Norad

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Template for report and accounts for organisations under the Climate and Forest Initiative funding scheme for civil society

2013-2015

This template for reports and accounts is to be used by organisations with agreements with Norad under the Climate and Forest Initiative funding scheme for civil society.

This template must be used for the **final report** and correspond with the signed agreement and the latest approved Project Document. The final report for the whole agreement period (2013-2015) should include results on a higher level in the results chain than previous reports (please see figure below). The final report should give a description of **achieved outcomes in terms of effects on target groups, and explain how these outcomes are expected to contribute to the intended impact.**

In cases where outcome cannot be documented by the end of the agreement period, substantial evidence of outputs should be presented with an explanation on how these will lead to the desired outcome and when.

The report should not exceed 15 pages, and please remember to submit the common indicators separately (if already submitted in March and there are no changes, you may refer to this).

The deadline for delivering the report is 1 June 2016, unless you have agreed otherwise with your desk officer. Please submit the report electronically to postmottak@norad.no, and Cc your desk officer.

1. General Project Information:

1.1 Name of recipient organisation: **Center for International Forestry Research (CIFOR)**

1.2 Reporting year: **2013 - 2015**

1.3 Agreement Number: **GLO-3945 QZA 13/0545**

1.4 Name of project: **Learning from REDD+ - An enhanced global comparative analysis**

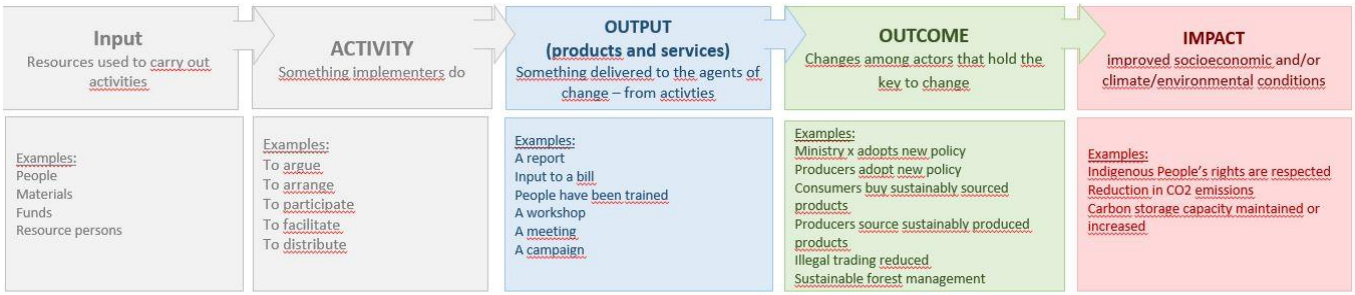
1.5 Country and region in the(se) country if applicable: Core project activities are implemented in the six countries that have become the focus of Global Comparative Study on REDD+ (GCS REDD+): Cameroon, Tanzania, Indonesia, Vietnam, Brazil and Peru. A subset of project activities took place in Burkina Faso, Democratic Republic of the Congo (DRC), Ethiopia, Mozambique, Papua New Guinea, Nepal, Bolivia and Guyana.

1.6 Financial support to the project from Norad for last calendar year 2015: **NOK 20,000,000**

1.7 Thematic area: **Category 3 Analysis, concepts and methodology development**

2 Please describe the project's progress for the whole grant period

Result chain:



With reference to the Result Chain as illustrated above, Norad requires reporting on the effect on target groups (outcomes) for this final report. If possible, we also highly appreciate reporting that reflect any results at impact level. Please remember to relate the reporting to the baselines.

Reporting of results: The achievements should be documented (for example by data on indicators or examples).

2.1 Please repeat the **project's target group(s)** and the baseline for the target group at the start of the project (from the approved project document).

Government agencies, development and environmental NGOs, indigenous rights organisations, business groups, political parties, research organisations and think tanks, and civil society forums have been working for decades to improve land management and promote sustainable use of forest resources. With the introduction of the REDD+ idea in forest-rich developing countries, new actors spanning different organizational types have become involved in discussions around forest policy, e.g. business actors focusing on carbon and 'green' investments, state agencies for ecosystem service provision and licensing, state environmental regulatory organizations, environmental NGOs and other civil society organisations. Commonly marginalised groups, such as indigenous peoples and forest-dependent people, have entered more prominently into policy arenas alongside established actors. They seek to realise their diverse interests by influencing the outcomes of the REDD+ policy process at all levels, the formulation of international and national REDD+ strategies, and their implementation at national and sub-national levels (Schroeder 2010). A new form of agency for the value of 'standing forest' is emerging, incorporating old and new actors as well as old and new interests (Brockhaus and Angelsen 2012; Corbera and Schroeder 2011). However, constituencies of change in a given country will need to be able to recruit more influential policy actors – in particular, state agencies that make authoritative decisions on policy trajectories.

2.2 Please repeat the project's **desired impact** (from the approved project document).

REDD+ policymakers and practitioner communities will have the information, analysis and tools they need to ensure effective and cost-efficient reduction of carbon emissions with equitable impacts and co-benefits – including poverty reduction, enhancement of non-carbon ecosystem services, and protection of local livelihoods, rights and tenure. **Cost-effectiveness, carbon-efficiency and equity are the indicators for better REDD+ – we call this the 3E framework.**

We envision a world where transformational change in tropical forests is facilitated by knowledge-based policy-making. In Phase 2 CIFOR contribute to evidence-based policy making and project implementation by strengthening the capacity of our respective partners to participate actively in REDD+ policy design and implementation, and providing jointly with partners peer-reviewed information. We also provide a framework for exchange of REDD+ policy and project analysis and experiences across countries and regions, to ensure that our research is not only disseminated but also adapted to the needs and dynamics in diverse policy arenas. Our overall vision for the REDD+ mechanism has not changed from the inception of this project, which is embodied in our 3E framework that was elaborated in the second book Realising REDD+ (Angelsen et al. 2009). CIFOR follows an elaborate Theory of Change to map outcomes and impact to project output and report on eventual project effects at country level (non-controllable indicators of impact). In fulfilling this vision, GCS-REDD+, as part of CIFOR, provide path-breaking research and analyses on the possibilities for mitigating climate change through REDD+, and how REDD can do so while providing a range of co-benefits including poverty reduction.

2.3 Is the project still relevant for the **desired impact**? (Yes/No) If No, please give a short explanation.

Yes. We continue believing in the relevance of science-based evidence and knowledge as a basis for informed policy making, and the impact of this project reinforces this idea.

2.4 **Main outcome(s).**

This is the final report for our project that took in total six years and two phases so far (2009-2015) and for which another round of funding is thankfully provided by Norad (Phase 3, 2016-2020). With over 350 publications from the two phases, a multitude of established and seasoned local, national and international partnerships, and a record of well-recognized knowledge sharing events, we have done the utmost to produce outcomes towards our 3E framework – to contribute with scientific knowledge to increased cost-efficiency, carbon-effectiveness and equity of REDD+ policy and practice.

For the impact of a project that comparatively studied REDD+ readiness and implementation in a dozen countries, a major impediment was the delay in the international negotiations leading to a finalization of the REDD+ framework only at the UNFCCC COP in Warsaw, and a final endorsement of REDD+ in the Paris Agreement.

Nevertheless, we contracted Overseas Development Institute (ODI) to evaluate the project (Young and Bird, 2015) and this revealed significant impacts of the project at national and international levels, including an influence on the Warsaw Framework itself (more about this in the section about Module 3 below, and the attached section 3.1, with results cases or impact success stories from the project). With the Paris Agreement in place, we look forward to see more relevant impact coming up in the next phase of the project, and we will work with our partners along our theory of change to provide the opportunities to make this impact happen.

This project comprised five modules with specific outcomes. Here we first give an overall assessment of the project, and in the rest of this section, we report individually on progress with regard to the outcomes in each module, one by one.

Module 1 – From policy outputs to policy outcomes

Module 1: Outcome 1	First and second generation REDD+ countries are guided by information, analysis, tools, and best practices derived from detailed assessments of processes and policy outcomes in early mover countries for the formulation and implementation of REDD+ national strategies, policies, and measures
Target groups/entities:	National decision-makers, including state and civil society actors, international and domestic business actors
Change to be achieved:	Deliberate policy and protest action leads to policy formulation and implementation away from business-as-usual policy approaches that directly or indirectly support deforestation and degradation by enabling effective, efficient and equitable emissions reductions
Key indicator(s):	Shifts in economic incentives, discursive practices and in power relations have occurred and led to changes in major formal and informal institutions relevant to REDD+ implementation, including changes in coordination and transparency across multiple levels of governance
Sustainability:	Sustainability is achieved because major governance reforms lead to long-term and sustainable change of patterns and paradigm shifts in forest use and exploitation and allow for avoided deforestation and degradation

I. What changes have been achieved with reference to the baseline?

Our findings show that the overall progress with REDD+ is slow, countries are stuck in REDD+ readiness, but some progress is visible (Korhonen-Kurki et al. 2014, Brockhaus et al. 2015, 2016 forthcoming). Brazil, Indonesia, and Vietnam show progress, as well as DRC, Tanzania and Guyana, but all of them struggle with overcoming the existing business-as-usual (BAU) path-dependencies, despite considerable investments (e.g. in the case of Brazil, in earlier command and control measures). An analysis undertaken by Brockhaus et al. (2015, 2016) shows the following progress within countries in establishing REDD+ :

Progress, but incomplete: First generation REDD+ countries

Brazil was assessed as being successful in progress with REDD+ and shares many conditions with ***Guyana***, except for pressure on forests that is high in Brazil and low in Guyana. Brazil has still not completely overcome path dependencies in deforestation and forest degradation (May, Millikan and Gebara, 2011), despite the country's investments in command and control measures (Maia, Hargrave, Gómez, & Röper, 2011, Assunção, Gandour and Rocha, 2012). Guyana seems to strengthen its REDD+ path by improving its forest governance institutions and showing considerable progress in developing an MRV system (Birdsall and Busch, 2014), although this remains debated (Henders and Ostwald 2013). In both countries we see commitment to results-based finance together with strong national ownership.

Indonesia is showing progress too, confirming the importance of ownership over the REDD+ process if performance based payments are supposed to make a difference. REDD+ in Indonesia has from the start been a highly contested and dynamic policy arena (Indrarto et al. 2012). Recent changes in the legal context in Indonesia might significantly affect how REDD+ will be shaped in the future. In particular the integration of the former, separate ministerial-level REDD+ Agency within this new Ministry of Environment and Forestry has created some uncertainty about the commitment to and the effective implementation of the REDD+ agenda, but might trigger in the long term stronger ownership over the process.

Contradictions and questions: REDD+ countries moving back and forth

Tanzania, was also assessed as having achieved some progress, due to the release of its national REDD+ strategy in 2013/14. The document however was considered very weak (Kweka et al. 2015). Although Tanzania has not yet formulated Nationally Appropriate Mitigation Actions (NAMAs) or similar climate policy strategies, it has long implemented participatory forest

management programs. This could be interpreted as a path change in forest policy that might have created an enabling context for REDD+ policy formulation. However, other developments give reason to doubt whether there is actual progress with REDD+; the ending of the bilateral agreements with Norway and Finland, which provided most of its financial backing and technical assistance; the lack of procedural clarity for REDD+ piloting activities, which are mostly directly donor funded and implemented by civil societies. All of this indicates that the progress with establishing REDD+ seems to lack stability, and that prospects are highly uncertain.

Based on our research, the **Democratic Republic of the Congo (DRC)** and **Vietnam** both lack, to a large extent, national ownership and have no performance-based funding instruments in place. Ownership of the REDD+ process in Vietnam has reduced only recently (and seems to be re-gained with developments in the institutional set up in 2015), and the REDD+ progress we see might be an aftereffect of the past strong national ownership (Pham et al. 2012; Korhonen-Kurki et al. 2014). On the other hand, the finding could indicate that progress is possible when donors politically and financially dominate the REDD+ process while both the government and coalitions of drivers of change are politically committed to REDD+. In DRC, progress has been made over the past years (Mpoyi et al. 2013), a REDD+ strategy is in place since 2014, and a REDD+ coordination body has been put in place. However, even though the strategy has been approved by the government, several stakeholders have cautioned that an implementation may be ineffective due to uncertain funding and persistent governance problems, such as corruption (Assembe-Mvondo, 2015).

REDD+ countries on a rocky road

Ethiopia and **Burkina Faso** saw previous policy change that could enable further progress with REDD+ but seem lack of clear ownership; performance-based instruments are absent, possibly because both countries started their REDD+ process rather recently (Bekele et al. 2015; Kambire et al. 2015).

In **Mozambique**, although the REDD+ process started early, and is considered inclusive and led by national institutions since 2009, REDD+ is still in early stages of development. Despite possibilities for performance based funding, Mozambique seems to approach REDD+ very cautiously, perhaps due to what was perceived as a threat from REDD+ related land grabs due to a very high level of pressure from international investors to acquire land for REDD+ projects (Nhantumbo, 2011; Sitoe, Salomão and Wertz-Kanounnikoff, 2012).

Peru advances slowly, toward consolidation of national strategies and laws regarding REDD+ and forests more broadly (Che Piu and Menton, 2013). The New Forestry Law, passed in 2011, was not enforced as of August 2015 due to delays in consultations and approval of its regulations. The government has also recently presented a draft of its National Strategy for Forests and Climate Change and opened it up for public comment. At COP 20, Peru signed an agreement with Norway and Germany who committed US$300 million towards results-based payments for REDD+.

Cameroon, Nepal and **Papua New Guinea (PNG)** all seem to struggle with REDD+ progress. Nepal and Cameroon both seem to have made some progress in policy development recently, PNG to lesser extent (Babon and Gowae, 2013; Dkamela, 2011; Paudel et al. 2013).

II. Please report on the key indicators used to document that the desired change has occurred.

We see new agents of change and new coalitions, as well as new incentives, and new discourses emerging for the value of standing forests (Brockhaus and Angelsen, 2012; Brockhaus et al. 2014, Luttrell et al. 2014). However, BAU actor coalitions are still the most powerful and the REDD+ policy arena is characterized by power struggles everywhere, horizontal, vertical, within between ministries, sectors, within and between old and new institutional settings and the

involved organisations (Babon et al. 2014, Bushley, 2014, Dkamela et al. 2014, Gallemore et al. 2014, Gebara et al. 2014, Moeliono et al. 2014, Pham et al. 2014, Rantala and Di Gregorio, 2014, Brockhaus and Di Gregorio, 2014, Brockhaus et al. 2014). Finally, and most importantly, the underlying causes of deforestation are not yet tackled, instead we see lots of 'old wine in new bottles' in proposed policies and measures (Angelsen and Rudel 2013, Salvini et al. 2014).

III. Please reflect on whether targets that were originally set have been achieved, and what project outputs were key to achieving them. If relevant reflect on why outputs delivered as planned did not help meet the targets

The key findings of our comparative analysis provided guidance to REDD+ countries as to which enabling conditions need to be strengthened to facilitate effective, efficient and equitable REDD+ policy formulation and implementation. Our engagement and outreach approach within the research countries included knowledge sharing events, workshops and policy dialogues with key stakeholders in Burkina Faso, Cameroon, DRC, Vietnam, Peru, Brazil, Ethiopia, Indonesia and Laos. For example in Indonesia, the country recently implemented a series of institutional changes in relation to forest and climate change governance under the new Administration, and in partnership with the Research Center for Climate Change, University of Indonesia.we conducted a knowledge sharing and policy dialogue in August 2015. This event resulted in 10 key messages that in turn informed deliberations in the ensuing High–level Policy Dialogue "Transformation and Climate Change in Indonesia under the New Government" led by our partner. Through social media (for example a blog flagging that deforestation drivers are not yet tackled) we highlighted the often critical findings, and also challenged those that hold the key for change to stimulate a critical debate and reflection.

IV. If outcomes are not yet achieved, please explain why, and in addition, how the outputs will lead to the desired outcome and when.

Despite the above described efforts, and the information, tools and analysis made available, as our outcome statement has stipulated, the REDD+ framework implementation was delayed, and countries are still reluctant to fully engage with the massive transformational change required to avoid deforestation and forest degradation. Hence the original target—of having REDD+ policies and measures implemented and results-based payments made—was not achieved. This can be attributed to a large extent to the political economy of deforestation and its underlying root causes. It will be crucial to continue independent analysis on progress (or lack thereof) and further credible and trustworthy engagement with international, national and subnational stakeholders, including consumers and producers of deforestation-driving products. Countries, and in particular the civil society actors within, will need such analyis and engagement to fulfil what is set out in the Paris agreement.

V. Are the outcomes expected to be sustainable?

A key objective in our research to policy pathway is to foster ownership by in-country partners of the knowledge, as these partners are often crucial vectors in the impact pathways who can carry evidence into national and subnational decision making arenas. Ownership of reform processes, reflected in discursive shifts within the country, in changing power relations and redesigned economic incentives, is crucial for the sustainability of an equitable, efficient and effective REDD+. Hence we expect a sustainable outcome, even if more slowly achieved than expected.

Module 1: Outcome 2	As more countries begin developing REDD+ strategies, they use best practices for the development of performance and impact assessments that build upon lessons from the design and implementation of early REDD+ strategies and their effectiveness, efficiency, and equity
Target groups/entities:	International negotiators, national decision makers
Change to be achieved:	An aidification of REDD + is avoided because the provision of economic incentives for REDD+ is linked to performance-based measures
Key indicator(s):	Performance indicators and measures are generated and applied in REDD+ funding decisions
Sustainability:	Additional performance-based payments under an UNFCCC framework will deliver long-term funding security

I. What changes have been achieved with reference to the baseline?

REDD+ has moved away from a payment-for-environmental-services (PES) approach as international funding for REDD+ primarily originates from development aid. This "aidification" of REDD+ has made the program similar to previous efforts using conditional or results-based aid (RBA), and with this it became more vulnerable to the risks of such an approach: donor spending pressure, unclear performance criteria, political reference levels and challenges regarding sustainable funding (Angelsen 2016 (upcoming), Wong et al. 2016, Brockhaus et al. 2015). The overall empirical evidence on RBA as well as lessons from other performance or results-based schemes is still limited. Currently, the Green Climate Fund (GCF) and other parties under the convention are designing performance-based finance instruments. Hence, research is urgently needed to inform these and other actors about critical issues and potential trade-offs and identify areas where further guidance and clearer targets are required to manage these trade-offs. Some recently published papers summarised such lessons for REDD+ (Angelsen 2013, Angelsen 2016 (forthcoming), Wong et al. 2016) summarizes lessons from CIFOR's work on equity, and Brockhaus et al. (2015, 2016 forthcoming) provide insights in how to assess performance in policy processes. However, by the end of 2015, there were no countries yet in a fully-fledged results based payments phase of REDD+.

II. Please report on the key indicators used to document that the desired change has occurred.

The uptake of performance indicators in a REDD+ funding mechanism is not yet visible, as the GCF is still underway with setting up its strategy framework for performance-based payments, and bilateral payments are lagging behind. We hope to see steeper curves of knowledge uptake while these approaches mature, possibly faster, over the coming years.

III. Please reflect on whether targets that were originally set have been achieved, and what project outputs were key to achieving them. If relevant reflect on why outputs delivered as planned did not help meet the targets

With results-based finance still being politically debated and countries not yet having entered the implementation phase of REDD+, our initial target of having evidence-based design of financing mechanisms is not achieved. However, findings such those recently outlined in Wong et al. 2016 continue highly relevant to the ongoing design debates within the GCF and beyond.

IV. If outcomes are not yet achieved, please explain why, and in addition, how the outputs will lead to the desired outcome and when.

While REDD+ progress was much slower than expected, our outputs were delivered and uptake can be seen, as confirmed during a recent SB44 side event on performanced based finance, which generated huge interest among ca. 100 REDD+ negotiators and practitioners (cf. https://seors.unfccc.int/seors/reports/events_list.html?session_id=SB44 and search for CIFOR to see the presentations).

V. Are the outcomes expected to be sustainable?

We are convinced that scientific knowledge will help improving the design of carbon-effective, cost-efficient and equitable REDD+, and this will increase acceptance and sustainability among stakeholders at all levels in all sectors.

Module 2 – REDD+ subnational initiatives

Module 2: Outcome 1	Stakeholders are using state-of-the-art knowledge of how to achieve effectiveness, efficiency, and equity in the implementation of REDD+ sub-national initiatives
Target groups/entities:	REDD+ project proponents, jurisdictional REDD initiatives, national and local governments, donor organisations, researchers
Change to be achieved:	REDD+ sub-national initiatives are designed and implemented in such a way that they achieve the three Es
Key indicator(s):	Measurable and verifiable forest carbon sequestration taking into account leakage and permanence; financial benefits exceed costs of implementation; distribution of benefits and costs are fair in view of all stakeholders
Sustainability:	Permanence is a key element of effectiveness, which can redound positively to efficiency and equity, but not necessarily so

Module 2: Outcome 2	Stakeholders are using state-of-the-art knowledge of how to achieve poverty reduction_in the implementation of REDD+ sub-national projects
Target groups/entities:	REDD+ project proponents, jurisdictional REDD initiatives, national and local governments, donor organisations, researchers
Change to be achieved:	REDD+ sub-national initiatives are designed and implemented in such a way that they provide livelihood and poverty reduction benefits to local stakeholders
Key indicator(s):	Measurable increase of average annual household income and poverty reduction through participation in REDD+ sub-national initiatives
Sustainability:	Unclear. It depends on host of factors that include the durability of REDD+ funding streams, the price of forest carbon and the resilience of benefit-sharing mechanisms that have yet to be created

Outcomes 1 and 2 of Module 2 are strongly linked to each other, therefore they are discussed together in the following section.

I. What changes have been achieved with reference to the baseline?

In Module 2 we have collaborated closely with 23 REDD+ subnational proponent organizations in six countries (Brazil, Peru, Cameroon, Tanzania, Indonesia and Vietnam) for research and analysis, resulting in the elaboration of tailored products, such as briefs, working papers, journal articles, a casebook and targeted communications, which aim to provide guidance on factors of success and failure with respect to attaining the 3E criteria.

At the onset of the project in early 2010, we selected all subnational initiatives in six countries that were at a particular stage of development. These 23 initiatives had defined site boundaries and intervention areas but had not yet applied interventions, meaning that there was a relatively risk-free period for collecting baseline data. A comparison of those initiatives with the ID-RECCO database, which includes 175 subnational initiatives worldwide that focus on REDD+ versus afforestation and reforestation activities (Simonet et al. 2015), shows that our sample of 23 initiatives is well representative of all REDD+ initiatives in the tropics (Sunderlin et al. 2016) and covers half the area globally under REDD+.

The boundary partners and target audiences making use of these tailored products have been the proponents of these 23 initiatives, other REDD+ proponent organizations, the Governors' Climate and Forests Task Force (a global network that includes almost all of jurisdictional REDD+ globally), the Climate, Community and Biodiversity Alliance (CCBA), REDD+ Social and Environmental Standards (REDD+ SES), subnational and national governments in the six partner countries, donor organizations, and international organizations laying the groundwork for REDD+ worldwide.

II. Please report on the key indicators used to document that the desired change has occurred.

In the course of 2013-2015, Module 2 concluded the second phase of its field research at our 23 subnational REDD+ initiative sites, which encompass 190 villages and 4,524 households. Module 2 now has the largest global database for in-depth (socioeconomic/biophysical) analysis of REDD+ initiatives. This longitudinal (data collection at two points in time) and counter-factual (half the villages and households inside and outside the sphere of REDD+) method will provide definitive empirical insights on the capability of REDD+ to deliver on the 3E criteria. This before-after/control-intervention (BACI) analytical approach is the gold standard for impact evaluation of development and environment projects. Module 2 findings and analysis from Phase 1 and Phase 2 are well documented in the book *REDD+ on the Ground: A case book of subnational initiatives across the globe* (Sills et al. 2014).

As relates to Outcome 1, Module 2 produced papers focused on carbon effectiveness, (cost) efficiency and equity:

- With respect to the carbon effectiveness criterion, key publications include monitoring of deforestation at the pioneering Juma/Bolsa Floresta site in Brazil (Börner et al. 2013), the MRV capacity of the initiatives in the Module 2 sample (Joseph et al. 2013), estimates of forest loss and carbon emissions at the 23 case initiatives (Bos and Avitabile 2014), and the difficulties in measuring carbon sources and sinks at the 23 case initiatives (Joseph 2014).
- Regarding the (cost)-efficiency criterion, key outputs include an in-depth cost assessments of two REDD+ initiatives (Marinho et al. 2014) and a tool for modelling the implementation costs of subnational REDD+ initiatives (http://www.cifor.org/redd-benefit-sharing/resources/tools/redd-cost-model/).
- Finally, regarding the equity criterion, Module 2 has produced papers that look at who should benefit from REDD+ and why (Luttrell et al. 2013), the role of women in early REDD+ (Larson et al. 2014; Larson et al. 2015), and local participation (at the Transamazon site in Brazil; Cromberg et al. 2014).

Relating to Outcome 2, Module 2 devoted substantial efforts to measuring the impacts of REDD+ on human well-being, since subnational REDD+ initiatives will, either by design or by accident, have impacts on the wellbeing of local stakeholders. One of the main challenges for proponents of these initiatives is to maximize the positive effects on wellbeing and equity while minimizing the down sides. One key dimension of REDD+ is that it can restrict access to and conversion of local forests. This inevitably has repercussions on local livelihoods, particularly where

dependence on forest resources (whether as a source of land for conversion or for forest products and ecological services) is high. Proponents of subnational REDD+ initiatives seek to compensate for these restrictions on access to forest resources through the provision of livelihood enhancements (whether conditional on the achievement of forest protection or not), and through equitable distribution of the stream of benefits to be obtained through REDD+. With respect to the poverty alleviation and livelihood enhancement criterion, Module 2 has produced publications that spotlight issues related to social safeguards (Jagger et al. 2014a; Duchelle and Jagger, 2014; Jagger et al. 2014b; Jagger and Rana, 2014), and forest reliance across poverty groups in REDD+ in Tanzania (Dokken and Angelsen, 2015). The case chapters in Sills et al. (2014) give strong attention to livelihoods issues.

Key overall findings of research in Module 2 to date are as follows:

- According to proponents of subnational REDD+ initiatives the key challenges of subnational REDD+ are tenure and the (currently) disadvantageous economics of REDD+;
- Other key areas of difficulty for subnational REDD+ implementation concern safeguards, scale (implementation at the jurisdictional level), and MRV;
- Performance-based, conditional livelihood rewards were supposed to be the "engine" of REDD+ on the ground but this has barely begun due to inadequate REDD+ financing;
- In the absence of a substantial funding stream to pay the opportunity costs of forest conservation (via conditional rewards), in most cases REDD+ initiatives cannot compete with conversion of forest to other uses;
- Most REDD+ initiatives are actually a continuation of pre-existing integrated conservation and development projects (ICDPs) operating at the same site. As such, they are functionally indistinguishable from ICDPs because (for the most part) they have not yet moved to conditional rewards;
- That is why what is now called "REDD+" is, in practice, dominated by forest interventions characteristic of ICDPs: restrictions on forest access and conversion; non-conditional livelihood enhancement; forest enhancement; environmental education; tenure clarification.

Key country-specific findings are as follows:

- In **Brazil**, subnational actors, such as the state governments of Acre, Amazonas and Mato Grosso have played an active role in Brazil's conservation gains. Brazil holds the highest number of subnational REDD+ initiatives worldwide (Simonet et al. 2015), of which several are supported by the Amazon Fund. Proponents of these initiatives are applying REDD+ intervention packages that in customized ways combine enabling measures, disincentives and incentives towards acheiving better protection of forests (Duchelle et al. 2014a; Bakkegaard and Wunder 2014; Guerra et al. 2014; Cromberg et al. 2014a; Gebara 2014; Cromberg et al 2014b). Early evaluation data show positive impacts of REDD+ interventions on human wellbeing (Borner et al. 2013 and reported forest clearing (Simonet et al., in review) at select sites. Lessons from these diverse initiatives can be used in the design of national policy mixes (Wunder and Duchelle 2014).
- In **Peru**, the large number of subnational REDD+ initiatives led by non-governmental organizations (NGOs) reflects strong involvement of civil society in defining the scope and direction of REDD+ in the country (Menton et al. 2014). One of these is a NGO-led REDD+ project to promote sustainable forest management by indigenous communities in the Peruvian Amazon, which shows how many NGOs have pursued funding through the voluntary carbon market to bolster ongoing conservation activities (Rodriguez-Ward et al. 2014). There are also private sector-led REDD+ projects in Peru, including one targeting Brazil nut producers. Lessons from this initiative highlight the challenges of implementing REDD+ in an areas with overlapping tenure rights and forest uses (e.g. high level of timber extraction within Brazil nut concessions) and where there is high local skepticism of externally-driven projects (Garrish et al. 2014).
- In **Cameroon**, lessons from two REDD+ projects highlight conflicting perceptions of land rights and forest ownership between the state and local communities, along with

challenges to promote equitable benefit sharing among local participants. In one REDD+ project being implemented in a protected area, ongoing land conflicts between indigenous people and migrant farmers, combined with government restrictions on land use, highlight the need for REDD+ to provide sufficient incentives to local people to gain their support for protected area management (Awono et al. 2014a). In a second project where payments for environmental services (PES) were introduced in a community-managed forest, not all land claimed by local communities is included in the initiative anf not all households in these communities are receiving payments from the project, which highlights the need to involve local people much more directly in project design (Awono et al. 2014b).

- **Tanzania** holds the largest number of REDD+ initiatives outside the Congo Basin, many of which financed by Norway's International Climate and Forest Initiative (NICFI). While these pilot initiatives have had important successes in reducing deforestation and improving local livelihoods, there have been substantial challenges associated with their implementation in relation to uncertainties in land tenure, carbon rights and benefit sharing; insufficent MRV capacity; and difficulties in addressing the underlying drivers of deforestation (Kweka 2014a; Caplow et al. 2014; Dokken et al. 2014; Kweka 2014b; Kweka 2014c; Putri and Kweka 2014). Since REDD+ is unlikely to benefit local communities without legal recognition of their land and forest tenure, REDD+ proponents in Tanzania needed to make considerable financial investments in helping communities resolve boundary conflicts and gain land titles, effectively substituting the government in this role.. None of them have been able to sell carbon credits; either they exhausted their limited funds on enabling measures or they were struggling with the long process of meeting the requirements to sell carbon (Kweka et al. 2014).
- In **Indonesia**, the landscape of subnational REDD+ initiatives is highly dynamic. Multiple provinces and districts have signed memoranda of understanding with the federal government to pilot REDD+ activities, including the Berau Forest Carbon Program (Anandi et al. 2014a), yet such jurisdictional REDD+ programs are vulnerable to electoral politics as seen in the case of Ulu Masen in Aceh (Anandi et al. 2014b). Also many early local REDD+ projects have been discontinued, completed or rebranded (Resosudarmo et al. 2014). One of the most high-profile was the Kalimantan Forests and Climate Partnership (KFCP), which ended in 2014 after attracting mostly unfavorable (yet unfounded) media attention at local, national and international levels, highlighting the need for proponents to more effectively communicate project goals and progress especially at initial stages (Atmadja et al. 2014). Findings from other NGO-led and private sector-led projects in Indonesia show the challenges in obtaining *hutan desa* tenure status – or community management rights over village forests (Intarini et al. 2014) – and Ecosystem Restoration Concession licenses for large peat domes (>100,000 ha) in a timely way (Indriatmoko et al. 2014a; Indriatmoko et al. 2014b), which highlights a major barrier to effective REDD+ implementation.
- In **Vietnam**, one of the first REDD+ projects – the Cat Tien National Park Pro-Poor REDD+ Project – faced numerous challenges, such as complex requirements for accessing the voluntary carbon market and difficulties penetrating higher levels of decision making in Vietnam, including but not limited to resolution of unclear forestland ownership/rights as a basis for REDD+. These led the proponent, SNV, to abandon the project-level approach in Vietnam to work on REDD+ at provincial and national levels instead (Huynh, 2014).

In addition, Module 2 has co-produced publications with eight proponent organizations (see Sunderlin et al. 2014 and Sunderlin et al. 2016), trained more than 100 junior developing country researchers in socioeconomic field research methods, and returned research results to study villages at the conclusion of both field research phases. Module 2 researchers prepared reports with site-specific results for distribution in all study villages, which were supported by oral presentations of key findings in village meetings.

III. Please reflect on whether targets that were originally set have been achieved, and what project outputs were key to achieving them. If relevant reflect on why outputs delivered as planned did not help meet the targets

One of the strongest impact of Module 2 documented in the program assessment by ODI has been to influence UN-REDD toward including tenure in the implementation of REDD+ (Young and Bird, 2015). Module 2 produced substantial scientific output on tenure and REDD+. One publication explains why tenure is key to fulfilling climate and ethical goals in REDD+ (Sunderlin, 2014). A special section of the journal *World Development* contains three articles on early efforts to prepare tenure in REDD+: an overview article examines proponent efforts to make tenure preparations at our sample of sites (Sunderlin et al. 2014); the linkage between tenure and compliance with environmental laws in Brazil is explored in Duchelle et al. (2014); and Resosudarmo et al. (2014) look at whether tenure security can lead to REDD+ effectiveness in Indonesia. An article by Awono et al. (2013) explores tenure and participation in REDD+ initiatives in Cameroon. Dokken et al. (2014) ask if there is insufficient attention to community dynamics in tenure preparations for REDD+ in Tanzania, and Larson et al. 2013 examine the prospects for successful tenure arrangements in a wider context. The overall finding of this research – that tenure security is key to forest-based climate change mitigation – has registered with the Policy Board of UN-REDD. This impact is documented in the ODI study and described in the attached Results Cases document. UN-REDD has been working with dozens of countries around the world in setting up policies and procedures for the design and implementation for REDD+, so it is likely this influence will lead to concrete and positive results along their (and our) impact pathway.

Other examples of the application of Module 2 research include:

- Invitation by the Government of Acre (proponent of the world's first jurisdictional REDD+ program) to present preliminary Phase 1 – Phase 2 comparative results at the 2014 Governors' Forests and Climate Task Force meeting in Rio Branco, Brazil
- The Nature Conservancy (Brazil) is using the detailed village- and household-level livelihoods information in the Module 2 databases to design their socio-environmental monitoring for the Sustainable Landscapes Pilot Program in São Félix do Xingu, The Nature Conservancy (Indonesia) is using the same data to assist the development of their community programs in Berau, and other local stakeholders in Indonesia as using the data for development planning purposes (e.g. the Berau and Aceh Besar district governments, and some village governments in the vicinity of the KFCP site).

IV. If outcomes are not yet achieved, please explain why, and in addition, how the outputs will lead to the desired outcome and when.

CIFOR has a record of showcasing REDD+-related research findings at international high-level policy events, including the UNFCCC Conference of Parties, the Global Landscapes Forum (2013 in Warsaw, 2014 in Lima and 2015 in Paris), CIFOR's Forest Asia Conference in 2014 and the 2016 Asia-Pacific Forestry Week, and is considered by many stakeholders a pioneer of REDD+ research and leading source for scientific information on REDD+ (Young & Bird, 2015). Due to the delays experienced in REDD+ framework implementation and finance flows, however, REDD+ implementation has been slower than expected. For instance, our second phase data (2013/14) mostly captures the very early impacts of REDD+ preparatory activities and interventions, and we cannot yet say if REDD projects on the ground have in fact achieved the full set of 3E objectives and social co-benefit outcomes. We continue to actively engage with proponents of REDD+ projects and programs, subnational and national governments, donors and other researchers towards promoting the uptake of our results in their decision-making. In our Phase 3 work that will be funded by Norad, we plan to revisit a subset of these sites in 2018 to be able to assess how longer-term outcomes and impacts of REDD+ efforts on the ground.

V. Are the outcomes expected to be sustainable?

However, sustainability of the impact of Module 2 depends to a large part on the future viability of REDD+. This in turn depends on a variety of factors that are outside of CIFOR's control, including whether the Paris Agreement stimulates national governments to give priority to forest protection, as a mitigation strategy and if sufficient REDD+ funds will flow. While many countries seem to prepare for REDD+ implementation post-Paris, and the Green Climate Fund is supposed to finalize their results-based funding strategy by October 2016, the fate of REDD+ remains as yet unclear. Even so, many of our findings, e.g. those on tenure, will continue to be relevant enough to have policy impact, because tenure preparations are crucial for forest-based climate change mitigation, irrespective of the form it takes (i.e. REDD+ or some other mode). Also, our data that link interventioins to forest and livelihood outcomes will continue to be an essential global scientific body of evidence about mitigation policy interventions that will generate a dearth of lessons for the land sector in coming years. Data will be made available for public use, according to CIFOR Policies on the Management of Intellectual Assets (IA) and Open Access.

The key lesson learned through Module 2 research is that there are considerable obstacles to moving ahead with REDD+, at the heart of which is the persistent strength of the political and economic interests that favour continued conversion of tropical forests to non-forest uses. This coorroborates, with an independent apprpach and independent data set based on REDD+ project assessment on the ground, the findings from Module 1 on the importance of the political economy for the success of REDD+ in each country.

Module 3: Monitoring, reporting and verification systems

Module 3: Outcome 1	Stepwise approach adopted and made operational to set RELs and develop national MRV systems that take into account national circumstances, with respect to key drivers of deforestation, degradation, conservation, SFM and rehabilitation
Target groups/entities:	National policy makers, technical services, research organizations
Change to be achieved:	Climate change focal points will have support from technical services to prepare more accurate and precise GHG inventories for forests and land use change
Key indicator(s):	Stepwise approach outlined in national REDD+ strategy documents and specific adjustments are made for national circumstances (data availability, drivers of land use and land use change, etc.)
Sustainability:	Progress in forest monitoring is a no regrets achievement. Improved forest monitoring will give better information to agencies responsible for managing national forest estates and for making rules for private forest owners, where they exist

I. What changes have been achieved with reference to the baseline?

The stepwise approach was initially proposed by CIFOR as a practical and pragmatic way to deal with lack of adequate data and the inherent uncertainties in predicting future emissions in the forest sector of many developing countries preparing for REDD+. Simply put, the approach allows countries to start at the level they are in terms of data availability and monitoring capacity, and gradually upgrade their FRL/FREL estimates in a stepwise or continually expanding approach with increasing quality of data, precision, accuracy and geographical coverage, from Tier 1 to Tier 3 data/approaches. The ODI assessment (Young and Bird, 2015) amassed evidence that CIFOR contributions were central to UNFCCC adopting and implementing the stepwise approach which has become part of the Warsaw REDD+ Framework (see below).

II. Please report on the key indicators used to document that the desired change has occurred.

The stepwise was included in the Decision 12/CP.17, at COP17 in 2011, and later confirmed as part of the Warsaw Framework for REDD+ (Decision 13/CP19, Annex, 2e) at COP 19 in 2013. By May 2016, 15 countries had submitted their FRLs/FRELs to the UNFCCC. A majority of them make explicit reference to the stepwise approach, and some actively apply it. E.g., it has been directly integrated into MRV planning documents in Ethiopia, Guyana and Indonesia. The concept is also being applied in other contexts, e.g. it is being discussed for safeguards.

III. Please reflect on whether targets that were originally set have been achieved, and what project outputs were key to achieving them. If relevant reflect on why outputs delivered as planned did not help meet the targets

The result described above was the intended outcome of our work since Phase 1 of the Norad grant, yet the quick adoption by COP17 was more than we had expected. The draft proposal was circulated among and discussions were held by key REDD+ negotiators during COP17, underpinned by several years of research on MRV and reference levels. The quick adoption might be explained by (i) the simplicity of the approach, and the "conceptual fit" with the phased approach to REDD+ and the tiered approach to emission factors; (ii) the approach providing a simple solution to the challenges related to the huge variation in data availability and quality, and national capacity, a central problem in UNFCCC negotiations; and (iii) the promotion of the approach through easily accessible material (discussion notes, a policy brief and a book chapter), as well as through informal meetings with key REDD+ negotiators.

IV. If outcomes are not yet achieved, please explain why, and in addition, how the outputs will lead to the desired outcome and when.

We will continue to work in Phase 3 grant on conceptionalizing the stepwise approach for setting reference emissions levels (RELs), and improving Steps 2 and 3 for setting RL/RELs at different scales and understanding the links between national and sub-national RELs. We will track the improvements and success factors in national forest monitoring capacity for specific country cases (Ethiopia, Guyana, Indonesia, and Peru) and in all non-Annex 1 countries (based on FAO FRA 2015) and work on making capacity building more effective.

V. Are the outcomes expected to be sustainable?

The approach is flexible and therefore robust: countries can submit FRLs/FRELs at their current capacity and data level, with an option to improve them over time. The latter is a critical point, and we see at least two possible hindrances for countries to improve their FRL/FREL data and capacities:

- Few financial incentives exist for growing national MRV capacity. Using more advanced methods and data has a cost and needs to be justified. Our review of submitted FRLs/FRELs found that most countries use simple historical average, typically over the 2000-2010, and makes few adjustments for drivers and other national circumstances
- If FRLs/FRELs are to be used for results-based payments (as countries indeed state is the intended use), this provides an incentive to report high FRLs/FRELs and selectively include carbon pools and activities that maximize payments.

Providing clear financial incentives for moving to the next step in setting the FRLs/FRELs would take care of the first problem; transparency and 'naming and shaming' might take care of the

second. In a long-term perspective the approach is supposed to make itself redundant as all countries would eventually have moved to using the most advanced approach available.

Module 3: Outcome 2	Improved data availability and technical capacity in REDD+ host countries for emissions measurement
Target groups/entities:	Donors and agencies involved in capacity building, national policy makers, technical services, research organisations
Change to be achieved:	Donors and technical services invest more effectively in capacity building efforts to achieve better MRV outcomes in countries
Key indicator(s):	Increased forest reporting capacity in FAO FRA 2015 and 2020 Increased reliance on remote sensing to detect land use change Better availability of emission/removal factors for emissions calculations
Sustainability:	Progress in forest monitoring is a no regrets achievement. Improved carbon measurement will give better information to national environmental agencies and civil society organisations that integrate environmental concerns with sustainable development.

I. What changes have been achieved with reference to the baseline?

As a large number of tropical countries had limited capacity in the past to implement national MRV systems, capacity building efforts are now ongoing to strengthen the technical and political skillsets necessary to implement national forest monitoring at institutional levels. We assessed the current status and recent changes in national forest monitoring and reporting capacities in 99 tropical countries, using FAO Forest Resources Assessment (FRA) 2015 data, complemented with FRA 2010 and FRA 2005 data. The results (see section ii) highlight the effectiveness of capacity building programmes (such as those by FAO, and national efforts at building REDD+ readiness) but also the need for continuing these efforts. It is important for countries to build, maintain and improve their forest monitoring systems and update their inventories on a regular basis. This will further improve accuracy and reliability of data and information on forest resources and will provide countries with the necessary input to refine policies and decisions and to further improve forest management.

We also made significant progress on emission factor data which are necessary in MRV frameworks with the publication of several papers and guidelines on peatlands and uplands and by contributing to the IPCC Wetland Supplement chapter to the 2006 IPCC guidelines for National Greenhouse Gas Inventories. We conducted two global synthesis on soil greenhouse gas emission factors for 1) Southeast Asian peatlands and 2) the pan-tropics in terms of NO and N_2O. We developed cost-efficient methods for improved quantification of peat C stores in Southeast Asia. We also established two new allometric biomass models for Southeast Asia, one related to peat swamp forest, the other to fallow systems. We have continued working on novel applications of ground based Lidar for developing biomass emission factors for selectively logged forests in the humid tropics. This is an important contribution to quantifying degradation, which eludes science so far. Emissions associarted to forest-to-oilpalm plantation conversion were also characterized in two case studies conducted on peat and upland soils in Indonesia.

Besides the operational monitoring of forest area change and carbon emissions, countries are struggling to identify and assess of drivers of deforestation and forest degradation. Our research contributed to the knowledge of drivers of deforestation by quantifying land use change and related carbon losses and thus linking carbon emissions to human activities. In addition, we developed reference emission factors linked to specific drivers, based on spatially-explicit remote sensing data, which can be used as a better alternative to the more general default Tier 1 values.

II. Please report on the key indicators used to document that the desired change has occurred.

Three indicators, ''Forest area change monitoring and remote sensing capacities'', ''Forest inventory capacities'' and ''Carbon pool reporting capacities'' were used to assess countries' MRV capacities for the years 2005, 2010 and 2015 and the change in capacities between 2005–2010 and 2010–2015.

- We found that forest area change monitoring and remote sensing capacities improved considerably between 2005 and 2015.The total tropical forest area that is monitored with good to very good *forest area change monitoring and remote sensing capacities* increased from 69% in 2005 to 83% in 2015. This corresponds to 1,435 million ha in 2005 and 1,699 million ha in 2015. This effect is related to the availability of more free and open remote sensing data and of better technologies to improve forest area change monitoring.
- The total tropical forest area that is monitored with good to very good *forest inventory capacities* increased from 38% in 2005 to 66% in 2015. This corresponds to 785 million ha in 2005 and 1,350 million ha in 2015.
- *Carbon pool reporting capacities* did not show as much improvement and the majority of countries still report at Tier 1 level. This indicates the need for greater emphasis on producing accurate emission factors at Tier 2 or Tier 3 level and improved greenhouse gases reporting.

A key indicator and landmark achievement for the project is the publication of the IPCC Wetlands Supplement with new emission factors for tropical peatlands and coastal ecosystems to which our research contributed. Methodology reports from the IPCC are politically significant for climate negotiations because they constitute the operating manuals behind UNFCCC and national decisions. This report fills a significant gap in the previous 2006 Revised IPCC National Greenhouse Gas Inventory Guidelines. The Supplement was accepted in 2013 and published in 2014.

Due to political changes in Australia, the Australian Government requested CIFOR to assume a leadership role in supporting the Indonesian government in developing the Indonesian Carbon Accounting System (INCAS). With new financial support from Australian Aid, CIFOR has worked supported the technical services in the Research and Development Agency (FORDA) of the Ministry of Forestry, and later Ministry of Environment and Forestry, in assessing deforestation using different datasets. INCAS was officially launched by the Indonesian government at the Globasl Landscapes Forum in December 2015; it is poised to become the carbon inventory system for all land use in the country. CIFOR also contributed to UN-REDD's new REDD+ Academy, which was held for the first time in Yogyakarta, which had participation of REDD+ practitioners from various Asian countries, and policy and media representatives from Indonesia.

III. Please reflect on whether targets that were originally set have been achieved, and what project outputs were key to achieving them. If relevant reflect on why outputs delivered as planned did not help meet the targets

The results build confidence and encouragement to international and national stakeholders that their capacity development efforts to improve national forest monitoring capacities in tropical countries show success. Many countries have now a better understanding and quantitative data on their forests, carbon stocks and changes, and greenhouse gas emission factors.

The results further re-emphasize our hypothesis that targeted capacity building programs are effective for building national forest monitoring capacities. Nevertheless, despite good progress, efforts need to continue to fill remaining capacity gaps. Knowing that progress can be achieved in reasonable time periods should encourage current activities and approaches, and lessons learned will inform future efforts.

IV. If outcomes are not yet achieved, please explain why, and in addition, how the outputs will lead to the desired outcome and when.

We have seen progress but much remains to be done for countries to achieve REDD+ readiness. We will continue to work in Phase 3 on the integration of multiple drivers of deforestation and forest degradation into monitoring and MRV (MMRV), evaluation and RELs (national and international levels) as well as increased participation of stakeholders in national forest monitoring. In addition, we will work on improved AFOLU information for multiple stakeholders in order to have better data and assessments on mitigation policy options and the role of forests in setting country targets and planning mitigation activities in the broader land use sector.

V. Are the outcomes expected to be sustainable?

Country capacity building efforts are ongoing and continously improving. We observe a positive trend in the net change in forest area reported because countries with previously lower capacities tended to overestimate the area of forest loss and are now using more reliable data. This would imply that potentially the total area (in 1990 and 2000) of net forest loss is lower than we think. Adding up errors in low-capacity national reporting seems to result in biased pan-tropical estimations of net forest loss, and it is important for countries to develop higher-level MRV capacity and update their inventories on a regular basis.

Module 3: Outcome 3	REDD+ practitioners use multiple streams of data including data generated through community participation in emissions inventories and have access to newly-available data for accurately estimating carbon stocks and changes
Target groups/entities:	Civil society, national policy makers, technical services, research organisations
Change to be achieved:	Local forest dependent communities participate in national MRV activities.
Key indicator(s):	Specific plans to integrate community derived primary data into national MRV schemes
Sustainability:	This is particularly dependent on REDD+ resources being available. However, as plans for low carbon development evolve, this work may support these efforts

I. What changes have been achieved with reference to the baseline?

We have tested community-based monitoring and could demonstrate its potential for the reliable collection and interpretation of forest inventory data. Effective implementation of community-based forest monitoring systems is often hampered by the unclear role of communities in national MRV systems and the lack of tools that can support and facilitate communities to participate in forest inventories. We have addressed this issue by proposing technical solutions that combine emerging technologies related to community-based monitoring, such as the use of smartphones, with remote sensing observations in an integrated approach. In addition, we developed an interactive web-based forest monitoring system based on open-source technologies. This system has been implemented together with local experts in Ethiopia and started development in Peru that is being linked to the national level.

II. Please report on the key indicators used to document that the desired change has occurred.

The accuracy and complementary use of local community-acquired datasets was examined in the UNESCO Kafa Biosphere Reserve, Ethiopia. High-resolution SPOT and RapidEye satellite imagery

and professional measurements were used as validation data to assess more than 700 forest change observations collected by the local experts. Results show that the local communities were capable of describing the processes of change associated with deforestation, forest degradation and reforestation, in terms of their spatial (location and size), temporal (time of change events) and thematic (type of change, driver of change) information within ten administrative units. Furthermore, the results demonstrate that communities offer complementary information to remotely sensed data, particularly to signal forest degradation and mapping deforestation over small areas that cannot be detected by optical remote sensing data because of the low impact degradation has on the canopy cover.

Based on this complementarity, a framework is proposed for integrating local expert monitoring data with satellite-based monitoring data in support of near-real time (NRT) forest change monitoring. Some efforts have been made towards developing interactive NRT forest monitoring system using open source technologies (e.g., DETER, Global Forest Watch). These monitoring systems need to be improved by incorporating local data streams to make them more interactive and to ensure the participation of local stakeholders in monitoring their forests. In this regard, designing an interactive forest monitoring system (IFMS) will have added value. To be effective, such an IFMS system would use four levels of geographic information services: 1) the acquisition of continuous data streams from satellite and CBM using mobile devices, 2) NRT forest disturbance detection based on satellite time-series, 3) collection of additional forest disturbance data through web-based applications and social media, and 4) interaction of the satellite based disturbance alerts with the end-user communities to enhance the collection of ground data. The system is developed using open source technologies and has been implemented together with local experts in UNESCO Kafa Biosphere Reserve, Ethiopia.

III. Please reflect on whether targets that were originally set have been achieved, and what project outputs were key to achieving them. If relevant reflect on why outputs delivered as planned did not help meet the targets

The results of our usability assessment show that community monitoring empowers local experts' participation, provides easy access to information on forest change and considerably improves the collection and storage of ground observation by local experts. As exemplified by other CIFOR research (Sassi et al. 2015), the results of this study provide evidence that integration of satellite and community-based approach can help to improve the spatial, temporal and thematic details of forest change information. Satellite-based NRT alerts are able to mobilize the local experts to visit the targeted locations. The ground observation alerts provided by the local experts provide excellent detail in terms of location, extent, timing and causes of forest change associated with deforestation, forest degradation and reforestation. Furthermore, the results also show that social media use leads to higher levels of user interaction and noticeably improved communication among stakeholders. These findings confirm the results of many other studies showing the capabilities of social media in effective communication. Based on the results of our work on community-based monitoring (CBM) it can be concluded that:

- CBM is becoming highly relevant in national forest monitoring schemes for monitoring local drivers of deforestation and forest degradation
- Establishing community-based forest monitoring systems requires systematically developed methods, common guidelines and quality control mechanisms
- The use of mobile devices incorporated with user-friendly applications improves community-based forest monitoring data collection, transmission and visualization
- Local communities are able to acquire forest inventory measurements with an accuracy comparable to that of professional expert measurements, albeit at lower costs
- The strength of CBM lies in describing processes of change associated with deforestation, forest degradation and reforestation, in terms of their spatial location, extent, timing and causes

- CBM data offers a way to complement and enhance remote sensing-based forest change analysis
- An interactive web-based forest monitoring system provides NRT information on forest change and considerably improves the collection and storage of ground observation by local communities.

IV. If outcomes are not yet achieved, please explain why, and in addition, how the outputs will lead to the desired outcome and when.

One current limitation of the proposed open data system (the proprietary ODK framework), used to deploy the data acquisition forms, is that it is designed for Android based mobile phones only. The ODK framework will have to be made compatible with other devices and Windows- and IOS-based devices. Also, currently, the ODK framework lacks spatial mapping capabilities at the client side. Hence, local communities were not able to map the data while they were in the field. Recently, ODK released a version in which spatial mapping capabilities called GeoODK (http://geoodk.com) are implemented. These capabilities will enable local community mappers to load the base maps and visualise the data in the map while being in the field. A third limitation is observed as data entry errors. Our field work showed that local people are more accurate in entering information by selecting an icon or checking boxes rather than by manually entering text or numbers. Improved data acquisition forms and techniques are needed to resolve this issue.

V. Are the outcomes expected to be sustainable?

Our work on community-based monitoring has shown that sustainable operations can work if linked to a performance-based (incentives) system such as the forest rangers in UNESCO Kafa Biosphere Reserve, or if linked to (national-level) subsidies. There are several issues regarding the involvement of local communities in national forest monitoring system before sustainability will be achieved:

- Scaling up requires national strategies and careful consideration of issues such as data transmission, data infrastructures, standards and guidelines, capacity development and flow of resources (e.g. equipment, supervision and incentives).
- Monitoring schemes should be designed based on the fitness for purpose and management needs, with 5 categories of monitoring schemes: 1) externally driven, professionally executed monitoring, 2) externally driven monitoring with local data collectors, 3) collaborative monitoring with external data interpretation, 4) collaborative monitoring with local data interpretation and 5) autonomous local monitoring. Countries should choose appropriate monitoring and provide adequate financial and human resource over a suitable time frame for the effective implementation of the chosen scheme.
- Scaling up requires learning-by-doing experiences. Countries should establish CBM at project level, and lessons learned in these projects should be incorporated at larger scale.
- Last, the implementation will be fruitful and efficient if both the local and national level contribute and benefit at the same time. A win–win situation should be created to stimulate a suitable level of collaboration among communities and between them and other stakeholders.

Module 4 – Carbon management at the landscape scale

Module 4: Outcome 1	Adoption of low carbon emission policies at landscape and national scales
Target groups/entities:	National and landscape scale government and private sector entities affecting land use and development decisions; REDD+ policy makers and implementers at all levels

Change to be achieved:	Land use decision-makers are using better information and data on carbon tradeoffs
Key indicator(s):	Improved carbon outcomes at landscape scale
Sustainability:	Political and economic incentives need to provide enabling environment for low carbon development

I. What changes have been achieved with reference to the baseline?

Until now, there has been a lack of simple tools for estimating carbon outcomes, i.e. the changes in above-/belowground biospheric carbon stocks at the landscape level. Such tools are useful in estimating the effectiveness of land use policies, i.e. comparing different land use scenarios (e.g. "REDD+" versus "business as usual" scenarios) to identify how much carbon is lost or gained under various land use policy options.

We developed a tool, CarboScen, to estimate biospheric carbon in landscapes, to address this gap. It is a simple tool typically used with an annual time step, based on carbon pools and densities. It assumes that carbon density asymptotically approaches a value, which is set for the land-use type in question. CarboScen is easy to use in landscapes with spatially homogenous soils and climate, multiple land uses, and changes between these leading to slow changes in carbon densities. Thanks to its simplicity, it is particularly suitable for participatory planning, rapid assessment of carbon outcomes of REDD+ policies, and educational use. The tool was used in subnational workshops in two regions each in three countries, Peru, Tanzania, and Indonesia, to develop in different land use scenarios and inform the participants about their respective carbon outcomes (see section Module 4, Outcome 2 for a more detailed description of the workshops).

The CarboScen tool is available for free download on CIFOR's GCS REDD+ web page.

II. Please report on the key indicators used to document that the desired change has occurred.

The subnational workshops involved participants from multiple levels and sectors. The carbon outcomes were estimated in terms of changes in the biospheric carbon stocks, i.e. reductions in the stocks are results of deforestation and forest degradation, and increases in the stocks are results of conservation, sustainable management, and recovery. In some cases, the scenarios developed in the workshops resulted in very large differences in the carbon stocks between the scenarios, e.g. a 4-fold difference between the lowest and highest scenario in Madre de Dios, Peru.

Information on carbon outcomes was then used in the participatory workshops to guide the development of policy options for the negotiated landscape scenarios (for details, see section Module 4, Outcome 2). In four out of six cases, the information about carbon outcomes was considered as an important information in guiding the selection of the preferred scenarios. This was not the case of the two landscapes in Kalimantan, where tensions between district and provincial governments interfered in the decision-making process.

III. Please reflect on whether targets that were originally set have been achieved, and what project outputs were key to achieving them. If relevant reflect on why outputs delivered as planned did not help meet the targets

The results of this research show that land use decision-makers appreciate the existence of a tool, which brings together two important elements for making decisions: data on biospheric carbon stocks presented in an easy-to-access data base, and a tool to estimate carbon outcomes in the land use change scenarios.

IV. If outcomes are not yet achieved, please explain why, and in addition, how the outputs will lead to the desired outcome and when.

In order to achieve wider use of the tool, further outreach activities and capacity building activities are needed and will be carried out in Phase 3 of this project.

V. Are the outcomes expected to be sustainable?

Improved knowledge and understanding on the impact of different land use decisions on carbon outcomes at landscape level are key elements of REDD+ and other policy instruments used in achieving low emission development pathways. Thus, the existence of tools such as CarboScen that allow assessing the effects of land use policy instruments on biospheric carbon in the landscape is key in achieving better land use decisions based on the best available scientific knowledge and data.

Module 4: Outcome 2	Improved design of multilevel institutions and processes to overcome economic and policy barriers to REDD+ implementation and other low carbon land use policies
Target groups/entities:	REDD+ and land use policy makers and implementers at all levels (e.g. government, private sector etc.); transformation coalitions and coalition members at national and sub-national levels
Change to be achieved:	Multilevel institutions and processes are better at achieving 3E outcomes and low carbon development pathways
Key indicator(s):	Improved stakeholder processes in land use planning and REDD+ implementation
Sustainability:	Improved governance and stakeholder processes can lead to sustainable change (More likely to be sustainable in countries that have subscribed to Rio +20 targets)

I. What changes have been achieved with reference to the baseline?

Research in this Module was a relatively late addition to the overall research program, and some of the research is still under way. Therefore we report here more in detail about research, engagement and knowledge sharing activities and the early achievements.

There is broad awareness of the importance of effective and equitable multilevel and multisectoral governance to transform business-as-usual land use practices. Cross-sectoral coordination is one of the central problems discussed in international forums with regard to REDD+, as well as to national governance concerning development and responses to climate change more generally. In this module we carried out research and engagement activities (e.g. presentations at national and international forums, publications and web products such as blogs details below).

The objective - improved multilevel processes and institutions to overcome barriers to the implementation of low carbon options (including REDD+) – requires better understanding of cross-sectoral and multilevel challenges and problems, more generally and in specific locations. At the national and subnational level, we framed the research in the context of the trends of moving from project-based to jurisdictional and national REDD+ programs.

The project has drawn attention to these issues, and generated knowledge on how they might be overcome. For example, in three of the countries, participants in 2-day subnational workshops discussed and formulated alternative landscape scenarios and negotiated strategies to bring about change in business-as-usual practices. These workshops permitted researchers to discuss

preliminary findings and bring people together in cross-level and cross-sectoral dialogues in specific subnational regions. Participatory multi-actor workshops (discussed in 4.1) were undertaken in Peru, Indonesia and Tanzania in two subnational regions per country, with broad representation in each from local, regional and national governments, NGOs and community organizations. Multilevel governance was explicitly discussed and implicitly built into the workshops, as government and non-government actors from national, provincial and local levels came together to elaborate land use scenarios.

The workshops were very well attended, with 26 participants in Central Kalimantan and 37 in West Kalimantan (Indonesia), 30 in Madre de Dios and 28 in San Martin (Peru), and 44 in Zanzibar and 30 in the Iringa-Kilolo area in Tanzania. Where we conducted evaluations, participants rated the workshops as relevant (67% in San Martin and 58% in Madre de Dios) or highly relevant (25% and 22% respectively). It was not always possible to obtain participation from some key sectors, such as agriculture, however, and this was recognized as a central challenge for integrated planning as well as the future of initiatives such as REDD+.

In **Tanzania** for example, several participants pointed out that being in the presence of actors from different levels of governance and sectors enabled them to hear others point of view, and helped them to get their own points of view across to other actors. The workshop also served as a forum for communication and knowledge sharing and transfer across different sectors and levels of governance/government. Participants expressed their desire to have similar forum on a more regular basis.
Research in each region was used to enrich and provide context to the workshop debates. For example, in Central Kalimantan, a central point of discord was the sense that external actors were always trying 'to tell local people what to do', including with REDD+, and that financial resources were not getting to the local NGOs who knew the territory best. In all of the countries, technical discussions and plans around REDD+ were deeply embedded in the history and context of each region studied, and the results suggest that technical solutions will not solve what are primarily political problems. We believe that there is increasing – but still insufficient – awareness of this at all levels.

> *II. Please report on the key indicators used to document that the desired change has occurred.*

We are still in the process of finalizing country level research results and beginning more systematic cross-country analysis (we have presented preliminary findings in multiple forums). The research included over 750 interviews around 54 cases of land use change in 11 subnational regions in Peru, Indonesia, Vietnam and Tanzania, as well as Mexico (with co-funding). Results have been summarized in briefs (Myers and Ardiansyah, 2014, Kowler et al. 2014, Myers et al. 2015, Yang et al. 2015, Martius et al. 2015) while synthesis reports have been under internal development and review (Myers et al. 2016, Kowler et al. 2016, Kijazi forthcoming, Yang et al. forthcoming).

In **Vietnam**, overall, the effectiveness of multilevel decision making appears to be affected by the mismatch between higher level decisions and local level realities and expectations, as well as the capacity of lower levels of government to carry out what is asked of them. Nevertheless, the will of different actors also played a key role in establishing priorities and shaping how policies were implemented, regulated and adjusted. Powerful actors, including those in local government, were sometimes found to coerce or manipulate information for local consent. With regard to PFES and REDD+ programs, participants/ beneficiaries seemed to be more informed and satisfied in the smaller programs, whereas in some of the larger projects burdens appeared to outweigh benefits to local people.

In **Peru**, the agriculture and mining sectors had the largest influence on land use and land use change in the regions studied, yet these sectors were not involved in REDD+ discussions. Differences among the three studied regions highlight the importance of context, history and

political will; e.g. regional authorities in San Martin were much more supportive, than those in other regions, of integrated, cross-sectoral land use planning as well as conservation in general. REDD+ and similar projects aimed at conservation or sustainable land uses did not always involve communities in ways that strengthened the projects' local legitimacy, but projects also had burdens based on the failure of REDD+ funds to materialize.

In **Indonesia**, tensions between district and provincial governments are ongoing, and are partly based on confusion over legal jurisdiction; but the research suggests they might also be related to struggles for autonomy and competition over control of decision-making power. Both the central government and the districts are seen as the most important players in land-use decision making, with both being blamed for deforestation. We found little evidence that REDD+ is changing the land-use priorities of district governments, while the district heads themselves did not find it likely that sizeable REDD+ revenues would materialize in the longer term, with many being skeptical or confused about the implications of REDD+ for their development priorities. Important differences among the actors involved, such as an exceptional oil palm company and a district head that support conservation, suggest that the positions and choices of individual leaders matter.
In Tanzania, cash-starved local governments were attracted to REDD+ projects for financial expectations, but to enhance their ability to operate properly and to support conservation projects under a decentralized system would require self-sustaining sources of funding and governance structures rather than transient projects. We also found contrasting views of REDD+ among communities and projects, with an emphasis in REDD+ projects on sedentary farmers which could potentially disenfranchise pastoralists and shifting cultivators. Also, projects tried to change the behavior of charcoal producers without addressing the substantial urban demand for charcoal or involving powerful charcoal traders. Another central problem in Tanzania – which was clearly visible in a national workshop with key government stakeholders in March 2016 – were differing legal interpretations of land classifications.

Some preliminary cross-cutting findings include the following:

- Across countries, people reported that coordination across sectors was a great challenge, with environmental offices and other traditional sectoral offices (e.g. agriculture, mining) often working at cross-purposes. This corresponds to national-level findings in Module 1 that clearly carries down to the subnational level.
- Environmental offices at all levels were widely considered less influential than those of other sectors. We believe that this reflects the broader political interests in all countries – the coalitions for agricultural expansion, mining, and traditional modes of development are either larger or more powerful than the coalitions for sustainable alternatives. As a result, at all levels, NGOs and others seeking to promote more sustainable practices are left mostly talking amongst themselves.
- With regard to REDD+ initiatives in the regions studied, most low-emissions efforts were trying to change the behaviour of the weaker actors, sometimes reinforcing deep-seated assumptions about deforestation drivers, while failing to address the major drivers. While this may be a part of REDD+ start-up activities ("low-hanging fruit"), it will not bring about significant change on the ground.
- That said, there were important exceptions at landscape level in some regions; these appear to be associated with important leaders who chose to establish different, more sustainable priorities, though contextual factors were likely important in allowing such leaders to be elected.

With regard to communities:

- Communities living in forests are not necessarily supportive of REDD+ or conservation initiatives due to the fear of loss of control over forests and of effects on livelihoods or rights, and perceptions are shaped by past experiences with outside projects and programs;
- Therefore, processes for engaging with communities are fundamental for winning support and legitimacy. Legitimate processes are based on effective communication, broad-based participation and effective representation, and a clear definition of roles and expectations.

In summary, in spite of the tendency to prioritize the "free market" and "smaller states," the role of the state has a substantial impact on the trajectory of interventions – and on land use change in general; legitimacy is central to the uptake and sustainability of change actions. Leadership and exceptional individuals, willing to challenge business as usual, on the one hand, or to deeply engage communities, on the other, are important for effective and equitable solutions. "Ownership" of new options for development trajectories may be important at all levels, from national to local levels, and is probably central to the construction of coalitions for transformational change, and vice versa.

Engagement throughout the research process has led to increasing awareness at country level as have presentations in key global forums. Indicators of awareness and interest include the multiple invitations to participate in discussions and activities with government and non-governmental entities. Engagement in Peru was the most substantial, as several people associated with the project (staff and consultants, including the module coordinator) were located there, for a long period and in multiple regions; engagement at the national level in Vietnam was also substantial because of the role of the CIFOR office and the specific partners who were engaged during the research. Engagement specifically from this module in Indonesia has been stronger at the subnational level (especially in Central Kalimantan), while in Tanzania the strongest ties have been with the partner university, Sokoine.

In **Peru**, the Ministry of Environment MINAM invited our team to participate in multiple workshops including: developing principles, criteria and indicators for prioritizing areas with REDD+ potential; input on the development of a national benefit sharing strategy including a day-long workshop co-organized to support the development of that strategy with scientific results and scenarios; consultations on governance issues and relations with regional governments; request for input into the national strategy for forests and climate change. We were also invited to participate in a new, ongoing cross-sectoral, cross-ministerial discussion forum hosted by the Ministry of Agriculture (on REDD+ and land tenure). The team coordinator was invited to participate in the organizing committee, which proposes the agenda for key discussion topics and meetings, of the civil society forum *Grupo REDD+*; other civil society partners invited the team to teach a class on multilevel governance and REDD+ and to speak in their public forums. A workshop with CIFOR REDD+ government and non-government partners in late 2015, including participants from two subnational governments, identified governance as the central issue to tackle in the coming year. USAID, FAO and the University of Richmond all invited the team to present on multilevel governance and REDD+ in various forums in Peru.

Subnational governments were engaged as co-coordinators of the scenario building workshops (explained above) in Madre de Dios and San Martin; several participants requested the methods guide (in Spanish translation) to develop similar workshops; there was a request for further support on the development of locally- appropriate governance monitoring tools (further workshops on this conducted in San Martin and Madre de Dios); and team members supported the regional government of Madre de Dios in providing inputs to the national REDD+ strategy. The team was invited by the Regional Environment Office (ARA) of San Martin to present research results and the Regional Environmental Commission in Madre de Dios requested a workshop to develop a tool for monitoring governance over natural resources.

In **Vietnam**, CIFOR collaborated closely with the Vietnamese government research institute Vietnam Academy of Forest Sciences (VAFS) as research partners and co-authors on key products. As part of their mandate for managing forest financing the Vietnam Forest Protection and Development Fund (VNFF) is seeking to learn lessons to improve its implementation of the Payment for Forest Environmental Services (PFES) policy and has looked to CIFOR research to inform their revisions. CIFOR input includes consultations, publications (policy briefs, journal article and papers) and technical meetings and workshops. Two important workshops were held in Hanoi: one organized by JICA, where results were presented on the Dien Bien research (30 July 2015); and one two day event organized with the Ministry of Environment (MARD) including a policy dialogue (11-12 November 2015).

In **Indonesia** the team had a strong relationship with the University of Palangka Raya in central Kalimantan, which co-organized the scenario building workshops; the team met with the Dean and others on various occasions to report on the research. In both West and Central Kalimantan, several NGOs and activist organizations, as well as one company promoting socially responsible oil palm, were interested in using the results to support their advocacy work but most require the translated versions of publications (currently in process). The district government of Kapuas plantation and forestry office was deeply engaged and has asked for a presentation of results in the coming months. The project also provided support to a REDD+ project proponent and community members to help address tensions and sensitivities through improved stakeholder engagement in that location. Bogor Agricultural University was also an official partner and results were presented in a seminar there in late 2015.

Globally, the project has collaborated with the *Governors' Climate and Forests Task Force* and their members including organizing and moderating a joint panel on jurisdictional REDD+ and multilevel governance and participating in their annual meetings (including a joint presentation with other modules at the 2014 annual meeting), with planned further collaboration in 2016 and beyond. We were invited to speak on governance and policy indicators for REDD+ at a workshop in Bogota, Colombia, organized by GIZ and a consulting firm with the Ministry of Environment. The lead scientist of the project, attended as an expert advisor to the 10th session of MegaFlorestais (an informal network of public Forest Agency leaders), organized by the National Forest and Wildlife Service of Peru (SERFOR), in coordination with the Rights and Resources Initiative (RRI), the US Forest Service and the European Forest Institute. CIFOR also organized forums to present results in Peru, Tanzania and Indonesia, as well as in a workshop on REDD+ with the Kenya Forest Service in Nairobi, at SBSTA in Bonn in 2016, an EU Infopoint presentation in Brussels, as well as academic and practitioner conferences (e.g. IASC, FLARE, COP, and GLF).

> *III. Please reflect on whether targets that were originally set have been achieved, and what project outputs were key to achieving them. If relevant reflect on why outputs delivered as planned did not help meet the targets*

Improving multilevel institutions and processes requires understanding the *importance* of these with regard to land use, REDD+ and transformational change, and then also understanding these relationships and their political challenges more fully. The project has increased understanding in certain locations and among key actors, as reported above. We believe that the engagement activities have been central to moving this process forward; the research findings themselves are still being written up, though the preliminary findings and related discussions, including the subnational workshops, are essential to that process.

Key research products have contributed to knowledge sharing objectives. For example, reports (peer reviewed Occasional Papers: Wieland et al. 2015, Ardiansyah et al. 2015, Mbwambo, 2015, Trung et al. 2015, Carrillo and Velasco Ramírez, 2016) were developed for each of five countries including Mexico, to outline the formal distribution of authority and responsibility across multiple sectors affecting forests and land use change; these were launched with a CIFOR blog (http://blog.cifor.org/40763/how-deforestation-is-tangled-up-in-the-law?fnl=en) and outreach campaign in early 2016. These reports, together with a popular online infographic from 2014 (http://www.cifor.org/gcs/landscapes-governance-peru/) based on Madre de Dios, Peru, underscore the complexity of multilevel decision making and the discrepancy between the legal framework and practice. A brief on legal changes in Peru that infringed on the authority of the Environment Ministry was downloaded over 5,000 times within the first month of publication (http://www.cifor.org/publications/pdf_files/infobrief/5206-infobrief.pdf). This brief, written with lawyers from our partner NGO SPDA, showed that the main authority over land and resources lies outside the environment sector and documented important contradictions between the new policies and country commitments on deforestation and carbon emissions targets, demonstrating a serious lack of cross-sectoral agreement.

The first country-level working papers synthesizing results have only recently been finalized and made available on line (Myers et al. 2016, Kowler et al. 2016); two are still being edited (Kijazi forthcoming, Yang et al. forthcoming). The first two are also being translated into national languages. These reports document multilevel decision-making institutions and processes to understand who makes land use decisions, how are decisions made, and who influences whom, how and why. The papers provide insight into why efforts to keep forests standing, such as REDD+, are still so far from altering development trajectories. They underline the importance of understanding the politics of multilevel governance in forest, land and climate policy and practice, and identify potential ways forward in each country.
To date it is the engagement activities discussed above that provided the main national and subnational level impact.

IV. If outcomes are not yet achieved, please explain why, and in addition, how the outputs will lead to the desired outcome and when.

The research findings are currently being synthesized in country reports, journal articles and briefs. These will be used in Phase 3, promoted with blogs and web media products, and through events, to contribute with knowledge the better implementation of multilevel institutional set-ups and processes aimed at 3E outcomes and low carbon development pathways. Knowledge can be influential but will require a groundswell of support for transformational change and people who can *lead* toward this end. The importance of leaders is one of the preliminary findings of our research.

Also, importantly, the research found that many people tend to suggest what would appear to be "simple" or perhaps "technical" solutions to problems that are rather clearly deeply embedded in socio-political conditions. That is, we often heard statements such as "if sectoral offices would just coordinate", or "if they could just harmonize land use plans among government levels", or "if the ministry of environment's land use plans would just be made binding", then the problem of unsustainable practices could be solved. Nevertheless, people forwarding these views fail to recognize *why* offices or government levels do not currently coordinate and why environmental land use plans are not currently binding: the underlying power dynamics constitute the barriers to change. To move forward from this insight, it is important to consider:

- What kind of guidance can be provided for addressing the politics?
- How can the will for change be incentivized to shift the politics in favor of leaving business-as-usual development models behind?

The global discourse may be shifting with the Paris Agreement, and REDD+ and similar initiatives may become essential elements of strategies to bring about transformational change. National and subnational level shifts depend, to some extent, on global-level trends for change. As said above, leadership is important;

- the regional government of San Martin, Peru, is promoting integrated development and prioritizing conservation, unlike the governments of Ucayali or Madre de Dios;
- an exceptional oil palm company in West Kalimantan is going beyond the legal requirements of community engagement to gain community buy-in and also supporting conservation;
- the thought leadership and work of the Governors' Forest and Climate Task Force.

More broadly, change on the ground requires multi-pronged approaches. The final analysis of results and further engagement in national and subnational forums will help promote further knowledge sharing. This work will continue into 2017 in Peru, Indonesia and Vietnam with funding from IKI and the Phase 3 support from Norad. Further engagement in international forums will help raise attention to the importance of finding ways to support transformation through forums like the UNFCCC, Green Climate Fund and others. Also, substantial attention has been given to the importance of multistakeholder forums to promote cross-sectoral and multilevel engagement

for more effective and equitable and use planning. Specific complementary research on multistakeholder forums is planned in the next phase of CIFOR's NORAD project. This research is intended to have global impact as well as specific engagement with the GCF Task Force and with national and subnational governments in Peru, Brazil, Indonesia and Ethiopia.

V. Are the outcomes expected to be sustainable?

Improved knowledge and understanding of the elements of (and challenges to) successful multilevel and multisectoral collaboration and coordination will make that success will be more likely and more sustainable, but the research itself demonstrates that transformational change across sectors and levels of government will require leadership, providing the right institutional set ups, and addressing the politics.

Module 5: Knowledge sharing

Module 5: Outcome 1	REDD+ policymakers and practitioners at all levels know what works in REDD policy formulation and implementation in order to achieve 3E outcomes. There is broad awareness of the challenges and opportunities provided by REDD+ for improved sustainable forest management as part of a no regrets approach to REDD+.
Target groups/entities:	A wide range of actors from community-based organisations, to national civil society, private sector, media and governments to international policy makers, donors and development agencies
Change to be achieved:	Continued increase in knowledge awareness to support policy development and practice on the ground. Increased political and community attention on sustainable forest management
Key indicator(s):	Books and papers published and disseminated Downloads of publications from websites Press coverage of outputs Attendance at media training workshops Blog/ website visits Attendance of scientists of and presentations at conferences, workshops & other events
Sustainability:	Better information availability is a no regrets outcome The spreading of awareness about REDD+ likely to become viral if packaged well and disseminated widely

I. What changes have been achieved with reference to the baseline?

Through our knowledge sharing efforts in Module 5, thousands of people engaged in REDD+ have gained insights into the research carried out in Modules 1 to 4 outlining the challenges and opportunities of REDD+ in policy and practice. The rich body of evidence and knowledge that CIFOR and its partners had amassed since the project inception through to 2015 was organized and presented in accessible formats, and shared via a sophisticated and comprehensive global communications campaign that included:

- Sharing of results and lessons learned through multi-stakeholder sub-national, national, regional and global events
- Web-presence: High visibility of CIFOR's climate change research across multiple web platforms including the CIFOR website, the GCS REDD+ project website, Forest News, CIFOR TV and the CGIAR Research Program on Forests, Trees and Agroforestry website

- Social media: Dissemination of climate change research and knowledge products across CIFOR's extensive social media networks with a following of over 63,100 stakeholders worldwide through Facebook, twitter, slideshare, and flickr
- Media engagement: Journalist trainings, media briefings, media advisories sent to more than 4,400 journalists across the world
- Communications capacity development: Communications training workshops for government partners, including the Indonesian Ministry of Environment and Forestry and the Vietnamese Ministry of Agriculture and Rural Development

II. Please report on the key indicators used to document that the desired change has occurred.

Web presence

CIFOR's Global Comparative Study of REDD+ has a dedicated website – www.cifor.org/gcs - where knowledge products are shared with partners, policy-makers, practitioners, researchers and other interested stakeholders. The website acts as a repository of the program's climate change research hosting more than 600 research publications and hundreds of project documents, presentations, multimedia products, toolboxes and project news. In the reporting period, the site attracted 25,500 views. The toolboxes have proven to be a popular resource for visitors, with toolboxes on Forests and Climate Change, Sustainable Wetlands for Adaptation and Mitigation and REDD+ Benefit Sharing Knowledge Tree garnering over 12,300 views altogether.

The program site also hosts more than 40 videos which received over 10,650 views between January 2013 and December 2015.

In 2015, CIFOR launched a revitalized Forest News site, with a new look and approach designed to integrate multimedia, be used on PDAs and keep readers on the site longer. The results were immediate and far-reaching with readership growing to up to 50,000 page views per month. The Global Landscapes Forum held on the sidelines of the UNFCCC COP and interest in climate change kept readership above average in December 2015, at more than 57,000.

From January 2013 to December 2015, over 600 stories were published on Forests News, with more than half directly related to climate change research and most translated into Indonesian, Spanish and French. Highlights on climate change articles that went viral during this period include:

- 'Don't inhale: Scientists look at what the Indonesian haze is made of' which garnered 124,288 views in its first 7 days
- Articles by Dr Louis Verchot 'On forests' role in climate, New York Times op-ed gets it wrong' was shared 3,300 times on Facebook and 'The science is clear: Forest loss behind Brazil's drought' attracted 24,480 views (17,503 views in its first four days)
- Article by Dr Anne Larson 'Why is it so incredibly hard to stop deforestation?' was read 3,148 times
- 'Cut emissions, not mangroves: Indonesia's best hope for slowing climate change' was shared more than 1,200 times on Facebook and Twitter

The Forest News site has been proven to increase the readership of CIFOR's scientific publications. As part of an evaluation of the GCS REDD+ program, in 2015 the Overseas Development Institute carried out a survey of 600 of our key climate change stakeholders who stated that after reading a blog, 89% of stakeholders accessed the related scientific publications. The REDD+ information portal in Indonesian (REDD-I), www.REDD-Indonesia.org, hosted by CIFOR in partnership with the Indonesian Forestry Research and Development Agency (FORDA) at the Ministry of Environment & Forestry, has become a leading site on forests, climate change and REDD+ in Indonesia. The site attracts more than 5,200 monthly visits and over 7,800

publications are downloaded monthly. The e-newsletter has over 9,100 subscribers, reaching the most important REDD+ stakeholders in Indonesia. A user survey of the site showed that more than 50% of readers use REDD-I for study and discussion and that one-third of visitors are government officers, proving that the site is helping both the Indonesian Ministry and CIFOR to reach their respective target audiences.

CIFOR continues to use its social media platforms, Facebook and Twitter in three languages (English, Bahasa Indonesia, and Spanish), as virtual news feeds to inform more than 63,000 followers about our latest climate change research and analyses. In 2016, we aim to re-establish our French Facebook and Twitter accounts.

Media outreach and training

Between January 2013 and December 2015, CIFOR has been cited 3,300 times for its research on climate change in international, national and sub-national media outlets including Al Jazeera, Australian Broadcasting Corporation, BBC, Bloomberg, The Conversation, Deutsche Welle, Earth Observatory NASA, The Economist, Huffington Post, The Guardian, Mongabay, National Geographic, Reuters, The Wall Street Journal and The Washington Post.

We engage with journalists directly through media training workshops and media briefings. Highlights include a journalist training workshop on 'Reporting on forests in Southeast Asia' (30 April – 4 May 2014) with 15 regional journalists on the sidelines of the Forests Asia Summit, and media training workshops in Cameroon (19 August 2014 and 18 March 2015) and the DRC (22-23 June 2015,) which led to the establishment of the 'Green Journalists' Network'.

"These efforts have led to improved and increased media coverage and public awareness of forests and climate change, and will, we hope, eventually lead to policy and behavioral change towards sustainable forest management." – **Cyprien Banyanga Byamungu**, Press Secretary, EU Delegation to the DRC, following a series of journalist training workshops in the DRC.

Communications capacity development

CIFOR celebrated the success of its 5-year partnership with the Indonesian Forestry Research and Development Agency (FORDA) which not only led to the development of the REDD-I site but through a series of CIFOR-led training workshops, also saw 61 FORDA staff trained on digital communications skills. In October 2015, CIFOR handed over the management of the REDD-I site to FORDA during the prestigious International Conference of Indonesian Forestry Researchers.

In November 2015, we delivered a communications training workshop for 20 officials in the Vietnam Forest Protection and Development Fund (VNFF) under the Vietnamese Ministry of Agriculture and Rural Development.

Events

In the ODI survey, 97% of climate change stakeholders said that CIFOR's events were either 'effective' or 'very effective' in sharing its research on forests and climate change.

CIFOR hosted official side events at the Bonn Climate Change Conferences in 2015 and 2016 at the SBSTA 42 and 44 meetings. In June 2015 at SBSTA 42, CIFOR co-organized the event, 'Who Pays and Who Benefits? Equity implications of REDD+ policies and benefit-sharing mechanisms' which discussed 3 years of CIFOR research across Asia, Africa and Latin America on the risks, rewards and results of various benefit sharing mechanisms to inform REDD+.

In May 2016 at SBSTA 44, we co-organized the event, 'Measuring national REDD+ performance for the promise of results-based finance' which discussed the practicalities of results-based finance for REDD+. CIFOR presented research findings on REDD+ performance at different

scales, the politics of multi-level governance and monitoring REDD+ policy progress, as well as equitable benefit sharing for REDD+ performance.

CIFOR regularly reports from the Bonn climate meetings to provide readers with analyses on the climate negotiations, either through CIFOR's Forests News or with partners such as International Institute for Sustainable Development (IISD) - Reporting Services:

- Bonn climate talks tackle emissions verification stumbling block?
- Bonn delegates to tackle impasse over REDD climate change negotiations
- Crossroads in climate negotiations when adaptation and mitigation meet in Bonn
- The REDD framework finally complete after almost 10 years
- IISD video coverage: Measuring national REDD+ performance for the promise of results-based finance

CIFOR also organizes the annual Global Landscapes Forums, held alongside the UN climate negotiations, creating an increasingly popular platform for positioning landscapes in the new international agreements on climate and sustainable development. The events bring together thousands of negotiators, world leaders, researchers, civil society leaders, business leaders, practitioners and policymakers in agriculture, forestry and development, funding organizations, and media, making it the largest, most influential event outside the UNFCCC COP.

Since 2013, the GCS REDD+ project has hosted 6 panel sessions at the Global Landscapes Forum, all of which were recorded and uploaded onto CIFOR TV. Messages from each session were further highlighted through numerous blogs, video interviews and presentations uploaded onto CIFOR's slideshare. All multimedia content was posted on the landscapes.org site which attracts up to 100,000 monthly views in the lead up to, during and immediately after the event:

- Beyond IPCC scenarios – Finding synergies between adapting to climate change and mitigation at temporal scales that are appropriate for policy makers and land managers
- REDD+ performance in the landscape
- Learning from REDD Safeguards Information Systems (SIS): Voices from research, policy and practice
- Jurisdictional approaches to REDD+ and experiences with multi-level governance: Bringing together global data, Latin American case studies and views from the ground
- Strengthening land and resource rights through REDD policy and practice successes
- Taking stock of REDD past, present and future

The 2014 Global Landscapes Forum, convened on the sidelines of the UNFCCC COP20 in Lima, 6-7 December 2014, brought together more than 1,700 participants to discuss the role of landscapes in climate and development policy. Ninety-five organizations came together for discussions and to draft an outcome statement of 9 key messages which formed the basis of their recommendations to international climate negotiators.

The 2015 Global Landscapes Forum held alongside COP21 in Paris was our most successful Forum to date. Over two days (5-6 December), the Forum brought together more than 3,200 participants from agriculture, forestry, water management, finance and other land use decision makers. The Forum drew on the extensive expertise of 148 actively participating organizations, who, in more than 40 sessions and knowledge-sharing activities, presented the results of recent research, technical approaches and best practice examples focused on achieving the SDGs and climate goals, restoration, tenure and rights and finance and trade.

Publications: books, papers published and disseminated

CIFOR extensively monitors usage of its research publications and journals. Between January 2013 and December 2015, Module 5 disseminated more than 68,000 hard copies of GCS-REDD research products at conferences and workshops or mailed to target stakeholders. Many of these were the French, Spanish, Indonesian versions and some in other languages.

All the research publications were posted on CIFOR's website and made available for download in PDF format. We programmed CIFOR's entire publication library, including GCS-REDD research, onto DVDs and USB memory sticks and 16,300 of these were distributed at conferences and workshops, especially in Africa and other areas with limited Internet bandwidth.

REDD on the Ground
In 2014, CIFOR released a 24-chapter book: "REDD+ on the Ground: A Case Book of Subnational Initiatives across the Globe". The publication was released not only in traditional book format (with a limited print run), but also in a specially designed digital version, online PDF and e-book. By the end of 2015, a year after "REDD+ on the Ground" was first published, the HTML version had been viewed more than 22,000 times by 5,600 users, and the book had been downloaded in PDF format more than 2,500 times.

The release was part of a comprehensive communications plan, which made use of the extensive communications infrastructure that CIFOR has built over several years. A media advisory to promote the book was sent to 4,400 journalists around the world. A journalist was commissioned to write an article about the book, based on an interview with one of the lead authors, as well as three articles focusing on REDD+ initiatives in Brazil, Indonesia and Tanzania. The Executive Summary was also translated into Spanish and Portuguese.

These four articles were published on Forests News and have been read more than 4,000 times:
- REDD+ on the ground: New book offers insights, lessons from across the tropics
- REDD+ on the ground: In Tanzania, funding and enthusiasm 'faded away'
- REDD+ on the ground: Unintended consequences in 'a microcosm of the Amazon'
- REDD+ on the ground: For one initiative in Indonesia, politics in the peatlands

One of the lead authors, William Sunderlin, presented key findings to the full room at "REDD+ Emerging?", an official side event at the UNFCCC COP20 in Lima, and elements of the results were presented by many others on many other occasions, most recently in a session at the Asia-Pacific Forestry Week in February 2016 in the Philippines. An article on the side event and a video interview with Dr. Sunderlin were also published on Forests News and on YouTube. These dissemination efforts were further supported by the combined strategic use of direct email lists, two special "REDD+" editions of CIFOR's newsletter sent out during COP20, media outreach and social media.
- News update: Special - Forests and climate change news
- News update: Climate change special report

III. Please reflect on whether targets that were originally set have been achieved, and what project outputs were key to achieving them. If relevant reflect on why outputs delivered as planned did not help meet the targets

CIFOR has applied the most current communication tools – combining journalistic approaches and techniques with those of science communication – to ensure information is available to policy makers, donors, journalists, academics, NGOs and practitioners in the shortest time possible.

A survey of the audiences, conducted by ODI as part of its assessment of the Global Comparative Study on REDD+, found that CIFOR is reaching its target audiences (national research partners, national proponents, national practitioners, national policy-makers, international research partners, and international policy actors), and that most of CIFOR's audiences are using its work, even where CIFOR has no country office.

Through a strategic suite of channels and products - Forests News site, the corporate website and library (CIFOR.org), CIFOR TV, social media networks, extensive listservs and fora such as the Global Landscapes Forum - GCS REDD+ findings have been transmitted to those who need them the most at sub-national, national and international levels, to support the uptake of knowledge and secure broad awareness of the challenges and opportunities provided by REDD+.

"CIFOR has been driving a global conversation on forests and climate change." ODI survey on GCS REDD+

When ODI compared CIFOR's climate change outreach program with The Climate and Development Knowledge Network (CDKN), they found that CIFOR has 6 times the reach with 40% of the budget.

IV. If outcomes are not yet achieved, please explain why, and in addition, how the outputs will lead to the desired outcome and when.

CIFOR's comprehensive global communications program has supported the achievement of outcomes. For the next phase of the GCS REDD+ program, we will continue this successful model, deploying our strategic suite of communications channels and products to reach global as well as sub-national and national target audiences.

V. Are the outcomes expected to be sustainable?

By deploying a high volume of high-quality and diverse science communications materials created based on CIFOR's research, we have developed a sophisticated and extensive communications and outreach program which has made it possible for CIFOR to grow its audiences for the dissemination and knowledge sharing of CIFOR's research. As a result, by the time climate change research and findings from the GCS REDD+ program are released, CIFOR can rely on the large audiences following our digital communications channels to access the work that is released and be receptive to it. We will continue this approach to build and contribute to communities of practice in the climate change and REDD+ arenas to secure the long-term accessibility and use of our research by multiple stakeholders at all levels.

CIFOR's investment in media trainings also supports the sustainability of our outreach efforts, having built the relationships with key media to report on CIFOR's climate findings and analyses for years to come. Similarly, communications trainings with government partners enable CIFOR to not only feed our research to key policymakers, but also help CIFOR and our government partners reach target audiences.

Lessons learned from the ODI evaluation of GCS REDD+ program will inform the communications strategy of the next phase of GCS REDD+, to build on the successes of our outreach and engagement activities, working closely with our partners.

2.5 Are there any **internal and/or external factors that have affected the project** in any significant way?

a) Please specify deviations from plans.

The slow international and national progress with REDD+ over the last years has also affected the uptake of research results and knowledge.

b) Please provide a short assessment of the risks occurred

Lack of political will to engage in an agenda that tackles deforestation and forest degradation and moves away from business as usual is perhaps the largest risk and difficult to manage as a research organistion. However, while such a risk can be somewhat managed through constant engagement and innovative outreach efforts that also mobilise awareness (and knowledge) among civil society and governmental actors as well as business, the risk of larger political changes with new agendas prioritised (as in Indonesia, or more recently Brazil) are beyond control of the researchers.

2.6 **Cross cutting concerns.** Please report on whether the project has had any effect (positive or negative) on

a) Corruption

Our work, in particular Samuel Assembe's work in DRC on corruption, helped to flag the importance of this issue to the government's top level (Assembe 2015).

b) Gender equality

Mainstreaming of gender issues in REDD+ led the government of Indonesia to contact CIFOR to support the efforts of the Ministry of Women in informing the national REDD+ strategy, and enabled us to provide evidence directly into a political process through meetings (informal and formal) as well as through policy briefs tailored to the needs of the Ministry (see for example Arwida et al. 2016). Our research also helped to raise the importance of inequalities in women's participation in REDD+ decision making in Vietnam (Pham and Brockhaus 2015, Pham et al. 2016 forthcoming).

c) Respect for human rights

While we are not directly studying issues of human rights in our research, our work on gender, tenure, benefit sharing and safeguards has provided rights-based civil society and other actors with information, tools and guidelines to strengthen their voice and provided them in particular arguments with arguments on 'why' equity and how to achieve it, based on scientific evidence (e.g. Luttrell et al. on who should benefit and why, or our safeguards series 2014).

2.7 **Lessons learned**. For final report, please summarize lessons learned for the whole agreement period. Both internal and external factors are relevant. What could have been done differently? How can lessons learned be incorporated in future plans? We are interested in learning based on positive and negative experiences.

In addition to generating scientific evidence, capacity building of, and engagement with those that hold the key for change, it is necessary to enable the uptake of new and sometimes challenging knowledge and to foment more evidence-based decision making. At CIFOR, we are designing and providing capacity building activities that are tailored to the partners' needs (ranging from theory and methods trainings to very practical support, for example introducing peer review to partners that have not yet published). Integrity, credibility and relevance are what we consider core values in such engagement. A key objective in the research-to-policy pathway is to foster ownership over the evidence of in-country partners, as these partners are often crucial vectors in the impact pathways and can carry evidence into national and subnational decision making arenas. Trust, time investments and sufficient financial resources are pre-conditions for successful engagement.

We have learned that proposing a simple framework that addresses an important topic in the UNFCCC negotiations has achieved considerable impact as was the case with our stepwise approach for RELs (Outcome 3.1). The stepwise approached provided a simple solution to the challenges related to the huge variation in data availability and quality, and national capacity. As such, it provided an answer to a question asked by key stakeholders and this was key for its success. We see this as a valuable positive lesson that we will be incorporated in further work. A key question concerning this framework is now how countries can embark on a process of continuous improvement.

Regarding our work on quantifying drivers of deforestation (Outcome 3.2) we were able to conclude that there are limitations to a remote sensing methodology when it comes to detecting small-scale and dispersed land uses such as subsistence activities (crop, fuelwood collection) and nomadic grazing. Here, our dataset would benefit from more local data and knowledge of land use dynamics, for example from field campaigns or community monitoring. Further work on drivers of deforestation and forest degradation should integrate remote sensing data with more local ground-based data and such data should be better linked to defining policy priorities and to eventually linking to on the ground actions addressing and continuously monitoring the activities of these drivers.

The development of advanced MRV systems for REDD+ in developing countries is possible, as illustrated by the INCAS Program of Support in Indonesia (Outcome 3.2). We found that capacity building efforts are most effective when they are long term and intensive. Risks included potential unsustainability of the system after the project finishes. This was addressed by leaving the development of the system entirely to leadership by Indonesian officials and experts, as a basis to give it the best possible chance of continuation as an ongoing function of government. Despite this, misperception continued in some quarters that INCAS was a temporary donor-funded project.

Our work with communities in the context of community-based monitoring (CBM) (Outcome 3.3) has taught us that new technologies such as the use of smartphones can be successful and sustainable if linked with a land management and/or incentive scheme. It is important that these technologies are adjusted to the communities' capabilities (e.g. data entry methods). In addition, community-based monitoring can only be successfully integrated into a national forest monitoring system if the national level provides a framework (data infrastructure, standards and guidelines etc.). Our CBM activities have mainly focused on the project level, and a conceptual /technical framework for integration with the national level. To make this framework operational on the national level, and fully integrated with the country forest monitoring system, efforts (capacity building, technical guidance) should also go to the national level. Such local to national monitoring ideas are gaining importance when it comes to actual implementation of mitigation actions; such as through sustainable supply chains and zero deforestation assessments.

In summary, factors that enabled success in terms of uptake of results included CIFOR's timely research interventions to address crucial (and sometimes controversial) policy questions, our high-quality independent research and publications, and a consistent and engaged outreach strategy with boundary partners from government at all levels, research and civil society. The presence of country offices with a highly engaged and well-respected local scientists is facilitating knowledge uptake but is not the only success factor. Our global presence through media, events and publications contributes to promote novel insights at all levels, globally, nationally, and sub-nationally.

3 Case/success story

3.1 Please see separate format for the result example, max 2 pages

Success case stories are detailed in Annex 1.

4 Project's accounts for last year:

4.1 The accounts must relate to the approved budget for the year in question. All deviations (positive and/ or negative) must be clearly shown and explained.

Norad has committed NOK 60 million covering a three-year period, from January 2013 to December 2015, with an estimated annual allocation of NOK 20 million. Our Phase II research activities in 2013 started effectively in June 2013 and we had spent 51% of the planned annual expenditure by the end of December 2013. For January to December 2014, our implementation and budget plan included the remaining 49% from the 2013 budget, and in total we had spent 92% of the budget. For the final year of January to December 2015, we experienced an exchange loss, and the project had to be implemented in a more efficient way, relying in part more heavily on co-funding. Overall, there was a loss of 11% or USD 1,094,248 from the original total budget, as detailed in the financial report 2015, submitted in a separate file.

Bogor, 22 June 2016

Dr. Christopher Martius
Team Leader
Climate Change Energy and Low-Carbon Development

Attachments:

Annex 1: Success case stories of Section 3.1
Annex 2: List of publications, published in 2013 to 2015
Annex 3: Final financial statement, reporting period January to December 2015
Annex 4: Audited report, reporting period January to December 2015 and prior period ended December 2014
Annex 5: Management letter from the auditor
Annex 6: CIFOR audited financial statement 2015