the enabling conditions for sustainable management.

Participants in the TFD proposed the use of a multi-criteria analysis to rank specific proposals in order to help the selection of activities to be funded. Criteria were defined for evaluating productive activities linked to drivers (e.g. agriculture, grazing), forestry and conservation activities, and other social and economic activities. Among other criteria, the potential to save carbon, the willingness of people to engage, the financial viability of individual actions, the existence of markets to sell products, and the level of threat of deforestation/degradation were mentioned. It was recommended to use a geographical targeting system to identify activities which might help to better alleviate poverty (e.g. forest-poverty map, linked to Mexico's National Crusade Against Hunger), and to give more weight to proposals from

indigenous communities within forested landscapes and in areas with a higher proportion of vulnerable groups.

TFD recommends that productive activities related to drivers should promote the adoption of sustainable and climate smart/effective activities and stabilize the agricultural frontier through the diversification of productive activities including the conservation of natural resources. Support for forest management practices should promote and strengthen better local and regional management of the forest landscape. Plans should promote collaborative agreements to maximize the output of investments. Criteria for the evaluation of forest management and conservation practices include: the targeting of areas with previous good management and certified areas; activities related to the provision of additional co-benefits (e.g. water, biodiversity); fire management practices; practices for restoration of areas affected by disturbances (fires, hurricanes, pests); and activities for maintaining or increasing carbon stocks.

6.3.4 National guidelines for sub-national investment plans

REDD+ will be implemented in phases, and the roles and guidelines for investment plans and local implementing agencies will evolve to allow different levels of flexibility and participation. The early phase of REDD+ could enable learning about cost-efficient use of domestic resources in terms of benefits produced. In subsequent phases involving results-based payments, guidelines might establish the principles for allocating emission reductions at local level. National guidance should encourage the participation of different stakeholders to increase the transparency of the process in order to engage different sectors particularly those related to drivers of deforestation and forest degradation (i.e. Public Territorial Planning & Development Agencies, NGOs, communities, private sector and philanthropic and asset investors). It is important that investment plans are evidence-based as it is necessary to consider historical land use modifications and emission drivers. Implementing agencies should prove they have the institutional capacities or plans to improve them as part of their efforts towards the implementation of investment plans. TFD participants agreed that guidelines for investment plans should include the following:

- Harmonization of policies, subsidies and investments for low carbon development;
- Favouring of long-term financial viability of activities based on income generation, potential markets and private investments;
- Building upon existing structures and experiences while ensuring a transparent use of resources;
- Inclusion of conflict resolution procedures and mechanisms to implement environmental and social safeguards (e.g. FPIC); and
- Definition of plans to share subsequent result-based payments.

7 Conclusions

7.1 Current position of CONAFOR on benefit sharing

Although discussions on benefit sharing in Mexico appear to have reached consensus in regard to some issues as indicated in TFD outcomes and the ER-PIN document, there are still many issues on which the policy is not clear, or which have not yet been resolved, as indicated already in Table 2.

The most recent official position of Mexico on benefit sharing is that expressed in the ER-PIN (for a summary of this position, see Section 2.4 above). Additionally during the TFD a number of points were expressed by CONAFOR which clarify its position on a number of specific aspects. These points are presented below, but it should be recognised that the policy is still under development and these should not be considered as definitive.

1. CONAFOR is essentially working towards the third model as proposed in this paper ('Two can Tango') in which the credits for reductions in deforestation and degradation would be measured against a national REL, exchanged in international funds by the federal government. The funds will be used to support improved local forest management efforts.
2. CONAFOR expects to invest at least 3 times more money in such efforts than they would receive from the international carbon funds. This money would be collected internally and a local carbon market would be a possible option for this.
3. Credits for forest enhancement would not be channelled through the government but would in principle be available for any community or landowner capable of measuring and justifying them; they could be sold by the community or landowner independently e.g. on the VCS or on internal carbon markets within Mexico. The credits relating to forest enhancement are not included in the REL/baseline presented to the FCPF in the ER-PIN.
4. The financial value of performance-based benefits for reduced deforestation and degradation, once valorised from international funds, would be distributed vertically to the participating states on the basis of their individual performance (i.e. using state level RELs).

5. It is unclear whether non performance-based benefits, such as capacity building investments which will be provided by the government from other sources, will be distributed in the same way. CONAFOR's point of view is that the term 'benefit sharing' refers only to the performance-based carbon benefits related to reduce deforestation and degradation.
6. Within each state, benefits from future reduced emissions will be distributed horizontally to local agents who will develop investment plans for defined territorial units (e.g. groups of municipalities under a *Junta*, for example). Initially, this is not performance-based distribution, but it would be justified in connection with the proposed investment plans and their likely carbon-related pay-offs and in terms of integrated development. An independent board consisting of NGOs and academics as well as government agencies would oversee this allocation procedure.
7. It is not entirely clear whether the eligible actions will be restricted to forest management activities or whether activities occurring outside forests might be included as well (Type B, or C). This will probably be left to the States to decide for themselves. Most of CONAFOR's texts refer to and give examples of forest-based activities, even though in the preamble to the texts a much broader approach is hinted at. The Dialogue favoured the inclusion of activities outside the forests.
8. Investments in local actions could include payment for labour for participation in useful activities and thus support the local economy and social development.
9. CONAFOR agrees that not only the forest rights holders but a wider group of local people should be eligible to receive benefits/incentives. Given the opposite view expressed in the Law on Sustainable Forest Development on this issue, some legal problems may be expected to arise and will have to be resolved.

7.2 Final remarks

During the dialogue, a number of issues were raised in connection with the inclusion of gender issues, the identification of beneficiaries, definition of activities eligible to receive REDD+ benefits, the definition of criteria to allocate/prioritize resources and the design of local strategies for implementation (i.e. local investment plans). CONAFOR should coordinate the incorporation of these aspects into the design of the schemes and continue to assess the implications particularly for pro-poor schemes. The outcomes of the dialogue indicate that since actors outside forests and actors without forest rights could potentially be identified as beneficiaries, it might be possible to include specific provisions to target the poorer members of communities and design *ad hoc* pro-poor schemes. The above could be done for instance by coordinating REDD+ with efforts to alleviate poverty, such as the Crusade Against Hunger, as highlighted during the Dialogue. In this context, it may be important to update the legal framework to avoid potential conflicts regarding the ownership of carbon benefits.

The implication of the ER-PIN is that in Mexico local REDD+ investment plans will be drawn up and the activities will be implemented using international carbon finance together with internal financial resources, with the aim of reducing forest emissions and promoting sustainable forest management. In this context, it will be necessary to ensure that the benefits and resources associated with REDD+ are separated from those of on-going programmes, in order to promote transparency in the use of resources and demonstrate the additionality of activities implemented. On the other hand, it is necessary to build upon existing structures and reduce transaction and bureaucratic costs. A first step would be to define what 'additionality' actually refers to and whether the concept of *financial additionality* as understood in the CDM, may be used in this context.

There are many intrinsic difficulties in designing benefit sharing schemes at a time when there are still some uncertainties regarding what REDD+ will be. The main uncertainties are related to the quantification of potential carbon benefits for a country, the specific methods needed to aggregate information on baselines and MRV from state to national levels, and how to tie local performance measurements into this. These systems are also crucial in monitoring implementation and in designing transparent benefit sharing schemes. As mentioned in Table 2, there are many factors determining the scale of carbon benefits (e.g. combination of performance of different areas, consideration of emission reductions and enhancements, additionality). Given that REDD+ in Mexico might consider interventions outside forest areas, then estimates of emissions reductions and carbon removals may need updates to enable accounting to be done using a landscape approach. There is information available in the National Greenhouse Gas Inventories that could be used to produce initial estimates. The design of local investment plans will also be a critical step towards creating equitable and transparent benefit sharing schemes. Although the federal government might provide general guidelines to design and evaluate such plans, the local actors (i.e. local implementing agencies and local steering committees) would be responsible for the plans themselves.

Annex 1: Clarifying important concepts and principles

What are ‘benefits’ in the context of national REDD+ programmes?

As it is well known, when countries have implemented Phase 3 of REDD+, they may be able to access funding based on carbon results (through ‘sale’ of carbon credits, or what is generally considered ‘carbon finance’). This finance is what is usually considered to be ‘REDD+ benefit’, REDD+ benefits (by CONAFOR). However, in the early phases of implementation, funding may not be based on carbon results, and these investments themselves could be considered benefits. In addition, there might be non-carbon benefits. Below, we identify and characterise three potential benefit streams, since their distribution may imply different rules or norms.

Type A. Capacity building and investments to facilitate participation

There are benefits related to capacity building, in the sense that participants in REDD+ may receive funds, training, technical assistance or start-up funds to enable or encourage them to participate in REDD+ (*ex ante*). Capacity building is not limited to the technical knowledge for forest management; communities also require capacities to participate, negotiate and make collective decisions (Buss et al., 2013b). Neither the source of funding for capacity building nor its distribution to participants is performance-related, although the funds could be targeted to particular areas or social groups. REDD+ Readiness funds are already to some extent financing activities for local capacity building. However, there is a debate on how these funds are being used: to what extent they are being used to build the national infrastructure for REDD+ including national databases and RELs etc., versus how much is being used at the grassroots level to strengthen capacity of rural inhabitants to participate in REDD+.

Type B. In cash or in kind (*ex post*) rewards for carbon performance or for successful participation in REDD+ activities

These benefits can be considered incentives or rewards or subsidies, depending on the design of the benefit sharing scheme. It is this type of benefit that is considered by CONAFOR to be 'REDD+ benefit'. In the broadest sense, this finance is intended to give sustainable forest management activities a higher economic value than they currently have, so that they can compete on a more even footing with activities that currently encourage deforestation and degradation. It is often assumed that the funding source for these rewards would be the exchange value of the carbon credits generated ('carbon finance'), although it would be possible for governments to supplement this from other (internal) sources, as has already been agreed in Mexico. Financing to local stakeholders could take place in the form of payments per ton of CO₂e or can be cash payments detached from carbon figures (i.e. subsidies). The distribution of benefits between local stakeholders would not necessarily have to be performance-based even though the fund itself may be largely generated by measuring national performance.

Type C. Non-carbon benefits

Finally, there are non-carbon benefits that may flow from these activities, such as local environmental services, general development, diversification of income sources, and improved water supply that may result from introducing sustainable forest management, but also timber and NTFP products.

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