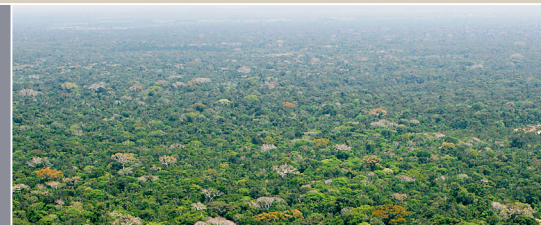
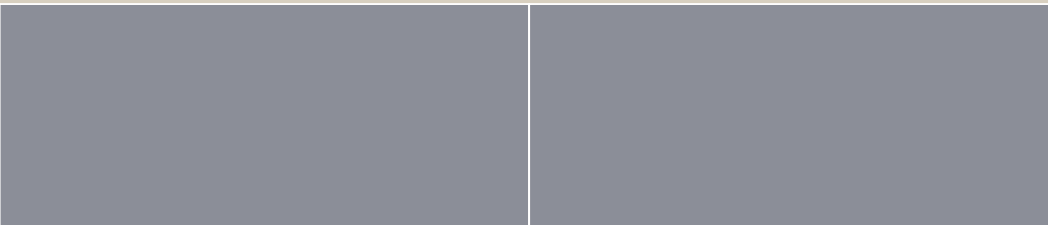




Real-Time Evaluation of Norway's International Climate and Forest Initiative

Contribution to Measurement, Reporting and Verification

Report 5/2013





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September 2013

LTS International in cooperation with
Ecometrica, Indufor Oy and the Chr. Michelsen Institute

Note on layout and language

The layout of the document has tried to conform to guidelines for accessibility and ease of reading, which require Arial font and left (not full) justification of the text.

The report has tried to avoid unnecessary use of acronyms and abbreviations.

Disclaimer:

The report is the product of its authors, and responsibility for the accuracy of data included in this report rests with the authors. The findings, interpretations and conclusions presented do not necessarily reflect the views of Norad Evaluation Department.

Preface

The Government of Norway's International Climate and Forest Initiative (NICFI), launched in December 2007, has pledged substantial development assistance to reduce emissions from deforestation and forest degradation in developing countries (REDD+). One aspect of NICFI's work is support for the measurement, reporting, and verification (MRV) of greenhouse gas emissions from forests in relation to REDD+. This information is essential if developing countries are to receive payments based on results achieved in reducing emissions.

The purpose of this evaluation is to assess NICFI's support to monitoring, reporting and verification and the extent to which this support has contributed to NICFI's general objectives. The evaluation covers the period from 2007 onwards and focuses on institutional, political and economic perspectives. Four focal countries were selected for in-depth studies (Democratic Republic of Congo, Guyana, Indonesia and Tanzania), as well as multilateral initiatives.

The evaluation shows that NICFI's work on MRV has provided important practical lessons to the debate at the international level under the climate change negotiations. At country level, the evaluation finds varying progress on establishing MRV systems, with Guyana as the most successful example. The political context and national capacity at the outset play an important role. The evaluation also points out a number of enabling factors that can be used to detect potential barriers to establishment of MRV systems, as well as for interventions to address these.

There are still few countries that are close to having a fully functioning MRV system. The costs of establishing MRV systems have not been sufficiently considered. This is important for comparing running costs with the potential for results-based payments. The evaluation points out that sustained progress on MRV is likely to be difficult in the absence of result-based payments and an international agreement on REDD+. Therefore the "added-value" of the MRV systems should be emphasised, for instance by tying the systems to domestic needs for the forest sector and land-use information.

This evaluation is a part of a series of evaluations conducted "real-time" as the Norwegian initiative is on-going. Through a framework agreement with a consortium of independent consultants and experts led by LTS International, evaluations progressively assess the results of NICFI with regard to its objectives and they are intended to provide timely information and recommendations to stakeholders and the public.



Tale Kvalvaag
Director, Evaluation Department

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This evaluation has been a complex task and in the process the team has requested contributions from many individuals. We would like to acknowledge the generous way in which people gave up their time and worked for long and often odd hours during the field visits as well as the time and patience and efforts of staff at the NICFI Secretariat, particularly Maarten van der Eynden.

Evaluation Team

The evaluation design, some of the data collection, analysis, synthesis and reporting were undertaken by a team consisting of Philippa Lincoln, Matthew Brander, Pat Hardcastle and Richard Tipper. Chris Inglis, Elling Tjønneland and Tapani Oksanen reviewed drafts and provided quality assurance.

Additional data collection was undertaken by James Acworth, Emily Brickell, Marisa Camargo, Majella Clarke, Catriona Clunas, Karoliina Lindroos, Tapani Oksanen, Lucio Pedroni, Benoît Rivard, Jyrki Salmi, Asep Suntana, Elling Tjønneland, Karin Viergever and Pete Watt.

Acronyms

AWF	African Wildlife Foundation
CARE-HIMA	Cooperative for American Remittances to Europe - Hifadhi ya Mimitu ya Asili
CBFF	Congo Basin Forest Fund
CI	Conservation International
COMIFAC	Central African Forest Commission
COP	Conference of the Parties (to the United Nations Framework Convention on Climate Change)
DRC	Democratic Republic of Congo
EU FLEGT	European Union Forest Law Enforcement, Governance and Trade
FAO	Food and Agriculture Organization (of the United Nations)
FCG	(Tanzania) Forest Conservation Group
FCPF	Forest Carbon Partnership Facility
FCT	Forest Carbon Tracking Task (of the Group on Earth Observations)
GEO	Group on Earth Observations
GFC	Guyana Forestry Commission
GFOI	Global Forest Observation Initiative (of the Group on Earth Observations)
GHG	Greenhouse gas
GIS	Geographic Information System
GOFC-GOLD	Global Observation for Forest Cover and Land Dynamics
GPG	Good Practice Guidance (of the Intergovernmental Panel on Climate Change)
GPS	Global Positioning System
GRIF	Guyana REDD+ Investment Fund
GY	Guyana
IDB	Inter-American Development Bank
INPE	Instituto Nacional de Pesquisas Espaciais (National Institute For Space Research, Brazil)
IPCC	Intergovernmental Panel on Climate Change
ITTO	International Tropical Timber Organization
JGI	Jane Goodall Institute
KFW	The German Development Bank
LAPAN	Lembaga Penerbangan dan Antariksa Nasional (Indonesia's National Institute of Aeronautics and Space)
LiDAR	Laser Imaging, Detection and Ranging
LoI	Letter of Intent
MRV	Measurement, Reporting and Verification
NAFORMA	National Forestry Resources Monitoring and Assessment

NCMC	National Carbon Monitoring Centre (Tanzania)
NFI	National Forest Inventory
NICFI	Norway's International Climate and Forest Initiative
NOK	Norwegian Krone
REDD+	Reducing Emissions from Deforestation and Forest Degradation (taking into account the role of conservation, sustainable management of forests and the enhancement of forest carbon stocks in developing countries)
REDDES	Reducing Deforestation and Forest Degradation and Enhancing Environmental Services
REL	Reference Emissions Level
RL	Reference Level
R-PIN	Readiness Programme Idea Note
R-PP	Readiness Preparation Proposal
SBSTA	Subsidiary Body for Scientific and Technological Advice
TaTEDO	Tanzania Traditional Energy Development and Environment Organisation
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
VER	Verified Emission Reduction
WCS	Wildlife Conservation Society
WWF	World Wide Fund for Nature
ZWBP	Zanzibar Woody Biomass Project

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- Annex 4: Democratic Republic of Congo (DRC) and Central Africa Forestry Commission (COMIFAC) Regional MRV Project Summary
- Annex 5: Guyana Summary
- Annex 6: Indonesia Summary
- Annex 7: Tanzania Summary
- Annex 8: Norwegian Space Centre and GEO Summary
- Annex 9: UN-REDD Programme
- Annex 10: Policy and Governance of NICFI in Oslo
- Annex 11: General Country Progress through UN-REDD and FCPF Support
- Annex 12: NICFI Support on MRV and Reference Levels in the UNFCCC Negotiations, and Interviews with Climate Change Negotiators
- Annex 13: International Informants Interviews
- Annex 14: Evaluation Framework
- Annex 15: Data Collection Templates and Interview Protocols

Executive Summary



Executive Summary

Background

Norway's International Climate and Forest Initiative (NICFI) aims at supporting efforts to reduce greenhouse gas emissions resulting from deforestation, forest degradation in developing countries (REDD+).

One aspect of NICFI's work is support for the measurement, reporting, and verification (MRV) of emissions from forests in relation to REDD+. This information is essential if developing countries are to receive payments based on results achieved in reducing emissions. Reference levels set out the level of emissions expected in the absence of actions on reducing emissions and are essential for results-based payments. This report presents an evaluation of NICFI's support for MRV and reference level activities.

Definition of MRV and scope of the evaluation

For the purpose of this evaluation MRV is defined as measurement, reporting and verification of anthropogenic, forest-related greenhouse gas emissions by sources and removals by sinks.

The scope of the evaluation is the NICFI MRV work track, which consists of four primary areas of support: 1) bilateral support through agreements with REDD+ countries (Tanzania, Guyana, Indonesia, Mexico, Ethiopia, Vietnam and Brazil¹); 2) multilateral support through the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD), Forest Carbon Partnership Facility (FCPF) funding allocated to national MRV and reference level establishment, support to the Group on Earth Observations' (GEO) Forest Carbon Tracking (FCT) initiative and to the Global Forest Observation Initiative (GFOI); 3) activities focused on MRV and reference levels in the United Nations Framework Convention on Climate Change (UNFCCC) climate change negotiations (submissions to the UNFCCC, participation in UNFCCC meetings and workshops, the development of the Norwegian position, commissioning of 'consensus building' research); and 4) smaller scale of funding to MRV activities provided through grant schemes such as the Norad-managed Civil Society Support Scheme on REDD+.

Methodology for the evaluation

A real-time approach to this evaluation has been adopted in order for the findings to be available for the on-going design and implementation of the MRV work track.

¹ No direct support for MRV system development is included in the Brazil – Norway bilateral agreement as Brazil already had a functioning MRV system when this agreement was made, however, up to 20% of the Amazon Fund can be used to support MRV in other countries in the Amazon region.

The evidence for the evaluation was collected through desk reviews and through semi-structured interviews with representatives from beneficiary countries, implementation partners, international negotiators, and other stakeholders with an interest in MRV. Interviews were used to supplement and triangulate the evidence collected during the desk reviews and were conducted by telephone, or in person, with 122 individuals being interviewed altogether. Visits of one to one-and-a-half week duration were made to Indonesia, the Democratic Republic of Congo, Guyana, and Tanzania. These were made by small teams of two to four individuals. Shorter visits (one or two days) were made to Geneva, Rome and Yaoundé.

Findings

The findings from the evaluation are presented under the Organisation for Economic Co-operation and Development's (OECD) Development Assistance Committee evaluation criteria of: relevance (consistency with needs and priorities); effectiveness (achievement of results); efficiency (how economically results are attained); sustainability; and impact.

1. Relevance

NICFI's work track on MRV and reference levels has been:

- **Timely and valuable for informing the UNFCCC negotiations;**
- **Well-aligned with Norway's position** on MRV and reference levels in terms of country partner implementation; and,
- Generally **well-aligned with recipient countries' national priorities, but occasionally the multilateral channels have not been sufficiently adaptive to national circumstances.**

2. Effectiveness

NICFI's work on MRV and reference levels has made a major contribution to the debate on these issues at the UNFCCC negotiations. The activities supported by NICFI have provided valuable practical lessons on MRV and reference levels and relevant research. These lessons have enabled Norway to develop crucial evidence-based submissions to the UNFCCC clarify aspects of MRV for negotiators, and have been viewed by negotiators as valuable for their discussions.

Although the MRV systems being piloted have informed the UNFCCC negotiations, they have been less effective as exemplars for other REDD+ countries. This may be because communications have focused on country progress, rather than on the lessons that are transferable to others. Guyana, the most successful pilot in terms of system development, is perceived as unrepresentative by many other REDD+ countries, however elements of the process followed (rather than the specific contextual details) should be eminently transferable.

All countries have made progress on the measurement aspects of MRV and there is evidence of progress on reference levels in most countries receiving NICFI support but reporting and verification have much further to go in all countries.

The **lack of final decisions and guidance from UNFCCC on MRV modalities** makes it challenging for countries to determine their system needs, capacity and institutional requirements. This lack may also be partially responsible for **UN-REDD activities at country level largely achieving their objectives** while the achievement of over-arching objectives is delayed.

In DRC, good progress has been made through UN-REDD support, especially with capacity building. Despite a low level of initial capacity, progress with implementation of supporting activities for MRV and reference levels has been good and activities have achieved or are likely to achieve their objectives. **MRV and reference level work in DRC, through effective multilateral support, is becoming a Central African Forestry Commission benchmark.**

NICFI support has been highly effective in developing the national MRV system and reference level in Guyana. A number of reasons for the success in Guyana have been identified, including: the existence of a clear financial incentive; clearly defined and effective institutional arrangements; and the timely provision of good technical advice.

NICFI's involvement in Indonesia has been effective in supporting some planning and technological developments, but overall progress has stalled due to delays in establishing the MRV institution, which is one of the requirements of the agreement between Norway and Indonesia on REDD+.

In Tanzania there has been a modest improvement to forest monitoring capabilities. Whilst noting that NICFI set out to contribute to MRV in Tanzania, rather than develop the full MRV system, wider progress has been limited; for several reasons. The Bilateral support to Tanzania is through a series of discrete projects, which have not yet fed through to developments at the national level; there is no agreement for results-based payments with Tanzania, and hence limited incentive for establishing an MRV system; and, there is a lack of financial incentives for government staff to undertake data entry or engage in systematic data management.

The Group on Earth Observations' Forest Carbon Tracking Task (FCT) seems likely to only partially achieve its objectives although developments at the Global Forest Observation Initiative (GFOI) are more promising. The FCT outputs have been limited and not widely used. Among national MRV actor and international informants awareness of the FCT was limited, and there were misunderstandings of its scope and of the capacity of the Group on Earth Observations, although the Global Forest Observation Initiative has made some promising early developments.

Support through UN-REDD and the World Bank's Forest Carbon Partnership Facility has been highly effective at engaging a large number of different countries but, given the wide dispersal of funding, the level of progress is generally more limited compared with that achieved through the bilateral partnerships such as with Guyana and Indonesia.

Numerous capacity building activities have been supported, through the NICFI MRV work track. While there are clear examples where capacity has been strengthened, there is generally a lack of detailed information on the outcomes from such activities.

There has been considerable support for planning the institutional frameworks required for national MRV systems. However, a number of informants commented that planning institutional arrangements is easier than the implementation, as evidenced in Indonesia.

3. Efficiency

NICFI funding for MRV and reference levels is primarily allocated to UN-REDD (47% of the total). Among the NICFI bilateral partners, Tanzania has been allocated by far the largest amount of financial support. Of the total NICFI funding for MRV, Tanzania has received approximately 24%. This compares with 12% to Mexico, 5% to Indonesia and 2% to Guyana. The Tanzania allocation includes a high-cost technology demonstration project, with potentially broader application, but even taking this into account, the proportion of funding to Tanzania remains high relative to its potential to reduce emissions.

There is large variation in economic efficiency in NICFI focal countries.

Guyana has developed a fully functioning MRV system with relatively little financial support at a cost of around 1.20 Norwegian krone (NOK) (US\$ 0.21) / hectare. In Tanzania the cost so far is around NOK 5.10 (US\$ 0.89) /hectare. Reasons for the high efficiency in Guyana include: implementation by a single efficient institution; process managed by a highly skilled administrator who has remained in the role from the beginning; early external technical support to develop a quality roadmap; and Guyana is a small country with relatively homogeneous forests and a limited number of drivers of deforestation.

There has been little attempt by REDD+ country governments, donors and other MRV actors to estimate current budgets across all donors or to assess the economic costs and benefits of different approaches and of achieving higher levels of precision. This is despite the fact that current costs appear to far exceed Readiness Preparation Proposal budgets, and that the overall cost of MRV and reference level establishment in some countries is likely to be substantial.

NICFI administration and management efficient but staff appear to be overstretched. Communications/interactions with the NICFI Secretariat's MRV staff were considered to be fast and efficient according to country partners, and the wider NICFI Secretariat. The embassy in Tanzania also appears to be

providing strong management guidance. However, there is a perception among informants that NICFI MRV staff are overstretched, which will limit the time available for reflection and strategic thinking.

The level of co-ordination between NICFI, NICFI partners, and other donors is mixed. A number of informants commented that there is a considerable burden associated with co-ordinating multiple donors within REDD+ countries. **The lack of detailed operational planning documents for the NICFI MRV work track is unhelpful in this regard.**

4. Sustainability

The prospect of results-based payments as a financial incentive is an important factor for maintaining the momentum for MRV system development and for the sustainability of the systems developed so far. This implies that where agreements for results-based payments have not yet been established, momentum may not be maintained.

For MRV systems to be sustainable the cost of maintaining the system also must be a realistic proportion of the potential value of results-based payments. Many informants expected there to be added-value benefits from MRV systems, such as aiding sustainable forest management, and the management of land use concessions. **The Guyana MRV system is already generating “added value” from use of the MRV data to monitor forest harvesting compliance and mining.** Although added-value benefits are likely to contribute to the sustainability of the systems developed they may not be demonstrable initially; opportunities to capture added-value may not become apparent until a certain level of development is achieved.

Retaining and incentivising staff is a major challenge for many countries in building and retaining capable teams of technical staff within the relevant departments or ministries responsible for MRV systems. There are also issues with incentivising staff to perform tasks that do not qualify for remuneration, such as daily subsistence allowances.

5. Impact

The impact of NICFI support is hard to quantify at this stage because of the comparatively short time over which it has been given and also because of the uncertainty over the final shape REDD+ MRV will take.

Considering the four NICFI objectives², supported work on MRV has contributed substantially to UNFCCC discussions, increasing the chances for the **inclusion of REDD+ in the post-2012 climate regime**. The full potential impact from country experience with MRV has, however, been limited due to insufficient focus on identification and communication of transferable lessons.

² In essence: (i) improving the prospects for inclusion of REDD+ in a post-2012 climate regime; (ii) mechanisms to attain verifiable reductions in greenhouse gas emissions; (iii) enhanced carbon storage capacity in natural forests; (iv) consistency with the general objectives of Norwegian development cooperation

In respect of support for **verifiable reductions in greenhouse gas emissions**, Guyana has developed a working MRV system. While other countries are assembling the building blocks in a positive way, none yet has a working system in sight. Resolution of uncertainty over the optimal institutional structure is a critical constraint to progress.

The MRV work-track would not be expected to have much direct impact on **conservation of natural forests**. Measurements in Guyana have proved helpful in increasing control of small-scale mining. In countries with limited personnel resources, there is some potential danger that diverting people onto MRV may result in lower staffing levels for forest protection and management, to the detriment of forest conservation.

The MRV work-track has been effectively neutral in respect of the **general objectives of Norwegian development cooperation**. This is neither unexpected nor inappropriate. There is potential positive impact from increased transparency around forest governance and information as a result of MRV activities. The limited work so far on community engagement in MRV is too new to reveal any impact.

In terms of the three aims of this evaluation³, the greatest impact on **capacity building** is apparent in DRC. Guyana started from a higher level but has also been successful. While both Indonesia and Tanzania have undertaken capacity building, the lack of an agreed institutional structure in the former and lack of coherence in the latter, have limited impact. The complexity and diversity of support modalities together with lack of clear baselines and reporting make it hard to see positive impact from capacity building generally.

Coordination is mixed across countries. Guyana had a clear road-map at an early stage into which all actors have bought-in. In other countries, there were many examples of inadequate coordination which has limited the full impact from the support.

This evaluation had limited resources with which to assess the **comparative effectiveness and efficiency of different support channels**. In general, progress has been faster with bilateral rather than multilateral support, which suffered from delayed disbursement and excessive bureaucracy. Despite this, there are examples of good impact from multilateral support, notably UN-REDD in DRC.

6. Conclusions

Overall, **NICFI has made a major contribution to the development of international REDD+ policy on MRV and reference levels**. Factors for success on MRV and reference level development are emerging through the NICFI MRV work track. These include: the availability of high quality and timely technical support; a clear route map for system development; agreement for

3 In essence, (i) contribution to capacity building and institutional strengthening; (ii) degree of coordination with other actors; (iii) effectiveness and efficiency of different channels of support

results-based payments; good co-ordination between donors and implementing agencies; clear definition and legal basis for the institutional framework.

Of the bilateral partners, **Guyana has achieved all planned objectives in terms of MRV** but is not an appropriate benchmark for countries with more complex forest, forest use, social and political dynamics. **Tanzania's progress has been slow given the high level of funding compared with other countries.** In part this may be due to the piecemeal approach to the activities funded and problems with co-ordination between the national forest inventory and a NICFI supported project. The absence of an agreement for results-based payments for REDD+ means that Tanzania has no specific REDD+ related incentive for completing MRV system development.

Many lessons are being generated on MRV and reference levels through NICFI supported activities but these could be communicated more effectively through **focusing on the lessons that are transferable.** Overall, there has been insufficient consideration of cost aspects in the development of MRV systems. **Consideration of cost is important for making informed decisions between different approaches, for comparing running costs with the potential for results-based payments, and understanding the feasibility of replicating systems in other REDD+ countries. Sustained progress on MRV is likely to be difficult in the absence of result-based payments,** as incentives for developing and maintaining MRV systems. There may be a timing gap if countries develop systems but international agreement on REDD+ is only reached a number of years later.

The **Group on Earth Observations' activities and achievements are unclear** although there is considerable interest and demand for the services from the Global Forest Observations Initiative. The GEO Forest Carbon Tracking Initiative does not appear to have communicated or engaged successfully with REDD+ countries.

There is potential and need for better donor co-ordination, and improved disbursement of funding. There appears to be considerable need and potential for more co-ordination between donors; Guyana offers an example of how this can be done. There is also potential for improving the disbursement of funding.

7. Recommendations

NICFI should promote and facilitate efforts to estimate MRV costs, including cost implications of different approaches and level of system sophistication, versus the potential for achieving results-based payments. Assessment of set-up, development (including cost implications of applying different approaches, technologies and increasing accuracy), and running costs for MRV systems, and the potential for results-based payments would enable partner countries to make informed decisions on which approach to take. A synthesis of lessons from a series of assessments of this type would be very helpful for REDD+ countries.

NICFI should prioritise development of exemplars of MRV systems for complex forest structures, high rates of deforestation, and complex social and political contexts. Indonesia may fulfil this role if progress can be made on its MRV institution.

The “enabling/success” factors⁴ identified in this report should be used to detect potential barriers to developing MRV systems and reference levels, and for planning interventions to address those barriers. Consideration of these factors could also be used to estimate realistic timelines for progress. REDD+ countries should also be given support and tools for managing the co-ordination of donors to optimise in-country effectiveness and efficiency.

NICFI should develop clear, operational level, documentation of its MRV activities, including indicators, milestones, assumptions-made and assessment of risks. This would assist NICFI with both internal coordination and coordination with other actors.

Linked to this, **NICFI should develop a clear plan on the timing of MRV system development,** particularly in relation to the expected availability of results-based payments. Systems should be developed to coincide with the availability of payments, to avoid capacity being lost in the interim.

It should also **continue to emphasise the need for MRV systems that create added-value** in the sense of outcomes that have inherent benefit in themselves independent of progress with REDD+ (systems that are tied to domestic needs for forest sector / land use information). This helps to support the sustainability of systems in the absence of international agreement on REDD+, and/or sufficient bilateral support.

NICFI should clarify the services required from GEO by REDD+ countries and the international REDD+ community, and determine whether the skills and resourcing needed to provide those services are available.

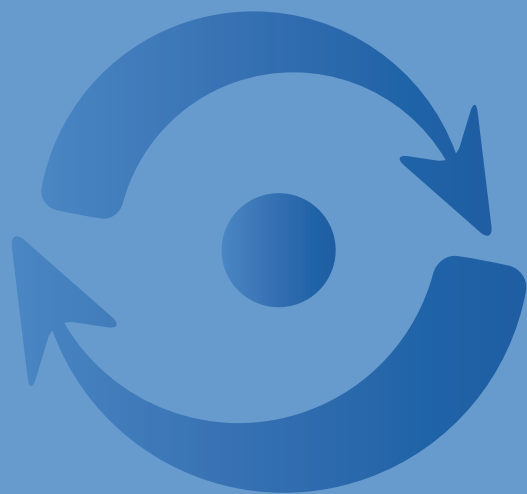
It should **develop an activity focused on identifying and communicating transferable lessons.** A clear programme is required for an independent body to identify and communicate transferable lessons, as partner countries are often not best placed to identify what is transferable. This could be funded through an existing grant scheme such as the Civil Society Fund or through an external contract.

More attention should be given to co-ordinating efforts with other donors at the country level. The co-ordination of donors can present a significant burden to partner countries, and the ability of partner countries to provide effective co-ordination has been over-estimated in some cases.

⁴ These are: (i) High quality and timely technical support; (ii) Clear route map for MRV system development; (iii) Agreement for results-based payments; (iv) Good co-ordination between donors and implementing agencies; (v) Clear definition and legal basis for institutional roles.

NICFI staffing levels should be increased, or resources reallocated, to meet the increasing demand on their time while ensuring senior personnel have adequate time for strategic work and to enhance management of complex interventions.

Main Report



1. Introduction

This report presents the findings of an evaluation of Norway's International Climate and Forest Initiative (NICFI) support for measurement, reporting, and verification (MRV) of efforts to reduce emissions from deforestation and forest degradation, taking into account forest conservation, sustainable management of forests and the enhancement of forest carbon stocks (REDD+). This section of the report provides general background to the evaluation and an overview of the NICFI MRV work track, the evaluation object.

1.1 General Background

The primary objective of the Norwegian Government's climate policy is to help establish a global, binding, long-term post-2012 regime that will ensure cuts in global greenhouse gas emissions sufficient to limit global temperature rise to no more than two degrees Celsius above pre-industrial levels. Measures to Reduce Emissions from Deforestation and forest Degradation (REDD+) in developing countries are considered essential if this target is to be achieved (Stern 2006⁵; IPCC 2007⁶).

To this end, the Government of Norway's International Climate and Forest Initiative was launched by Prime Minister Jens Stoltenberg during the 13th Conference of Parties to the United Nations Convention on Climate Change in Bali, December 2007, pledging up to three billion Kroner (circa US\$ 500 million) a year in development cooperation funding in support of efforts to REDD+.

1.2 Real-Time Evaluation

As NICFI will be managing a significant part of Norwegian development cooperation funds for several years, it is in the interest of policy-makers and the public to have access to impartial information about its progress and performance. The objectives of the real-time evaluation are to assess the impact and results of the NICFI support:

1. For improving the prospects of the inclusion of a REDD+ mechanism in a post-2012 climate regime;
2. For the preparation of mechanisms and implementation of activities to attain verifiable reductions in greenhouse gas emissions;

5 http://webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/sternreview_index.htm

6 http://www.ipcc.ch/publications_and_data/ar4/syr/en/contents.html

3. For the conservation of natural forests to maintain their carbon storage capacity;
4. With regards to the general objectives of Norwegian development cooperation, such as those related to livelihoods, economic and social development and the environment.

The first three objectives refer to NICFI main objectives, while the fourth objective derives from the use of development cooperation funds.

A real-time approach to this evaluation has been adopted in order to assess and feed back the results of NICFI to facilitate rapid learning, give advice at an early enough stage for changes in implementation to still be feasible, and provide timely information to the international community engaged in REDD+ and climate change issues. This approach is valid given the dynamic nature of the international debate around REDD+.

Three core evaluations have already been completed to date:

1. NICFI contribution to an international REDD+ regime (2010);
2. NICFI support to the formulation and implementation of national REDD+ strategies in five countries (Brazil, Democratic Republic of Congo (DRC), Guyana, Indonesia and Tanzania, 2010); and,
3. NICFI Civil Society Support Scheme (2011-2012).

The Norwegian government Ministries of the Environment and Foreign Affairs, and the Norwegian Agency for Development Co-operation (Norad), which are responsible for the Initiative, are intended to be the main users of the feedback and recommendations generated by the evaluation programme. More widely, the intended audience for the evaluation also includes:

- The Norwegian Parliament, institutions, organisations, and the general public in Norway;
- Multilateral organisations engaged in REDD+ activities, including the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD programme), the World Bank and the regional development banks;
- The international community, contributing to overall knowledge concerning the achievement of both REDD+ and sustainable development in general;
- The national REDD+ initiatives in target countries.

1.3 Purpose of this Evaluation

The purpose of the evaluation is to assess NICFI's support to Measurement, Reporting and Verification (MRV) and the extent to which this support has contributed to NICFI's general objectives. To achieve this purpose, the evaluation has the following three objectives, as stated in the Terms of Reference:

1. Assess to what extent the support has contributed to national capacity building, institutional strengthening and MRV and forest inventory systems;
2. Assess to what extent the support has been coordinated with the efforts of other actors;
3. Assess the effectiveness and efficiency of different channels of support, where possible comparing these.

The emphasis is on institutional, political and economic perspectives, less on technical aspects, and covers the period from 2007 onwards.

1.4 REDD+ MRV and Reference Level Definitions Used in this Evaluation

The term "measurement, reporting and verification" (MRV) is used by people in a number of different ways, and is sometimes taken to include the monitoring of aspects such as safeguards and governance. It was therefore important to establish a clear definition of MRV to be used in this evaluation to delineate the evaluation object.

As agreed with Norad Evaluation Department, for the purpose of this evaluation MRV is defined as measurement, reporting and verification of anthropogenic forest-related greenhouse gas emissions by sources, and removals by sinks. We recognise that data collection for REDD+ MRV is likely to be combined at the operational level with collection of data for monitoring of safeguards as well as other parameters useful for sound resource management and decision making. This is necessary for cost effectiveness and efficiency.

However, activities related to the monitoring of safeguards or forest governance that might also form part of a national forest monitoring system or a forest information system, are conceptually separate and outside the scope of this evaluation given the definition above. Safeguards are also formally separated from MRV under the United Nations Framework Convention on Climate Change and would be covered under 'Safeguards Information Systems' under the convention. The fact that they are excluded from this evaluation does not in any way undermine their importance, nor Norway's commitment to, and funding of, these broader forest monitoring activities.

Within this agreed definition of MRV, measurement refers to the collection of information on the extent of land area that is subject to deforestation, degradation, carbon stock conservation or enhancement, or sustainable forest management (activity data), and the development and application of coefficients that quantify the emissions or removals of greenhouse gases per unit of activity (emission factors). For REDD+, activity data may be collected in a number of ways including remote sensing/satellite imagery, field measurements, and community-based monitoring.

Emission factors are derived from assessments of the changes in carbon stocks in the various carbon pools of a forest from forest inventories and other studies. This carbon stock information can be obtained at different Tier levels. Tier 1 uses IPCC default values; Tier 2 requires some country-specific carbon data, and Tier 3 requires highly disaggregated national inventory-type data of carbon stocks in different pools and assessment of any change in these pools through repeated measurements also supported by modelling. Moving from Tier 1 to Tier 3 increases the accuracy and precision of the estimates, but also increases the complexity and the costs of monitoring.⁷ Together, the activity data and emissions factors provide the basis for compiling a greenhouse gas inventory, in accordance with Intergovernmental Panel on Climate Change (IPCC) guidance for land use, land use change, and forestry, and IPCC guidelines for national inventory accounting.

In the context of REDD+, the difference between the terms Reference Level and Reference Emission Level is in the extent of coverage of the five REDD+ activities. Reference Levels (RL) are the level of emissions from deforestation and forest degradation and removals of greenhouse gases from sustainable forest management and enhancement of forest carbon stocks that would have occurred in the absence of the REDD+ activities aimed at reducing emissions or enhancing sinks (i.e. REDD+).

The term Reference Emissions Levels (REL) refers to emissions from deforestation and forest degradation and does not include removals of greenhouse gases through sustainable forest management and enhancement of forest carbon stocks (i.e. REDD). For the purposes of brevity and readability we will use the term “reference levels” to refer to both references emission levels and reference levels throughout the report, except where the text explicitly states that the narrower sense of the term is intended.

1.5 The Evaluation Object

The evaluation object agreed with Norad Evaluation Department, is the NICFI activities in support of measurement, reporting and verification (MRV), and the development of reference levels. Collectively, these activities are described as the NICFI MRV work track throughout this report.

⁷ GOF-C-GOLD (2012). Sourcebook, COP 18 version 1. <http://www.gofcgold.wur.nl/redd/>

In addition to the MRV focused activities of the NICFI Secretariat, the NICFI MRV work track consists of four primary modalities of support:

1. Bilateral support - through bilateral agreements with REDD+ countries (Tanzania, Guyana, Indonesia, Mexico, Ethiopia, Vietnam, Brazil⁸);
2. Multilateral support – through the UN-REDD Programme (including both the National and Global programmes), funding allocated to national MRV and reference level establishment through the World Bank’s Forest Carbon Partnership Facility (FCPF), and support to the Group on Earth Observations’ (GEO) Forest Carbon Tracking Task (FCT) and Global Forest Observation Initiative (GFOI);
3. Activities focused on MRV and reference levels in the UNFCCC climate change negotiations (including submissions to the UNFCCC), participation in UNFCCC meetings and workshops, informing the development of the Norwegian position, commissioning of ‘consensus building’ research;
4. A smaller scale of funding to MRV activities is also provided through grant schemes (the Norad-managed Civil Society Support Scheme on REDD+).

Detail on the purpose, funding, and activities undertaken through these primary modalities of support is provided in Table 1. Table 1 also outlines the evaluation sampling coverage of each of the support modalities and funded activities.

8 The widely reported discussion between the Norwegian and Brazilian delegations at the 18th Conference of the Parties on the requirements which UNFCCC body should be responsible for REDD+ verification is outside the scope of this evaluation. Whilst NICFI is involved with the negotiations in various ways (see Table 1 - NICFI MRV Activities for an overview), the negotiating itself is undertaken by another team within Norway’s Ministry of Environment that is external to NICFI.

Table 1 - NICFI MRV Activities and Evaluation Sampling Coverage

Partner	Purpose (where stated)	Key activities	Funding	Timeline	Sampling Coverage
NICFI staff		<ul style="list-style-type: none"> - MRV portfolio development and management - Support / sharing of information with negotiators; informing the development of the Norway position; input into submissions to SBSTA; presence at UNFCCC meetings and workshops - Acquisition of ad-hoc technical support to the Secretariat - Commissioning of research/consensus building / information provision - Provision of technical advice, e.g. to country and multilateral partners 		2008-to present	Documentation review, interviews with Secretariat staff, interviews with partners, stakeholders, UNFCCC negotiators
Multilateral channels					
Congo Basin Forest Fund - Congo Basin MRV Initiative:					
National Forest Monitoring and MRV systems with a regional approach for the Congo Basin countries (implemented by COMIFAC, FAO and INPE)	Support for the design and implementation of national monitoring and MRV systems in the COMIFAC region	<ul style="list-style-type: none"> - Inception workshop summer 2012 in Yaoundé; - Project office set up in January 2013; - Project team hired, including the focal points in all 10 COMIFAC countries; - Missions to Chad and DR Congo to discuss needs for National Programmes 	<p>Budget for Quick Start Phase: € 6.2 million (NOK 46.4 million). This is for the whole of the COMIFAC region</p>	2011-2013 originally, but start delayed until January 2013	Documentation review, interviews with COMIFAC Secretariat and FAO (implementing partner) in Yaoundé, interviews with recipient government (DRC) and stakeholders

Partner	Purpose (where stated)	Key activities	Funding	Timeline	Sampling Coverage
Forest Carbon Partnership Facility	DRC: merged with UN-REDD	DRC: merged with UN-REDD	DRC: \$7.8 million(NOK 45.1 million)	DRC: 2010-2012	
	GUYANA (GY): not started; and now unlikely to fund MRV / RL establishment (latest R-PP puts FCPF contribution as zero) as other donors have been sought	GY: none, as funding hasn't been released	GY: no funding yet received		Documentation review, interview with FCPF MRV lead at the World Bank, Washington; interview with the IDB; interviews with international stakeholders, national partners and stakeholders (DRC, Guyana, Indonesia, Tanzania)
	INDONESIA (IND):unclear, but some funding has gone towards increasing the network of forest inventory plots	IND: -forest inventory expansion	IND: unclear		
	TANZANIA (TAN): To learn and share experiences with other REDD+ countries (has not sought a readiness grant from FCPF as it receives funding from the Norwegian Embassy)	TAN: not applicable	TAN: none		

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Partner	Purpose (where stated)	Key activities	Funding	Timeline	Sampling Coverage
	<p>GLOBALPROGRAMME (GP): contribute to REDD+ implementation across the globe both at national and international levels; one aspect of which is MRV</p>	<p>GP: Development of common approaches, analyses, methodologies, guidelines, tools, data and best practices</p>	<p>GP: NOK 24.8 million</p>	<p>GP: Phase 1 2009-11, Phase 2 2011-15.</p>	<p>Documentation review, interviews with UN-REDD Secretariat, Geneva; interviews with UN-REDD/FAO in Rome, DRC, Indonesia, Tanzania; interviews with international stakeholders, national partners and stakeholders (DRC, Indonesia, Tanzania)</p>
	<p>NATIONAL PROGRAMMES (NP): MRV support is mostly provided through the National Programmes, with complementary support from the Global Programme</p>		<p>NP Total: NOK 219 millionii</p>	<p>NP 'Quick Start Phase 2008-11, Phase 2 2011-15</p>	
UN-REDD	<p>DRC: An operational, country-managed MRV system for GHG emissions (deforestation/ degradation), i.e. setting up and operationalising a national satellite land monitoring system, national forest inventory and national GHG inventory</p>	<p>DRC:-all aspects of MRV system development</p>	<p>DRC: \$1.8 million (NOK 10.4 million) for MRV and reference level</p>	<p>DRC: 2010-2013</p>	
	<p>INDONESIA (IND): Successful demonstration of establishing a REL/MRV system and fair payment systems based on the national REDD+ architecture</p>	<p>IND: - Capacity building and methodology design for forest carbon inventory - Reference Emissions Level (REL)</p>	<p>IND: \$1.4 million (NOK 8.1 million)</p>	<p>IND: 2009 – 2012</p>	
	<p>TANZANIA (TAN): To develop MRV tools and methodologies, and a national reference level.</p>	<p>TAN: - Capacity Building - Development of tools and methodologies</p>	<p>TAN: USD \$4.28 million (NOK 24.6 million)</p>	<p>TAN: January 2010 to June 2013</p>	

Partner	Purpose (where stated)	Key activities	Funding	Timeline	Sampling Coverage
Group on Earth Observations (GEO) Forest Carbon Tracking (FCT)	FCT: To demonstrate that co-ordinated earth observation can provide the basis for reliable information services to support REDD+ policy		FCT: NOK 5.4 million	FCT: 2009-2012 iii	Documentation review, interviews with Secretariat staff in Geneva, interview with NSR staff, interview with staff at INPE, interviews with national partners, stakeholders in Tanzania, DRC, Indonesia and Guyana
Norwegian Space Centre (NSR)	NSR: Lead and co-ordinate GEO FCT		NSR: NOK 9.8 million	NSR: 2009-2012	
Global Forest Observation Initiative (GFOI)	GFOI: To help countries develop efficient and sustainable forest monitoring systems		GFOI: US\$ 4.6 million (around NOK 26.4 million)	GFOI: 2012-2015 (start-up phase 2012-2013)	
Bilateral channels					
Brazil	No specific support for MRV system development, however, up to 20% of the Amazon Fund can be used to support MRV in other countries	-Inventário Florestal Nacional – Amazônia	R\$ 65,000,555, none yet disbursed	Contract signed Jan 2013	Not sampled, project is too early in implementation
Ethiopia		-REDD+ Roadmap Development Workshop	Unknown	Heid November 2012	Limited to multilateral institutions document review as early in implementation
Vietnam	MRV aspects through UN-REDD programme	- Involvement women, ethnic minorities and local communities in forest monitoring	Unknown	MoU signed Dec 2012	Limited to multilateral institutions document review as early in implementation
Guyana	UNFCCC compliance grade capability for monitoring, reporting and verifying (MRV) emissions is established in Guyana (Guyana – Norway MoU)	- MRV and REL/RL establishment, with stepwise improvements	NOK 6.6 million plus NOK 0.7 million to DNV for verification	2011-2012; covered by the Guyana REDD+ Investment Fund since then	Documentation review, interviews with Secretariat staff, implementing partners (Guyana Forestry Commission), international, national stakeholders

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Partner	Purpose (where stated)	Key activities	Funding	Timeline	Sampling Coverage
Indonesia	Phase 1 Preparation for MRV	<ul style="list-style-type: none"> - MRV conceptual design - National near real time forest monitoring - Land based emissions measurements in pilot province 	US\$ 4 million (NOK 22.5 million)	Phase 1 2010 – 2011, but not yet completed	Documentation review, interviews with Secretariat staff, implementing partners (inter alia UKP4, MRV Task Force, LAPAN) international, national stakeholders
Mexico – Norway (Note that this is a multi-bilateral arrangement that also includes UN agencies)	Development of an MRV system in Mexico	<ul style="list-style-type: none"> - Development of Mexican national capacity for MRV - Promotion of Mexico as a centre of excellence for South-South co-operation, including on MRV 	Around 10 million US\$ (around 60 million NOK) for MRV	Originally 2010-2013, but rescheduled because of problems outside the programme's control. No cost extension granted to 2015	Limited to desk review, interviews with NICFI Secretariat, implementation staff in Mexico (by phone), due to early stage of activities and evaluation time constraints
Tanzania (embassy supported projects) The LiDAR Projectiv	<p>LIDAR PROJECT: Research project to test methods for MRV using a combination of ground data and remote sensing techniques (with focus on LiDAR)</p> <p>LIDAR PROJECT: - Testing of LiDAR approaches</p> <p>- Development of sampling-based application for regional biomass / C stock estimation</p> <p>- Above-ground biomass estimates and allometric equation development</p> <p>- Capacity building on MRV</p>	<p>LIDAR PROJECT: Research project to test methods for MRV using a combination of ground data and remote sensing techniques (with focus on LiDAR)</p> <p>LIDAR PROJECT: - Testing of LiDAR approaches</p> <p>- Development of sampling-based application for regional biomass / C stock estimation</p> <p>- Above-ground biomass estimates and allometric equation development</p> <p>- Capacity building on MRV</p>	LIDAR: NOK 27.5 million	2011 – 2015	Documentation review, interviews with Secretariat staff, implementing partners, international, national stakeholders
The National Carbon Monitoring Centre (NCMC)	NCMC: To co-ordinate the measurement of forest carbon emissions for Tanzania	NCMC: -Establishment of the centre	NCMC: US\$ 5.5 million (NOK 32.5 million)	NCMC: 2013 - 2016	

Partner	Purpose (where stated)	Key activities	Funding	Timeline	Sampling Coverage
Zanzibar Woody Biomass Survey (ZWBS)	ZWBS: Survey of woody biomass in Zanzibar	ZWBS: - Develop a systematic survey of woody biomass - Capacity building - Institutional strengthening	ZWBS: US \$0.75 million (NOK 4.3 million)	September 2012 to September 2013	
9 Pilot REDD+ "Projects"v	See Annex 7 – Tanzania Summary	PILOT PROJECTS: -The pilot projects all involve project-scale MRV and RL development		2010-2012 or 2014	
Grant Schemes					
Civil Society Support Scheme		One project has MRV as a main theme (the CIFOR Global Comparative Study) and six others have MRV as a subsidiary theme			Evaluated in 2012. Excluded here to prevent duplication

- i Global Programme expended on "Improved guidance on MRV and monitoring" during 2009 to 2011 was US \$5.2 million (NOK 29.8 million). Estimated NICFI contribution NOK 24.8 million, based on Norway having provided 83% of UN-REDD funds - US\$ 141.2 million of the total UN-REDD fund budget of US\$170.9 million <http://www.climatefundsupdate.org/listing/un-redd-programme>, (<http://mpdf.undp.org/factsheet/fund/CCF00>)
- ii Total Funding allocated to National Programmes: US \$46 million (NOK 264 million). Estimated NICFI contribution NOK 219 million, estimated as in i
- iii FCT is expected to end once the GFOI is well established
- iv Enhancing the Measuring, Reporting and Verification of Forests in Tanzania Through the Application of Advanced Remote Sensing Techniques. Informally known as 'The LiDAR Project'. The project is also a GEO FCT country demonstration activity
- v See Annex 7 for details of the individual projects

2. Methodology

The evaluation was divided into three phases to aid implementation. Phase 1 was an intensive design phase to optimise strategic focus and develop the most appropriate and efficient sampling and assessment methodologies. Phase 2 focused on secondary and primary data collection and preliminary analysis through four steps that were aimed at ensuring efficiency, consistency and triangulation of information to generate strong evidence. Phase 3 involved the analysis and synthesis of the information collected, and reporting.

2.1 Phase 1 – Evaluation Design

2.1.1 Agreed Definition of Evaluation Scope and Development of Theory of Change and Evaluation Framework

The definition of MRV, evaluation scope and evaluation object were agreed with Norad Evaluation Department. The NICFI MRV and reference levels work is not supported by a logical framework or similar document that provides an overview of the thinking behind the choice of activities and how these are expected to lead to the intended impact. To provide a strategic overview, a detailed Theory of Change was constructed and validated with members of the NICFI Secretariat during an Inception Meeting in Oslo (a simplified version of the Theory of Change is presented in Figure 1 Theory of Change).

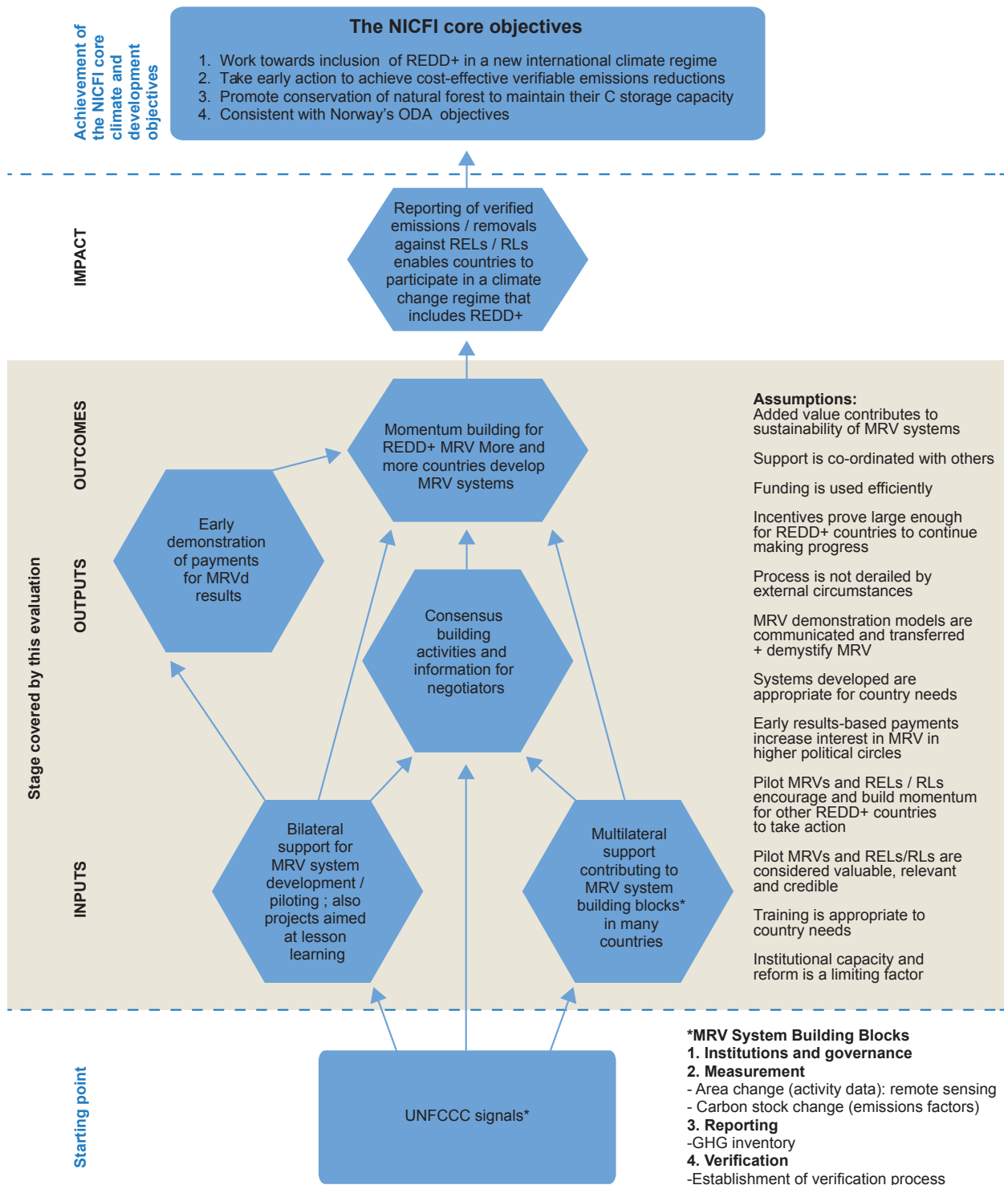
The Theory of Change formed the basis for development of an evaluation framework (Annex 14 – Evaluation Framework). The Evaluation Framework contains questions, judgement criteria and indicators against the Organisation for Economic Co-operation and Development's Development Assistance Committee criteria for development evaluation that are tailored to the purpose of the evaluation. The questions were based on assumptions associated with the Theory of Change. It constituted the main instrument for data collection during the evaluation.

2.1.2 Sampling Strategy and Selection of Focal Countries

A sampling strategy was devised to provide good coverage of the evaluation object, in relation to the different components of the Evaluation Framework, and to collect data from a range of different data sources and stakeholders, including national, international, and NICFI sources. Coverage of the evaluation object reflects the relative importance of the activity / programme within the portfolio (both strategically, in terms of NICFI funding and maturity of the NICFI partnership, where relevant), and the resource requirements for field visits.

In-depth data collection for the multilateral initiatives primarily focused on the United Nations Food and Agriculture Organisation-led MRV component of the UN-REDD Programme, the Central Africa Forests Commission (COMIFAC) regional MRV development project of the Congo Basin Forest Fund, and support to the Group on Earth Observations (GEO), which are the dominant recipients of NICFI funding for MRV and RL activities.

Figure 1 Theory of Change



Time constraints dictated that a subset of key countries included in the evaluation object could be covered in detail. Four focal countries (Democratic Republic of Congo, Guyana, Indonesia and Tanzania) were selected for in-depth assessment of pilots systems (where applicable) and capacity, capability and MRV progress. Identification of these focal countries for in-depth study was based on the following criteria:

- Coverage of each of the modalities of the evaluation object (bilateral channels, multilateral channels);
- Inclusion of countries of particular strategic interest to NICFI (e.g. Democratic Republic of Congo);
- Consideration of scale of funding (with the aim of ensuring that a high proportion of the total NICFI spend on MRV and reference level development was covered by the sample);
- Coverage of countries with different initial levels of MRV capacity; and,
- Coverage of countries at different stages of development (based on the Organisation for Economic Co-operation and Development's Development Assistance Committee classifications of aid-eligible countries).

Brazil, Mexico, Vietnam and Ethiopia were not selected for a field visit for the following reasons:

- As Brazil's MRV system was already operational when the Brazil-Norway bilateral agreement was signed, no specific provision is made under the agreement for MRV / RL activities. The Amazon Fund can support MRV projects both in Brazil and in other countries. At present this appears to be a very minor component of the Amazon Fund portfolio to date (the contract for the most relevant project, Inventário Florestal Nacional – Amazônia, was only signed at the end of January 2013 and no funds have yet been disbursed to this project, so it is in the very early stages of development). However, the Brazilian MRV approach, using satellite based data combined with conservative proxies for carbon emission estimates, was important for Norway in terms of developing its overall MRV approach. For this reason, in respect of Brazil, beyond noting the importance of the Brazilian MRV approach to NICFI, and that the Inventário Florestal Nacional – Amazônia is under development, Brazil-related coverage of the evaluation was limited to interviews with key informants from the Brazilian National Institute for Space Research (INPE) in relation to GEO.
- The bilateral REDD+ MRV activities with Mexico, Vietnam and Ethiopia are in their infancy and baseline data were not immediately available as these countries have not been covered previously in sub-evaluations of

NICFI, so coverage of these elements was limited to assessment of the decision making processes around the establishment of the partnerships and a brief case study assessment of scope and activities undertaken so far in Mexico, which is the most advanced of these recent partnerships, supported by a small number of telephone interviews.

Support provided through the Norad-managed Civil Society Support Scheme was the subject of a comprehensive evaluation of activities through to 2012 and is covered only peripherally here to avoid duplication.

2.2 Phase 2 – Data Collection

2.2.1 Desk Review

A documentation review was undertaken to clarify the size of funding, objectives and scope of each activity within the NICFI MRV portfolio. The desk review also served to reconstruct a baseline of MRV capacity and capability for each of the modalities and to provide a first draft of results against the relevant sections of the evaluation framework for each modality. Brief desk reviews of twelve countries (Annex 11 – General country progress through UN-REDD and FCPF support) supported in MRV and RL development by the FCPF and UN-REDD Programme in addition to the countries selected for field visits, were taken to provide a broad sample across the multilateral channels.

2.2.2 Baseline Comparison of Forest Monitoring Capability

To facilitate development of a baseline comparison of forest monitoring capability in the focal countries, a range of literature sources with potential to provide a baseline were reviewed. Herold 2009⁹ was selected as it covers all of the focal countries in the study and includes a number of indicator criteria that were defined explicitly, meaning that assessment in 2013 could be made in a similar way (see Annex 15 – Data Collection Templates and Interview Protocols for baseline comparison template and criteria used, and country annexes for the baseline comparison results).

2.2.3 Development of Interview Protocols

Based on the Evaluation Framework and, where possible, in consultation with the NICFI Secretariat, protocols and outlines for key informant interviews at a range of levels (international actors, national actors etc.) were developed for use by the field teams. The protocols for the different stakeholder groups were tailored for each broad stakeholder group but include sufficient overlap in the questions to ensure data triangulation and comparison of the topics and responses. The protocols also enabled the team to maintain consistency across a range of field visits.

⁹ Herold (2009) An assessment of national forest monitoring capabilities in tropical non-Annex I countries: http://princes.3cdn.net/8453c17981d0ae3cc8_q0m6vsqxd.pdf

2.2.4 Field Visits and Telephone Interviews

Field work was based on the sampling strategy and focused on obtaining semi-structured interviews with key informants and other stakeholders to supplement and triangulate the evidence collected during the desk reviews. Visits of one to one-and-a half week duration were made to Indonesia, the Democratic Republic of Congo, Guyana, and Tanzania. These were made by small teams of two to four individuals. Shorter visits (one-two days) were made to Geneva, Rome and Yaoundé.

In total 124 people were interviewed, either individually or in groups. Of these, 5 were from the NICFI Secretariat, 5 were Norwegian Embassy staff in the countries visited, 60 were involved in REDD+ implementation in the countries visited (national REDD+ co-ordination entities, implementing ministries and government departments), pilot project staff in Tanzania, 13 were from NICFI-supported multilateral institutions (UN-REDD / FAO, GEO, UNDP), 7 from other governmental departments, 12 were other donors, 11 UNFCCC climate change negotiators, 27 representatives of international and national civil society organisations and stakeholders, and 14 representatives of academic institutions. Most were interviewed face-to face in Rome (FAO), Geneva (UN-REDD and GEO Secretariat staff), Washington D.C. (FCPF MRV Lead), Yaoundé (COMIFAC and FAO staff involved in the Congo Basin Regional MRV project), Kinshasa, Georgetown, Dar es Salaam, Jakarta, Bogor, Palangka Raya and Oslo. Phone interviews were also held with stakeholders and national implementers in Mexico, UNFCCC REDD+ negotiators and international informants based in locations other than those we visited.

2.3 Phase 3 – Analysis, Synthesis and Reporting

An internal results workshop was held after field work to collate and consolidate the information collected for each activity, and to identify the key overarching findings, as well as modality specific results and conclusions. A one-day workshop was held in Oslo to present results and conclusions to NICFI in order to provide NICFI with an early opportunity to respond to findings and for the evaluation team to seek further clarifications.

2.4 Limitations to the Methodology

It would perhaps have been desirable to also have visited the activities in Mexico, spent longer at the GEO and UN-REDD Secretariats, the FAO and FCPF headquarters and to have spoken with additional academic informants on the research aspects of the NICFI MRV activities. This was not possible with the resources available. Collectively, the existing sample covered all the main support modalities, and provided a cross-section of characteristics in terms of MRV capacity, development, and maturity of co-operation with NICFI on MRV; this sample was agreed with Norad Evaluation Department.

3. Relevance

The findings presented in this section focus on the extent to which Norway's International Climate and Forest Initiative (NICFI) measurement, reporting, and verification (MRV) work track is consistent with beneficiaries' requirements, country needs, global priorities and partners' and donors' policies, and whether the work track has remained appropriate given evolving policy conditions (both domestically and internationally)

Finding 1. Norway's International Climate and Forest Initiative (NICFI) measurement, reporting and verification (MRV) and reference level work track is timely and well-aligned with the international climate change negotiations and is valuable in informing these.

The NICFI MRV and reference level work track is well-aligned with the United Nations Framework Convention on Climate Change (UNFCCC) Reducing Emissions from Deforestation and Forest Degradation (REDD+) negotiations and relevant work programmes within the UNFCCC Subsidiary Body for Scientific and Technological Advice (SBSTA). The portfolio of activities responds directly to two UNFCCC decisions: The Bali Conference of Parties decision on REDD+¹⁰ which:

- “Encourages all Parties, in a position to do so, to support capacity-building, provide technical assistance, facilitate the transfer of technology to improve, inter alia, data collection, estimation of emissions from deforestation and forest degradation, monitoring and reporting, and address the institutional needs of developing countries to estimate and reduce emissions from deforestation and forest degradation” (paragraph 2); and
- “Invites Parties, in particular Parties included in Annex II to the Convention, to mobilize resources to support efforts in relation to the actions referred to in paragraphs 1-3 above”(paragraph 5);

And also the Copenhagen Conference of Parties decision on REDD+¹¹ which:

- “Encourages all Parties in a position to do so to support and strengthen the capacities of developing countries to collect and access, analyse and interpret data, in order to develop estimates” (paragraph 4).

¹⁰ FCCC/CP/2007/6/Add.1

¹¹ FCCC/CP/2009/11/Add.1

The NICFI Secretariat has been involved in the development of submissions to SBSTA on MRV and RLs and participates in the relevant UNFCCC meetings and workshops. The majority of the NICFI pilot activities on MRV and reference level establishment (through the bilateral agreements with Guyana and Indonesia, embassy managed projects in Tanzania, and through support to multilateral institutions) were underway before the SBSTA was requested to initiate a work programme to develop modalities for MRV and RLs. Consensus building research has also been commissioned in time for up-coming agenda items at SBSTA on MRV and reference levels. All eleven of the UNFCCC negotiators interviewed as part of this evaluation felt that contributions from the NICFI MRV and reference level work track have been aligned and timely.

All NICFI-supported multilateral and country level MRV and reference level activities also aim for consistency with UNFCCC requirements and the need for compliance with Intergovernmental Panel on Climate Change Good Practice Guidance for Land Use, Land-Use Change and Forestry 12 is written into all relevant programme documents and templates. This includes, for instance: the Letter of Intent between Indonesia and Norway and Indonesia's draft MRV strategy; the Democratic Republic of Congo's (DRC) framework strategy for REDD+; the Tanzania REDD+ Strategy; and all Guyana MRV-related documentation (Joint Concept Note; MRV Roadmap; and interim measures reports). Compliance with the UNFCCC and IPCC Good Practice Guidance is also emphasised through the MRV and reference level related work undertaken through multilateral channels (e.g. the Forest Carbon Partnership Facility (FCPF) and United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD) programme Readiness Preparation Proposal template, the Congo Basin Forest Fund (CBFF) Central African Forest Commission (COMIFAC) project and Group on Earth Observations (GEO) programme documentation).

Finding 2. The NICFI MRV and reference level work track is consistent with Norwegian policy priorities and the activities supported are generally well-aligned with Norway's position on the scope and modalities for MRV and reference levels.

There is strong commitment to NICFI from the Ministry of Environment and Ministry of Foreign Affairs, and NICFI goals are considered by both to be consistent and aligned with Norway's main policy priorities in relation to climate change and overseas aid. There have been some policy adjustments since the new Minister of International Development has been in position, but these have not directly affected NICFI work on MRV and reference levels.

MRV system establishment activities by partner countries are also well aligned with Norway's position on MRV as submitted to SBSTA (Norway, 2012¹³): that MRV should be on a national basis, or sub-national as an interim step towards a national system and that MRV systems should be integrated with national forest information systems. All the partner countries visited by the evaluation team are

12 <http://www.ipcc-nggip.iges.or.jp/public/gpplulucf/gpplulucf.html>

13 Submission by Norway on methodological guidance for REDD (SBSTA) – Forest Monitoring, MRV and Drivers of Deforestation <http://unfccc.int/resource/docs/2012/sbsta/eng/misc01.pdf>

planning/developing national level systems that are integrated with national forest inventories. Guyana's MRV system is already national in scope; for DRC and Indonesia, the design is national, but the implementation of the system will be sub-national to start with. This is consistent with the approach being promoted by UN-REDD, which highlights the importance of the National Forest Monitoring Systems, which have to fulfil an MRV function within a broader monitoring function.

While the integration of MRV activities into wider national forest monitoring and information systems is important for cost-efficiency, as explained in Section 1.4, MRV is tightly defined by UNFCCC and it is the scope of this definition that is being considered in this evaluation. This does not preclude further evolution in due course.

Where there may be scope for slight diversity of view between the Norway/ NICFI position and that of some partner countries is in relation to the scope of the MRV system. This is a current point of discussion as some parties, observers and stakeholders believe that the incentive structure for REDD+ (and therefore the scope of MRV systems) should go beyond carbon, and the topic was discussed in a number of side events to the 18th Conference of the Parties under the UNFCCC in Qatar, December 2012. Norway's position (and therefore NICFI's position too), is clearly that measuring, reporting and verification (MRV) for REDD+ means the measuring, reporting and verification of greenhouse gas (GHG) emissions/removals, based on the latest IPCC guidance and guidelines, in relation to REDD+ activities (Norway, 2012).

In addition to differences in views about the ultimate incentive structure for REDD+, differences in use of terms 'measurement' and 'monitoring' add to the confusion, with the two terms being used interchangeably by many of the evaluation informants, whilst others use 'measurement' purely for aspects that will be used to develop greenhouse gas emissions assessments, and 'monitoring' for collection of information on a broad range of additional parameters that might be covered by a national forest monitoring system. This is partially because it makes sense operationally. As pointed out by NICFI and UN-REDD, it may be that in some country contexts, it makes sense operationally, strategically and institutionally to view these aspects in close connection, for instance to use other incentives for in-country benefit sharing mechanisms.

At the 18th Conference of the Parties under the UNFCCC , it was clear that countries want to take advantage of the opportunity to collect data on more parameters than necessary for MRV alone when designing their national forest monitoring system, of which MRV is a component, often for reasons of cost-effectiveness. The UN-REDD and FCPF R-PP template includes all elements of monitoring (forest and carbon density, land use change, safeguards, governance, and multiple benefits within a single chapter on establishment of a national forest monitoring system. Some NICFI-supported countries, for

example Indonesia and DRC, include monitoring for biodiversity within the MRV strategy or national forest inventory.

Additional forest related information (e.g. social, governance, biodiversity safeguards) are considered by Norway and NICFI to be potential elements of broader national forest monitoring systems, while recognising that forest monitoring systems and MRV systems will normally be closely integrated, so this is aligned fully with Norwegian policy (Norway, 2012).

Finding 3. There is generally good alignment with national priorities and requirements, but occasionally the multilateral channels have not been sufficiently adaptive to national circumstances.

Generally both the bilateral and multilateral support channels are well-aligned with national priorities and requirements. For example, decisions on how bilateral support funding is spent in Indonesia have largely been made by the National REDD+ Taskforce which has oversight of national priorities and should ensure to the best extent possible there is close alignment with these.

In terms of UN-REDD and FCPF, the development of Readiness Preparation Proposals tends to involve extensive stakeholder engagement, which helps to align the resulting proposals with national circumstances and needs. Nevertheless, some informants have suggested that the Food and Agriculture Organization (FAO) is too focused on implementing MRV systems based on the Brazilian model and questioned its appropriateness and level of sophistication where it is being applied. While this is not especially technically advanced, it is demanding of personnel and this may constrain its uptake in countries with limited staff capacity.

A number of informants suggested that FAO tends to favour the development of systems which have on-going support provided by FAO, rather than building capacity so that countries can maintain their own systems. FAO refutes this, although it recognises that at times systems needed to be simplified and there are examples where FAO is building capacity in order to handover the responsibility for technical processes, as is the case in DRC.

Although GEO has excellent technical expertise, its mandate and experience on development work are both quite limited. As a consequence, GEO is not perhaps sufficiently aware of varying partner country capabilities and at times seems to have not adapted and refined its engagement. For example Brazil is itself a provider of technical guidance to DRC and other partners. It was reported that GEO was unaware of Brazil's level of capacity for remote sensing and did not adapt its approach appropriately

4. Effectiveness

The findings presented under Effectiveness focus on the extent to which the selected interventions have attained or are likely to attain their objectives, taking into account their relative importance. The order of the findings is: effectiveness issues related to the UNFCCC; effectiveness in each of the four focal countries; effectiveness of the multilateral support channels; other effectiveness findings (including findings on reference levels, pilot systems, capacity building, institutional strengthening, and communication).

Finding 4. Norway's International Climate and Forest Initiative (NICFI) measurement, reporting and verification (MRV) and reference level work track has made a major contribution to the debate on MRV and reference level at the United Nations Framework Convention on Climate Change (UNFCCC) negotiations, with the practical experience and consensus building activities regarded as particularly useful.

NICFI has been influential by providing information and lessons from the NICFI-supported pilot approaches to MRV and the establishment of reference levels to Norway's negotiating team and other negotiators; and through commissioning reports aimed at building consensus on MRV and Reference Levels in the negotiations.

Norway has responded to two of the four invitations for submissions to the Subsidiary Body for Scientific and Technological Advice (SBSTA), relevant to MRV and RLs, since 2007. Norway has attended all four of the UNFCCC workshops and expert meetings relevant to MRV and RLs, since 2007, providing financial support to three of the meetings. At two of the meetings, presentations were given based on consensus building reports funded by NICFI.

The valuable practical lessons generated by the NICFI MRV and reference level work track have enabled Norway to develop submissions to SBSTA that are evidence-based. For instance, the step-wise approach to reference level and MRV system development piloted through the Guyana-Norway bilateral agreement directly informed the Norway negotiating position on modalities for these. The contribution of these practical lessons to the UNFCCC process was recognised and valued by negotiators from other countries.

One of the negotiators interviewed specifically noted that Norway's submissions to the UNFCCC on MRV and reference levels "are very [much] based on

practical experience”. The fact that practical lessons generated by NICFI are being used by the Norway negotiating team demonstrates that the transfer of information between NICFI and the Norwegian negotiators is effective. There is a short decision-making and communication route within the NICFI Secretariat and the Norway Reducing Emissions from Deforestation and Forest Degradation (REDD+) negotiators; this is aided by the fact that one of the NICFI Secretariat staff serves part-time as a member of Norway’s climate negotiation team.

NICFI has commissioned a number of reports relevant to MRV and reference levels including the Meridian Institute Options Assessment Report¹⁴, the Global Observation for Forest Cover and Land Dynamics (GOF-C-GOLD) report on capacity development in national forest monitoring¹⁵, and two Meridian Institute reports on reference levels¹⁶. Respondents commented that the reports were timely (i.e. being released sufficiently early on in the discussion on reference levels and, to have a role in clarifying the negotiating terminology), balanced, and influential in the UNFCCC negotiations. The Meridian Institute reports on reference levels, particularly the ‘Modalities’ report is seen as having been particularly useful in demystifying the terms and in contributing to progress. The consultative drafting process of the ‘Modalities’ report was seen as especially useful as it helped to build awareness and consensus amongst participating countries. One negotiator noted that the significant progress on reference levels in the UNFCCC negotiations was facilitated “quite a bit” by the Meridian report and another noted that they had seen lots of negotiators looking at it, highlighting that it was “really good work”. However, one informant commented that the Meridian Institute reports also brought some overly complex concepts into the debate and triggered lengthy discussions.

In addition to the reports, submissions, and direct participation in the negotiations, informants also commented on the influence that NICFI has had through its civil society support grants. Two of the eleven negotiator respondents also highlighted the NICFI support through the Civil Society Support Fund as contributing to the UNFCCC negotiations on MRV and reference levels.

NICFI’s partner countries, particularly Brazil, Indonesia, and Guyana, were also seen as highly influential in the negotiations, and NICFI support is likely to have contributed to the content of submissions and direction of that influence. Respondents also noted that NICFI’s partner countries are not necessarily aligned with Norway’s negotiating position, as appeared to be the case on the issue of verification at the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP) 18. However, each of these countries (with the exception of Brazil) has developed or undertaken MRV and reference level activities through the NICFI financial support, lessons from which are likely to have contributed to informing the national negotiating positions.

14 http://www.redd-oar.org/links/REDD-OAR_en.pdf

15 http://www.cifor.org/publications/pdf_files/Books/BWijaya1201.pdf

16 http://www.redd-oar.org/links/RL_report.pdf

Nearly all of the countries receiving support through the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD) or the Forest Carbon Partnership Facility (FCPF) have also made submissions to SBSTA on MRV and reference level development. For example, Vietnam made a presentation at a SBSTA side event at COP¹⁷ in Durban on reference level developments and options for SBSTA consideration. Although direct attribution for such communications to NICFI support is not possible, it is likely that NICFI support via UN-REDD and FCPF provided opportunities for countries to develop and share lessons learned, and this contributed to well-informed discussions at the international negotiations, based on experience.

There was generally good awareness of NICFI engagement on MRV and reference level activities through the bilateral and multilateral channels among UNFCCC negotiators, though not necessarily on which activities were being supported. There was least awareness of the Group on Earth Observations (GEO) (5 out of the 11 negotiators interviewed were unaware) and there was less awareness of the work in Tanzania than through the other bilateral partnerships.

Finding 5. Without final decisions and guidance from the UNFCCC on MRV modalities, it is a challenge for countries to determine their MRV system needs and capacity requirements.

The lack of clarity and continuing evolution of MRV at the UNFCCC level was described by respondents from all of the countries the evaluation team visited, as well as by multilateral sources, as a major challenge facing all REDD+ countries¹⁷. The difficulty of designing a system to meet UNFCCC requirements while these requirements are not yet finalised or fixed, described as “shooting a moving target”, is also discussed at length in Indonesia’s Draft MRV Strategy.

Some countries appear to be responding to this challenge by building flexibility into their systems. For instance, the programme document for Tanzania’s National Carbon Monitoring Centre, explicitly states that the centre “must adopt a flexible approach to ensure full compliance with UNFCCC requirements as they are progressively developed and elaborated”. A REDD+ country MRV practitioner also pointed out that they are developing their MRV system in an adaptive way as this has the additional benefit of providing the best scope for innovation, and this would be difficult if the design were overly prescribed at the outset.

Finding 6. In the Democratic Republic of Congo (DRC), good progress has been made, especially with capacity building.

Forest monitoring capacities were quite low in 2009, based on the criteria used by Herold (2009), but there has been clear improvement in carbon stock assessment capability since then (Table 2, Annex 4: Table 1).

¹⁷ We note that at the UNFCCC Bonn Climate Change Conference in June 2013 at SBSTA 38 further progress was made with the drafting of elements for possible draft decisions on modalities for measuring, reporting and verifying and on guidelines and procedures for the technical assessment of submissions from Parties on proposed forest reference emission levels and/or forest reference levels <http://unfccc.int/resource/docs/2013/sbsta/eng/l12.pdf>

Although the starting point for capacity in DRC was low for MRV and reference level establishment, progress with the implementation of supporting activities has been good and activities have achieved or are generally likely to achieve their objectives (Annex 4: Table 3). The greenhouse gas (GHG) inventory activities are at an early stage of implementation and it is too early to ascertain whether these are likely to be successful and sustained.

NICFI supported activities have primarily focused on planning and early / supporting activities for the development of a measurement system, however, first steps have also been taken in relation to developing reporting capability (Annex 4: Table 4).

Table 2 - Focal country MRV capabilities. Baseline 2009 comparison with 2013 using criteria from Herold (2009)

		DRC		Guyana		Indonesia		Tanzania	
Key requirement		2009	2013	2009	2013	2009	2013	2009	2013
GHG inventory	Understanding of international UNFCCC negotiations and REDD process	High	High	Medium	High	Medium	High	Medium	Medium
	Forest area change monitoring capacity	Some	Some	Very Low	Very Good	Very Good	Very Good	Very Low	Limited
	Carbon stock assessment	Some	Good	Limited	Very Good	Good	Very Good*	Very Low	Limited
Forest monitoring capacities	Reporting on carbon for different pools	-	Inter-mediate -Good by end 2013	-	Very Good	-	Probably Good to Very Good	-	Limited

* However, the national forest inventory needs to be vastly expanded to cover carbon stocks

Finding 7. The MRV and reference level establishment processes in DRC have been supported effectively by the multilateral institutions (particularly the UN-REDD Programme) and DRC is becoming the benchmark for the Central African Forest Commission (COMIFAC) countries.

Although many other donors are also involved in MRV system establishment in DRC, the Food and Agriculture Organisation (FAO) activities (through UN-REDD) have been a critical component of the progress made and have generated many of the key outputs so far (Annex 4). DRC depends primarily on the FAO UN-REDD network of international experts to develop methods for its MRV system and setting of reference levels. The quality of technical support provided by FAO from Rome and from its global network was deemed to be 'high' by respondents. Effective national co-ordination and donor co-ordination appear to have been additional factors. According to the DRC National REDD+ Co-ordination, DRC's progress on establishing its MRV system is seen as one of the few concrete examples of setting up a national MRV system in Sub-Saharan Africa.

Finding 8. In Guyana, the NICFI support has been highly effective in developing a national MRV system and reference level and rapid progress has been made on all aspects.

Guyana's capacity for REDD+ MRV was very limited in 2007, with few data sources relevant to REDD+ MRV, and GIS and remote sensing capabilities were also very limited (Hardcastle et al., 2011¹⁸). Guyana's 2009 baseline status was 'Limited' or 'Very Low' against the forest monitoring capacity indicators in Herold (2009) and 'Medium' against the GHG inventory indicator (Table 2 - Focal country MRV capabilities. Baseline 2009 comparison with 2013 using criteria from Herold (2009)Table 2). By April 2013, good progress had been made against each of these indicators, with Guyana scoring 'High' or 'Very Good' in all categories (Annex 5: Table 1).

There has also been a high level of achievement both against the MRV and reference level related objectives in the bilateral agreement and the NICFI Secretariat's strategic objectives for this partnership (Annex 5: Table 3).

Through the bilateral agreement with Norway, Guyana has made good progress on all aspects of MRV and reference level establishment (Annex 5: Table 3) and has achieved, or is close to achieving several world firsts:

1. The Guyana-Norway bilateral agreement contained the first example of a national REDD+ reference level;

18 Hardcastle, P.D., Davenport, D. and Lincoln, P. (2011) Real-Time Evaluation of Norway's International Climate and Forest Initiative: Contributions to National REDD+ Processes 2007-2010. Country Report: Guyana http://www.regjeringen.no/upload/MD/2011/vedlegg/klima/klima_skogprosjektet/Evalueringrapportene/Report_15_Guyana_web.pdf

2. Two annual national-level measurement, reporting and verification processes have been undertaken against this reference level;
3. Guyana is planning to propose the first national REDD+ reference level to the UNFCCC in 2014.

Finding 9. Provision of appropriate technical support has been a critical feature of the Guyana-Norway bilateral agreement that has facilitated Guyana's rapid progress.

In addition to several other features, notably the existence of a clear financial incentive, a simple institutional framework (see Finding 26), highly efficient management by the Guyana Forestry Commission, the high quality of technical support provided and high degree to which this has been tailored to meet Guyana's needs has been vital in enabling Guyana's rapid progress. Two workshops funded through the bilateral agreement appear to have laid critical groundwork. The first was a meeting of key MRV experts in Guyana to help Guyana understand the international requirements of an MRV system. The idea to hold an MRV Roadmap workshop emerged from this first workshop.

According to Guyana Forestry Commission (GFC) staff, NICFI MRV staff helped GFC identify the experts to invite to the first workshop and identified the facilitator of the MRV Roadmap workshop. NICFI was also useful in persuading these experts to participate. The resulting MRV Roadmap is seen by GFC as instrumental to their progress so far.

The Guyana Forestry Commission hired two technical experts to aid the development of the Guyana MRV system (Poyry / Indufor Asia Pacific and Winrock international) and is extremely happy with the quality of support provided. The Guyana Forestry Commission also suggested that technical support provided by Indufor and Winrock has been key to Guyana's success in developing its MRV system. Guyana's participation in the development of the FCPF-funded stepwise framework for the establishment of reference levels developed by Winrock was also considered valuable, and this is the framework that Guyana is now working towards in developing its reference level.

It is worth noting that although the Norway-Guyana partnership has been successful, there have been some areas of discordance. One informant reported that there has been pressure from NICFI to increase the precision of Guyana's degradation assessments, although to do so would be expensive and result in a slight increase in the precision of emissions estimates. There were also mixed views on the level of conservativeness in some of the Guyana measurements: one informant felt that NICFI were overly conservative in their infrastructure deletions, although another informant expressed an opposite view, with their models suggesting that infrastructure developments would have far more impact on emissions than was being stated.

Finding 10. In Indonesia NICFI funding has been effective in supporting planning and technological developments, but overall progress in MRV system development has been delayed due to the currently unachieved objective of establishing an independent MRV institution.

Of the focal countries covered by this study, Indonesia had the strongest forest monitoring capability in 2009. Clear progress has been made against this baseline, particularly in engagement in the UNFCCC process and carbon stock assessment (Table 2, Annex 6: Table 1).

Achievement of the MRV and reference level related objectives in the Indonesia-Norway bilateral agreement is partial and delayed at this stage (Annex 6: Table 3). The lack of agreement on an independent MRV institution has meant that one of the Phase 1 objectives of the bilateral agreement with Indonesia has not been met, and all Phase 2 objectives are delayed as a result (see Annex 6: Table 3 for List of the Indonesia – Norway bilateral agreement Phase 1 and Phase 2 Objectives). However, lack of achievement of this Phase 1 objective belies the progress that has been made through other MRV and reference level activities in support of the Phase 1 and Phase 2 objectives in Indonesia (Annex 6: Table 3).

The overarching MRV and reference level objectives of the UN-REDD programme activities in Indonesia have been achieved (Annex 6: Table 3).

NICFI support has contributed to the progress made on the measurement component of MRV and sub-national reference level establishment in Indonesia (Annex 6: Table 4). Reporting aspects are covered by another donor, while work on verification is not yet underway.

Finding 11. The creation of an effective MRV system in Indonesia is being held back by lack of consensus on establishing the institutional framework.

One of the two key objectives for Phase 1 (2010 to 2011) of Norwegian-Indonesian Letter of Intent (LoI) is the creation of an independent MRV institution. A draft Presidential Decree to establish an independent MRV institution has been circulated for consultation amongst the relevant line ministries but is yet to be agreed and finalised. The delay in the creation of the MRV institution was identified by many informants (both within and outside Indonesia) as the main obstacle in progressing with Indonesia's MRV system, and is also one of the main obstacles in progressing to Phase 2 under the Letter of Intent. This proposal is highly political and controversial, and informants identified the cause of the delay as resistance from existing line ministries, particularly the Ministry of Forestry, which is reluctant to concede responsibilities to a new institution.

Informants expressed a range of views on the appropriateness of requiring an independent MRV institution in the Lol. A number of informants suggested that the requirement for independence has caused an institutional conflict which has slowed the development of the MRV system, and also that the Ministry of Forestry already has the legal mandate and capacity for measurement and reporting. On the other hand, a number of informants suggested that the requirement for independence is necessary for establishing a credible MRV system that would be fit for the purpose of results-based payments. Some informants suggested that, despite the tension created, the proposal for an independent institution had been beneficial in driving positive changes within the Ministry of Forestry, such as increased transparency and engagement with external experts.

Finding 12. In Tanzania, progress on the development of the MRV system and reference level has been modest and some NICFI funded projects appear unlikely to achieve their objectives.

A modest improvement to forest monitoring capabilities has been made compared with the 2009 baseline, but capability remains very low (Table 2, Annex 7: Table 1). NICFI bilateral support in Tanzania is delivered through a series of discrete projects, with many of the supported activities still ongoing. It is therefore too early to determine whether they are likely to meet their objectives, however, the potential value of the pilot projects appears to be limited for national MRV and reference level establishment (Annex 7: Table 3), and a number of informants questioned the utility of the Enhancing the Measuring, Reporting, and Verification (MRV) of Forests in Tanzania through the Application of Advanced Remote Sensing Techniques project (referred to as the “LiDAR” project for short) for Tanzania’s MRV system.

It is not possible to assess whether the UN-REDD programme MRV and reference level activities will achieve their objectives in Tanzania as the programme has evolved significantly since the 2009 Joint Programme Document, and the original indicators are no longer relevant. However, UN-REDD programme activities have been successful in generating clear outputs: several MRV tools and methodologies have been developed; an important MRV workshop was held which brought together all the MRV stakeholders in Tanzania; and the first national forest reference emission level for Tanzania is expected in late 2013 (Annex 7: Table 4).

NICFI supported activities in Tanzania have contributed predominantly to the measurement component of MRV and reference level planning, with some support for reporting through the National Carbon Monitoring Centre (NCMC).

Finding 13. The projects-based approach taken by NICFI in Tanzania does not yet appear to be generating progress at the national level.

The development of Tanzania's national level MRV system and reference level has been very slow and there appear to be a number of reasons for this. Firstly, there have been a large number discrete projects and activities in Tanzania, with sixteen separate initiatives supported by NICFI, either bilaterally or through the multilaterals. This breadth of activity does not appear to have coalesced into a coherent national level system. Nine of the supported initiatives are REDD+ pilot projects (mostly using Voluntary Carbon Standard methodologies), and it is not clear that support for project-level activities will feed through to increased capacity at the national level, especially as it is reported that much of the technical input for the projects has been conducted by international consultants. Several of the projects are also using a different forest classification system from that used at the national level, making it difficult to "nest" the project-level activities in a national MRV system. The projects have each taken a different methodological approach, so it will be difficult to harmonise and use carbon stock and forest cover change data from them at the national level.

A second possible explanation for the state of progress in Tanzania is that there is not yet an agreement for results-based payments with Norway, or any other partner. This suggests that there is no clear incentive for Tanzania to progress with its MRV system, and there may even be a perverse incentive not to make progress, as Tanzania is currently receiving funding for undertaking development activities. This funding would not continue once the system is fully established.

A further reason for the lack of progress is the limited co-ordination between some of the NICFI-funded initiatives and existing components of Tanzania's national forest inventory (NFI). For instance it is reported that the LiDAR project's Global Positioning System (GPS) points have a different level of accuracy to those used for the NFI, and additional steps are required to address this. Most REDD+ stakeholders in Tanzania questioned the value of the LiDAR project because of this. Similarly, the forest definition and classifications used for the Zanzibar Woody Biomass Project are reportedly different from those used for the NFI, and this has also created delays in the use of the data.

Another factor, suggested by a number of respondents, is that there are few, if any, financial incentives for government staff to undertake data entry or data management, as such activities do not qualify for a daily subsistence allowance. While the allowance culture must be deprecated, its origins lie in the severe erosion of salaries, with the result that many government employees rely on allowances to meet basic living costs.

Please see Annex 7 – Tanzania Summary for more detail on some of the barriers to progress identified.

Finding 14. While UN-REDD activities at the country level appear to be achieving their objectives, achievement of overarching programme-level objectives is delayed.

The UN-REDD country level activities in all three of the UN-REDD supported focal countries covered by this evaluation (DRC, Indonesia and Tanzania) are all achieving results (please see Annexes 4, 6, 7, and 9 for details of UN-REDD activities in these countries). However achievement of overarching MRV and reference level establishment objectives in the UN-REDD 2009-2011 strategy is delayed (Annex 9: Table 2). This is partly because the timeline for the achievement of these objectives has proved over-ambitious. The lessons learned from the 2009 – 2011 period have been used to set more realistic objectives for the 2011 – 2015 UN-REDD programme strategy.

Finding 15. Support through UN-REDD and FCPF has been effective at engaging a large number of different countries, but, due to the wide dispersal of funding, the level of progress is generally more limited in each country (compared with the bilateral partnerships).

The UN-REDD national programmes and the FCPF Readiness Fund have been effective at engaging a large number of countries in the development of MRV systems and reference levels. Up to now, 36 developing countries have signed agreements with the FCPF to participate in the Readiness Fund (though it should be noted that not all have received funding), and UN-REDD has 46 partner countries, 16 of which are receiving support for their national programmes, the other 30 being observers. There is some overlap between the FCPF partner countries and those receiving UN-REDD support for their national programmes, and the total number of countries supported through both these channels is 43.

The documentary evidence, in the form of progress reports or sheets, shows that a high proportion of the activities delivered through multilaterals has related to planning, stakeholder engagement, capacity building workshops and training. This is largely to be expected as these stages are required prior to system implementation, but it will be important to move beyond the planning stages if countries are to develop fully functioning MRV systems. The documentation for these activities provides very limited information about the outcomes of workshops and training sessions.

Finding 16. The Group on Earth Observations (GEO) Forest Carbon Tracking Task (FCT) has not been effective in delivering useful outputs, however early developments at GFOI are more promising.

GEO FCT's outputs have been limited, and have not been widely used (Annex 8: Table 2). Technical guidelines from GEO FCT are available on the FAO web site but these have not been widely accessed or used by REDD+ countries. There is limited evidence of capacity built (apart from in DRC) and, although the FCT web

portal lists data acquisitions for each of the focal countries of this study, Guyana was the only country that mentioned receiving data. The FCT activities seem to be primarily at the research level, focusing on test sites rather than national MRV (in both Tanzania and Guyana).

Several reasons have been identified for the limited progress under GEO FCT. Firstly, there was very little awareness of GEO FCT at either the country or international stakeholder level. Secondly, where there is awareness of GEO FCT there appears to be a mis-match in the understanding of its scope between GEO and REDD+ countries. While REDD+ countries seem to expect a service centred on provision of satellite data, standardised pre-processing and analysis methodologies, GEO FCT itself, based on interviews with GEO staff and other key informants, is apparently more focused on research and development in forest monitoring. It is also possible that there has been misunderstanding, on the part of REDD+ countries and stakeholders, over GEO FCT capacity in terms of human resources and funding. A third possible reason for GEO FCT's limited progress is a lack of experience amongst GEO staff in working with institutions in developing countries.

More positively, GFOI, the successor to GEO FCT, is at an early stage of implementation, but has made progress with contacting private satellite providers and has a strategy for data acquisition. These appear to be some promising developments providing they can be tied with country needs and that research work can be more targeted towards application in a cost-effective, sustainably managed MRV system. The GFOI grant application to the Norwegian Space Centre for 2013 to 2014 also includes a set of activities that are well aligned with REDD+ countries stated needs, though it is too early to comment on the effectiveness of this programme.

One informant commented that GEO FCT and GFOI have foundational or strategic aspects, such as increasing the level of communication within the remote sensing community, which may in turn lead to further benefits, such as improved coordination of public satellites. It is difficult to identify or measure these strategic or longer-term effects, and it is not possible to comment on these based on the information available in the current evaluation.

Finding 17. All countries have made progress on the measurement aspects of MRV, particularly in relation to data on forest area change, however, reporting and verification aspects are rudimentary in all countries and even for Guyana full UNFCCC reporting is still some way off.

Most of the progress made so far has been on the measurement aspects of MRV, and all countries have made progress on this, though at different rates. Evidence from this evaluation shows that Guyana has made the most progress, followed by Indonesia and DRC, with least progress in Tanzania. In all countries, progress has been most rapid in developing forest area change assessments, while the development of the carbon density components, which

involve extensive field data collection and analysis, are necessarily slower. Guyana is the only country that has a functioning interim MRV system in 2013, and has now undertaken two annual measurement and reporting cycles, followed by independent verifications. However, there is much work still to be done in Guyana, especially on reporting.

Developments in countries supported by multilaterals (UN-REDD and FCPF) have varied, with significant progress in countries such as DRC and Vietnam, ranging to limited progress in Papua New Guinea, and stalled progress in Bolivia. As a general trend, there has been a large amount of activity related to planning, establishing institutional frameworks, and capacity building, with fewer examples of developments in technological infrastructure or data acquisition. As with the focal countries, progress through the multilaterals is being made in the measurement aspects of MRV, and there are fewer activities related to developing REDD+ countries' reporting or verification.

Finding 18. There is evidence of progress on the development of reference levels for most of the countries receiving NICFI's support.

Both the bilateral and multilateral support channels have been effective in generating initial progress on reference level development. As with its MRV system, Guyana is one of the more advanced countries in developing its reference level. The bilateral Joint Concept Note for Guyana includes the first national forest reference level. In line with the step-wise approach set out in the UNFCCC text, Guyana has been revising and developing its reference level, and is expected to be one of the first countries to submit a reference emission level to the UNFCCC in 2014.

In contrast, DRC is still at the stage of discussing the information requirements for developing its national reference level, and is receiving support from FCPF to facilitate these discussions. The developments in Indonesia appear to be slightly more advanced, but with activities still at the sub-national rather than national level. UN-REDD has developed a reference level for Central Sulawesi, and bilateral support via UNDP has funded the development of an initial reference level for Central Kalimantan, based on the limited historical deforestation data available from the Ministry of Forestry. However, one informant commented that there is a danger that progressing too quickly with sub-national reference levels may mean there will be difficulties in achieving consistency at the national level later.

Tanzania is at the stage of developing its national reference level. Tanzania's Readiness Preparation Proposal sets out a general approach for developing a reference scenario and reportedly there is now consensus that the historical deforestation rate method will be used to establish the reference level. Support for the reference level development is being provided by UN-REDD but there have been some delays as data from another programme are not yet available.

The progress reports and other documentation available suggests there has been a large amount of activity focused on reference level development across the other countries receiving multilateral support. The activities appear to have been predominantly enabling, training, or planning activities, such as gathering or generating data on historic rates of deforestation (in order to inform the development of reference levels), or the review of approaches for establishing reference levels. For example, Peru set out its plans for the development of a reference level in its Readiness Preparation Proposal (R-PP) in 2011 but is still at the preparatory stage for developing its reference level in 2013 (it is developing a methodological framework for the development of regional reference levels).

Other countries, e.g. Zambia, have developed initial reference levels as a starting point, while also planning for improvements to the way in which the reference level is estimated.

Papua New Guinea's Readiness Preparation Proposal noted the lack of detail from the UNFCCC on what constitutes "national circumstances" when developing reference levels. It is likely that the lack of clear guidance from the UNFCCC is, at least in part, causing a delay in the progress on reference levels.

Finding 19. The pilot MRV systems developed through NICFI have been useful in informing the UNFCCC negotiations but have been less effective as exemplars for other REDD+ countries; the potential transferable lessons have yet to be fully communicated.

The international informants interviewed broadly agreed that the UNFCCC negotiations have benefited from the "learning by doing" approach enabled through the pilot MRV systems supported by NICFI. The pilots have provided real-world examples of MRV system development and have created a depth of knowledge which would not otherwise exist. By highlighting the practicalities of system development, the pilots have also helped to "demystify" MRV. However, there was limited awareness amongst international informants of the partnership with Tanzania, and little detailed knowledge of the other pilots generally, which suggests that there is scope for improving the dissemination of lessons from the pilots.

Informants within REDD+ countries were aware of at least some of the pilots supported by NICFI but often the pilot systems were not viewed as either transferrable or relevant to other countries. For example, Guyana was viewed as a special case and not directly relevant to countries with more complex forest structures, high rates of deforestation, or more complex political/social circumstances.

This may be due, in large part, to the way in which lessons are identified and communicated, rather than a lack of transferable lessons. There appears to be a tendency of pilot countries to communicate all the lessons that they have learned, rather than focusing on and distilling those lessons that are

transferable. For instance, the transferable lessons from Guyana (regardless of forest structure or other characteristics) include: the importance of a clear roadmap; the importance of early establishment of an agreement for results-based payments; the need to get clear agreement on institutional remits and mandates; high level political support and commitment and a willingness to use national resources as well as donor funds.

This suggests that more can be done to capture and communicate the lessons that are transferable, perhaps through the engagement of an external agent to identify transferable lessons and package the information appropriately.

Finding 20. There has been strong focus on capacity building through many of the channels in the NICFI MRV and reference level work track but the pattern of support is complex and varies across countries and channels, and there is not always clear information on the effectiveness of capacity building activities.

There are numerous examples of capacity building through NICFI support channels. UN-REDD has provided a wide range of capacity building activities, with a large number of training sessions and workshops on remote sensing, national forest inventory, and national greenhouse gas inventory. However, there is a lack of information on the effectiveness of these activities (i.e. whether the activities address significant gaps in capacity, and whether participants were subsequently able to apply these techniques or skills within their institutional settings). There are some instances where such evidence is available, for example, DRC staff who received training in Rome subsequently took over data processing activities in-country.

Guyana provides a strong example, where the terms of reference for the external consultants include a requirement to provide training to Guyanese staff, with the result that the Guyana Forestry Commission (GFC) is undertaking an increasing amount of technical work. Through a NICFI Civil Society Fund project implemented by the Global Canopy Programme, Iwokrama and the North Rupununi District Development Board, Amerindian community members have also been trained in community forest monitoring in order to supplement GFC staff in implementation of the national MRV system.

The process of developing Readiness Preparation Proposals through FCPF and UN-REDD appears to have been useful for identifying gaps in capacity and training needs. For example, Kenya's R-PP sets out the key areas where capacity-building/training is needed, such as in remote sensing and GIS. Similarly, Nepal's R-PP identified a number of areas for capacity building, including training in managing and reporting information on forest cover changes.

Finding 21. NICFI support has been effective in initiating the development of institutional frameworks for MRV but implementing the institutional arrangements is often more difficult than anticipated.

For countries supported through the multilateral channels (UN-REDD and FCPF) preliminary progress has been made on defining the institutional arrangements for MRV. The process of developing the R-PP appears to have been useful for clarifying and documenting the roles of institutions for countries' proposed MRV systems. For example, Colombia's R-PP clearly sets out the institutions that will be involved in MRV, and their respective roles.

However, it appears that setting out institutional arrangements on paper is often considerably easier than implementation. For example, implementing the plans for an independent MRV institution in Indonesia has proved to be a considerable challenge, and is one of the main barriers to the creation of an effective MRV system. The Letter of Intent between Norway and Indonesia envisages that there should be an independent MRV institution; however, there appears to be considerable resistance to this from existing sectoral ministries that would see some of their functions transferred to the new institution.

Similarly, in Tanzania there have been reports on institutional capacity needs by both UN-REDD and the National Carbon Monitoring Centre. Despite this, a number of informants commented that while the institutional arrangements for the national MRV system appear clear on paper they do not adequately address the capacity constraints of the various institutions involved in the system. Informants also suggested that further clarification is needed on the division of roles and financial arrangements between the Tanzania Forestry Service and the National Carbon Monitoring Centre.

Guyana offers an example of an institutional framework that has been highly successful in managing and developing the MRV system. However, this institutional efficiency may come at the expense of wider stakeholder engagement, with a number of informants commenting that the MRV development process has not been inclusive from their perspective.

Finding 22. A large number of communication activities are taking place, though the effectiveness could be enhanced by tighter focus on transferable lessons, and working through South-South channels.

There are a large number of communication activities undertaken by NICFI supported channels/REDD+ countries, aimed at sharing lessons learnt. All of the 'consensus building' reports commissioned by NICFI have been submitted by Norway to the UNFCCC REDD+ web platform. All the bilateral partners have engaged in communicating lessons learnt at the international level, for example Guyana has presented on MRV and reference levels at REDD+ Partnership

meetings and UNFCCC workshops; the Indonesian REDD+ Taskforce and Ministry of Forestry have presented COP side events; and the Tanzanian Government hosted a side-event at COP18 on lessons learnt.

In terms of the effectiveness of the communication activities, although countries' experience is being presented, there may be insufficient focus on lessons that are clearly transferable. A number of informants questioned the transferability of lessons from other countries but their views tended to be based on very specific technical aspects, which are closely related to country context. While these very context-specific aspects have by their nature limited transferability into other contexts, elements related to process and good practice seem likely to be eminently transferable. This suggests that more emphasis could be given to identifying and explaining the transferability of lessons learnt.

There is also evidence of communication activities within countries. For example, in Tanzania the REDD+ pilot projects meet every three months to share lessons learnt. However, in Indonesia the level of communication between provinces appears to be limited, in part due to the slow progress with MRV system development at the provincial level.

The multilateral channels are also active in communicating lessons learnt, although the documentation available on the UN-REDD and FCPF web sites does not appear to be updated regularly. In addition to the multilateral agencies themselves, the REDD+ countries supported through the multilateral channels are also active in gathering and communicating lessons learnt. For instance, Vietnam has produced a "lessons learnt" report which includes information on participatory carbon monitoring and participatory forest monitoring. Kenya's R-PP includes a budget for documenting lessons learnt, and so it may be expected that similar outputs will be generated in Kenya. One informant commented that UN-REDD is strongly promoting the communication of lessons learned through regional and sub-regional workshops.

There was a very low level of awareness of GEO generally amongst informants, which suggests that GEO has not been successful in its communication activities. This may, in part, be due to GEO undertaking activities through partnerships, and beneficiaries may be aware of GEO's partners without being aware of GEO's involvement. Nevertheless, even in cases where informants are aware of GEO, there is evidence of ineffective communication. For example, one informant commented that GEO had not understood the level of MRV system development already achieved by the country, and the support offered by GEO was consequently not appropriate.

Some instances of South-South communication of lessons learnt appear to be effective, for example Ethiopia has developed an MRV road map by following the MRV road map development process and experiences of Guyana. This seems to be a good example of excellent transferability and adaptation. Similarly, a workshop aimed at information exchange between Zambia and Tanzania has reportedly been successful in helping to develop country-specific allometric

equations. The South-South communication activities planned through the bilateral arrangement with Mexico are at too early a stage to assess for effectiveness, but there appears to be considerable potential from this support channel. On a cautionary note, a number of informants commented that the technical sophistication of the MRV systems developed needs to match the technical capacity of the country in question, and aspects of the Mexican communication activities, such as on model-based Tier 3 reporting, may be beyond the current needs and capability of some REDD+ countries.

5. Efficiency

The findings presented under Efficiency focus on how economically resources/ inputs (funds, expertise, time, etc.) are converted to results.

Finding 23. The level of support provided by Norway's International Climate and Forest Initiative (NICFI) for measurement, reporting and verification (MRV) is not excessive compared with the NICFI funding for other readiness needs.

While international and national informants described MRV as being a high priority, particularly as systems need to be in place for results-based payments to happen, concerns were also raised about the level of funding allocated to MRV and reference level development in comparison to other Reducing Emissions from Deforestation and Forest Degradation (REDD+) readiness activities. However, these concerns do not appear to be borne out by the results presented below.

In Indonesia, 13% (22.5 million Norwegian Kroner, NOK Table 3) of the budget for Phase 1 of the Indonesia – Norway bilateral agreement (180 million NOK in total) has been spent on MRV and reference level activities. Of the 213 million NOK that has been disbursed to Tanzania for readiness activities through the NICFI bilateral agreement, 23%¹⁹ (49 million NOK, Table 3) has been disbursed for MRV and reference level activities²⁰. NICFI does not have a specific bilateral agreement with DRC, however, out of an estimated 58 million NOK (10 million USD) annual allocation across all donors for readiness activities in the Democratic Republic of Congo (DRC), the 2013 allocation to MRV and reference level establishment is about 7% (4.1 million NOK/700,000 USD).

In Guyana, an initial payment of 7.2 million NOK was entirely used for MRV and reference level establishment, however, it is less easy to compare this against the NICFI allocation for other REDD+ readiness activities as Guyana receives payments for results achieved, which are transferred to the Guyana REDD+ Investment Fund (GRIF). Disbursements from the GRIF are used for a broad range of activities in support of the Guyana Low Carbon Development Strategy, including MRV and reference level development, but these funds are essentially no longer NICFI support as they are Guyanese national funds.

Given the early stage of readiness for REDD+ of most countries, little information exists on what might constitute an appropriate balance of funding for

¹⁹ This includes 27.5 million for the LiDAR project which is intended to generate research outputs that are relevant generally, and the project is not only relevant for Tanzania.

²⁰ We note that 25% of the funds disbursed to Tanzania for MRV and RL activities includes large research project that has work components of regional relevance

MRV and reference levels compared with other readiness needs, and in any case this will differ between countries. In addition, as one informant pointed out, it is too early in the process to know whether the balance of support for MRV in comparison to other REDD+ readiness elements is appropriate. However, the proportional allocations in Indonesia, Tanzania and DRC are below the estimates of proposed REDD+ readiness budget allocations to MRV and reference level development in Readiness Preparation Proposals (R-PPs), which average 45% of the total budget²¹.

Finding 24. NICFI funding for MRV and reference levels is primarily allocated to UN-REDD. Among the NICFI bilateral partners, Tanzania has received by far the largest amount of financial support.

The UN-REDD Programme accounts for around 47% of the funding allocated to the NICFI MRV and RL work track. This is to be expected given that there is a need to engage a large number of countries in REDD+ in order to effectively reduce emissions and to prevent international leakage.

In relation to the bilateral funding provided, both in terms of the total amount contracted and the total disbursed for MRV and reference level activities, NICFI support appears to be disproportionately focused on Tanzania (Table 3). To a certain extent this may be justifiable given the very low capacity starting point of Tanzania relative to Guyana, Indonesia and Mexico. However, Tanzania also has lower forest cover than other countries, and less potential for results-based payments (which would suggest that it should be given less prominence in the MRV work track).

On the other hand, it is also recognised that Tanzania's forest is largely dry woodland, subjected to widespread livelihood use, often subjected to wildfire, fragmented and subject to poorly understood long-term fluctuations. The rationale for NICFI support was a deliberate attempt to work on REDD+ in a country in which forest conditions are similar to those across a large part of Sub-Saharan Africa.

A further reason for the disproportionately high spend in Tanzania is that it is the location for the (Laser Imaging, Detection and Ranging) LiDAR project, which is intended to generate lessons on the use of advanced remote sensing techniques generally, and should not be viewed as a Tanzania-specific project.

Nevertheless, even with the budget for the LiDAR project removed, the total allocation for Tanzania remains just under one quarter of the total MRV and reference level work track budget. We note that around 80% of the LiDAR project budget has been used to cover the support of institutions in Norway, resulting in increased cost compared with activities where local institutions are more prominent.

21 Lotsch, A. (2012) REDD+ Readiness Preparation under the Forest Carbon Partnership Facility. In 'Capacity development in national forest monitoring'. Available at: http://www.cifor.org/publications/pdf_files/Books/BWijaya1201.pdf

An international informant commented that this use of funds needs to be rebalanced somehow, and that efforts to support longer term capacity need to be enhanced with predictable (but not necessarily large) funding in the next at least 5 to 10 years.

Table 3 - NICFI MRV and reference level funding²²

Modality	Total NICFI MRV contribution Million NOK	% of Total NICFI MRV Work Track Contribution	Total disbursed Million NOK
UN-REDD	219.0	47%	Not known
Tanzania bilateral / MRV aspects of embassy projects	111.0*	24%	48.9
Mexico bilateral	57.0	12%	34.7**
Norwegian Space Centre / GEO	c. 17.0 + 10.0	7%	27.0
CBFF COMIFAC project	23.2	5%	23.2
Indonesia bilateral	22.5	5%	22.5
Guyana bilateral	7.3***	2%	7.3
TOTAL	467.1	100%	

* For breakdown of NICFI bilateral support to Tanzania (see Table 4 and also country annex)

** The year 1 budget has been disbursed, this included a US\$5.4 million (c.34.7 million NOK) allocation for MRV. Sources – Norad Department of statistics, Project revised budget 2012.

*** This figure does not include funding from the Guyana REDD+ Investment Fund (GRIF) as this has already been given to Guyana as payment for results achieved.

Table 4 - Breakdown of NICFI support to Tanzania

Bilateral / multilateral	Million NOK	Pilot projects Estimated % total budget on MRV	MRV budget estimate Million NOK	Pilot projects Estimated % budget on MRV	MRV budget estimate Million NOK	TOTAL
LiDAR Project	27.5	JGI 55%	10.6	CARE HIMA 10%	3.9	
ZWBP	4.3	FCG 10%	4.1	AWF 25%	3.6	
NCMC preparation	0.5	TaTEDO 30%	4.2	WWF 100%	13.9	
NCMC implementation	32.0	Mpingo 30%	4.1	WCS 25%	2.3	
Total	64.3		23.0		23.7	111.0

²² Please note that the expenditure figures are estimates based on the data available, and some caution should be exercised in using these values.

Finding 25. Our estimates suggest that the overall cost of MRV and reference level establishment in some countries is likely to be substantial, however, there has been very little attempt to estimate total current levels of expenditure, or the implications for replicating pilot systems in other REDD+ countries.

The overall total cost of developing an MRV system and reference level in Tanzania appears to be very high. We estimate that 170 million NOK has been contracted to date across several donors in Tanzania (primarily the NICFI bilateral agreement, United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD) and the Finland funded National Forestry Resources Monitoring and Assessment (NAFORMA) project) for MRV and reference level establishment (Table 5), and there is a long way to go before Tanzania will have a fully functioning MRV system. This is far beyond the estimates for MRV establishment in Guyana, and even Indonesia, although we note that the NAFORMA project is very comprehensive and would probably exceed what most other countries would aim for during the REDD+ readiness phase.

Although the budgets presented in countries' R-PP documents set out initial cost estimates for MRV system development, these are underestimates and have not been updated. Where countries have produced detailed plans for their MRV systems there has been a lack of consideration given to the relative costs of employing different methodologies, approaches and technologies. For example, such considerations are not included in Indonesia's draft MRV strategy. Given Indonesia's decentralised governance structure, the MRV strategy envisages a system of district and province level measurement which is then brought together at the national level. Such a system is likely to be administratively complex, time consuming and consequently costly. However, there appears not to have been any estimate of the potential running costs of such a system.

There appears to have been little attempt by NICFI or implementation partners to estimate total levels of expenditure on MRV (or components of MRV such as land monitoring systems, forest inventory, greenhouse gas inventory etc.). There also appears to be little quantification of total MRV costs relative to the potential for results-based payments. We recognise that these costs will be highly variable between countries, depending on national circumstances, starting points and approaches used, however, such information is highly important for estimating the level of resources required internationally for MRV and RL establishment in REDD+ countries. This information is also important for accountability purposes and avoidance of duplication, and to enable REDD+ countries to make strategic and informed decisions about the level of resources to apply to MRV and RL establishment given the country potential for results based payments. These issues are discussed further in relation to sustainability).

The Norwegian Space Centre commented that an assessment of costs and the operational use of the various components of the LiDAR project will be

undertaken at the end of the project. This information should be highly useful in assessing the feasibility and sustainability of extending the use the technologies tested.

Table 5 Country MRV funding from NICFI and non-NICFI sources* 23

MRV / reference level (RL) budget (million NOK)	DRC	Guyana	Indonesia	Tanzania
Bilateral				
UN-REDD		7.3	22.5	111.1
UN-REDD/FCPF	5.4		8.1	24.6
TOTAL NICFI Support Channels	5.4	7.3	30.6	135.7
Known Non-NICFI support (actual totals will be higher than this as data was not easily available for all donors)		4.3 - IDB 3.7 - CI/KfW 2.9 - Guiana Shield Initiative		34.9 - NAFORMA (Finland)
TOTAL known non-NICFI support		10.9		34.9
Total MRV /RL budget NICFI and known non-NICFI (million NOK) (NOTE much less has been disbursed)		18.2		170.6
TOTAL MRV / Reference Levels budget in Readiness Preparation Proposal	51.4	19.5	55.0	15.2

* See country annexes for details

Finding 26. The economic efficiency demonstrated by NICFI focal countries in developing their MRV systems and reference levels has varied widely, however this is partially related to country context.

Guyana has developed a fully functioning MRV system from a low capacity starting point, and in a relatively short period of time. Based on the cost figures shown in Table 5), and data on forest area cover from the Forest Resources Assessment 2010, the total known donor spend on MRV for Guyana is

23 Please note that the expenditure figures are estimates based on the data available, and some caution should be exercised in using these values.

approximately 1.20 NOK/hectare. To give an indication of the variation in costs between countries, the Guyana figure compares to approximately 5.10 NOK/hectare for Tanzania, or 4.48 NOK/hectare if the cost of the LiDAR project is excluded (as noted above, the LiDAR project is intended to generate research outputs which are applicable generally, and it is not solely focused on contributing to Tanzania's MRV system)²⁴.

Caution should be exercised when comparing the costs of MRV in different countries due to differing country circumstances and starting points, and also differing support objectives. However, in addition to contextual factors it is possible to identify a number of operational factors that influence the efficiency with which MRV systems have been developed. The lessons from relatively efficient (and inefficient systems) may be used to guide more efficient system development in other countries.

There appear to be a number of reasons for the high level of efficiency in Guyana. One of the key reasons is that the MRV and reference level activities have been driven and managed by a single implementing institution (the Guyana Forestry Commission), with reportedly limited engagement with wider stakeholder groups. A further reason is that the activities have been led by an efficient manager, who has the necessary skills and authority to drive the system development forward, and who has also remained in the role from the beginning of the development process. In addition, Guyana received external technical support to develop an MRV roadmap, which key informants describe as being instrumental in the development of the system.

It should also be noted that Guyana is a small country, with relatively homogeneous and inaccessible forests, and a limited number of drivers of deforestation; these factors also help to explain Guyana's ability to develop its MRV system with low levels of funding. Nevertheless, important lessons can be taken from the Guyana example regarding the "enabling" or "success" factors which contribute to the efficient development of an MRV system and reference level.

In Indonesia, despite the political standoff on the agreement of the MRV institution, there has been good progress on developing components of the MRV system. The NICFI bilateral funding has primarily been used to support the Indonesian Space Agency (LAPAN) in the provision of a new satellite receiving station to enhance Indonesia's ability to receive a large amount of satellite data. Through the bilateral funding, LAPAN has also acquired full historical remote sensing data and has undertaken assessments of historical forest cover change, which should provide the foundation for developing Indonesia's reference level. LAPAN has also acquired multi-user licences for the data it has acquired, to reduce duplication in costs for the ministries that require these data going forward. This has all been achieved with a budget of 22.5 million NOK, which appears to be an efficient use of funds.

²⁴ Please note that the expenditure figures are estimates based on the data available, and some caution should be exercised in using these values.

Tanzania has received by far the most funding (pledged and disbursed) but the approach of funding many separate projects (bilateral and multilateral) appears to have generated piecemeal results, despite relatively large levels of funding. As noted above, the funding for MRV in Tanzania is approximately three times that in Guyana, on a NOK/hectare of forest basis, and Tanzania is still some way from having a fully functioning system.

It should also be noted that some of the most impactful elements of the program are the ones with the lowest cost – the activities in Guyana and the Meridian Institute reports.

Finding 27. The proportion of the budget allocated to staff and office costs for the Group on Earth Observations' (GEO) Global Forest Observations Initiative (GFOI), and the cost of the LiDAR project appears to be high in comparison with the outputs achieved so far.

Staffing costs for GEO's Global Forest Observations Initiative (GFOI) appear large (45-52% of total budget per year²⁵ in comparison to the budget for national capacity building and the development of methodologies (which together only account for about 14% of the annual budget). This seems to be a function of the structure of GEO GFOI, which consists mainly of high cost staff. In addition there does not appear to be any budget allocated for the procurement of multi-user licenses or the acquisition of data from private providers, although the coordination of uptake and distribution of satellite data is one of the GFOI objectives, and is also one of the services that REDD+ country informants are hoping GEO will provide. There appears to be the potential for large efficiency savings if REDD+ countries can avoid having to negotiate data licenses separately.

The LiDAR project in Tanzania also appears to be expensive, given the practical value of its outputs (though it should be noted that the LiDAR flights themselves were lower than originally budgeted for). The project will account for 25% of the NICFI bilateral MRV allocation in Tanzania and about 10% of the total funding across all countries and support modalities. A number of informants have questioned the applicability of the technology and describe the project as something that is primarily of interest to the scientific community. The LiDAR project provides an interesting comparison with the efficiency of the support provided to LAPAN in Indonesia, which had a smaller budget and has generated more tangible outputs (please see Finding 26 for details on the tangible outputs from LAPAN).

One reason for the high cost of the LiDAR project is the proportion of activities undertaken by higher cost Norwegian-based organisations, which account for approximately 80% of the overall budget. The Norwegian Space Centre commented that the use of Norwegian-based organisations has been largely

25 Global Forest Observations Initiative (GFOI) Work Plan for 2012 and 2013

unavoidable due to the lack of capacity in Tanzania, and that efforts are being made to build capacity in Tanzania.

It should also be noted that the LiDAR project is intended to generate research outputs which may be disseminated and used across a large number of countries in the future, and the depth of the current evaluation may not be sufficient for capturing these broader outcomes. An independent mid-term review of the LiDAR project has been commissioned and will provide more detail on the effectiveness and efficiency of the project.

Finding 28. Communications and interactions between the NICFI Secretariat's MRV staff and the wider NICFI Secretariat, and also with partner countries is frequent, efficient and well-regarded.

There appears to be strong interaction within the NICFI Secretariat between the staff members responsible for MRV and the rest of the team, with MRV staff in growing demand. There is generally a short decision-making/communication route between the NICFI Secretariat and the climate negotiators.

The embassy personnel in Jakarta were positive about the level of management, extent of communication, frequency of visits, and level of co-ordination with the NICFI Secretariat staff member responsible for the partnership with Indonesia (including the MRV aspects of this). According to the bilateral implementation partners in Guyana and Indonesia, contact with the NICFI Secretariat staff is considered to be frequent and NICFI Secretariat staff appear to ensure that they are appropriately available. In Guyana NICFI Secretariat staff members are held in high regard for being open and supportive, as well as efficient, and respondents commented very positively on the good communication on MRV that they have with the NICFI Secretariat. Informants from the Indonesia REDD+ Task Force reported having valuable and substantial interaction on MRV with the NICFI Secretariat.

Finding 29. NICFI administration and management of the MRV portfolio is generally efficient, but some aspects have scope for improvement and staff are regarded as over-stretched.

The NICFI Secretariat currently has two staff members solely dedicated to work on MRV and reference levels, and an additional staff member who spends some time on this. The wider Secretariat staff members are also engaged on MRV issues within their individual portfolio's, which takes some of the pressure off the technical MRV staff. They also rely heavily on one external consultant to help but claim that they are coping with the help of the Ministry of Foreign Affairs, including Norad (for administrative and management support), and the Norwegian embassies in Tanzania and Indonesia. The evaluation team gained the impression that the NICFI staff consider the MRV work track to be reasonably efficient, but decreasingly so due to staff shortages in a situation characterised by growing demand. NICFI have recently recruited the second member of the MRV staff to help address this shortage.

Several international informants commented that NICFI human resources for MRV are stretched too thinly, that staffing numbers in focal countries are also inadequate and that they rely on a rather limited pool of experts (although the NICFI Secretariat note that they also have a wide informal contact network that they draw on for technical and strategic input). The NICFI MRV staff also appear to have limited time to reflect and process lessons learnt. Despite this, they appear to have a good grasp of the state of progress in the NICFI focal countries, and one of the international informants who commented on the staff shortage also said that “they are doing a great job for the limited number of persons/small country they are”.

In terms of management, NICFI appears to be flexible in its administration of bilateral funding, part of which supports MRV activities. Respondents on the Mexico-Norway bilateral agreement reported that NICFI proved to be very flexible in addressing project delays and budget changes, and was rapid in making decisions to approve these changes. An extension was also made to Phase 1 of the Indonesia Letter of Intent (although this may be more a result of necessity rather than flexibility); a flexible approach towards other MRV elements of the Indonesia Letter of Intent was also noted from interviews with NICFI staff.

The embassy in Tanzania appears to be providing strong management, guidance on financial administration, and reporting of results in relation to the embassy administrated projects. According to a respondent from the Tanzanian Institute for Resource Assessment, which hosts the REDD+ Secretariat, the guidelines and modalities for reporting are very clear and there are regular meetings between the Royal Norwegian Embassy and Institute for Resource Assessment to ensure the efficient administration of projects. Most of the REDD+ pilot projects felt that disbursements were timely, according to the contract, and that there is clarity in budget reporting and documentation. All contracts for REDD+ projects with budgets are available from the Royal Norwegian Embassy in Tanzania’s website. Where there have been financial or reporting irregularities, such as with the Wildlife Conservation Society of Tanzania project or the WWF Tanzania project, these have been identified and remedied.

In the case of Guyana the clarity, quality and timeliness of the interim measures reporting appears to be very good, and presents a clear picture of evolving developments on MRV and reference level activities. In the case of Mexico, improvements to the clarity of reporting were suggested by NICFI to better illustrate progress.

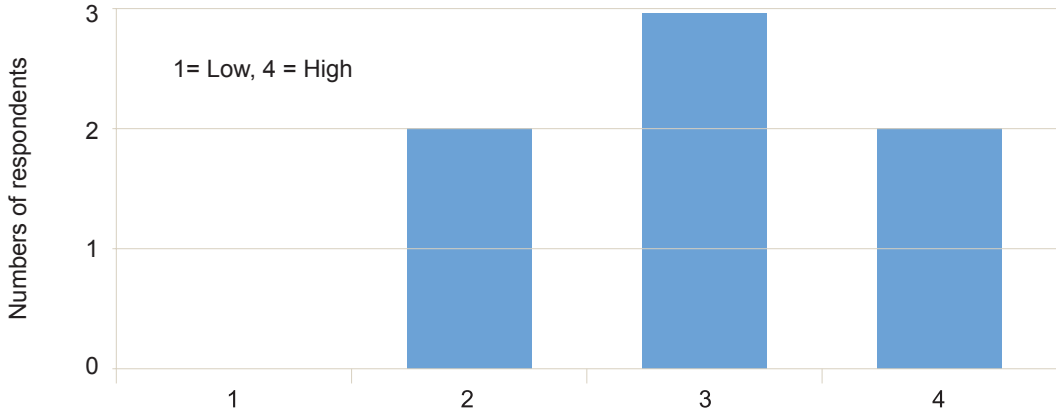
For GEO and UN-REDD, the reporting is a little unclear on what activities have been undertaken, and what outputs and achievements have been made. There may be a need for generality in the reporting of these multilateral initiatives as they cover a large number of activities and countries, however, the consequence is a lack of detail on tangible developments. The Forest Carbon Partnership Facility (FCPF) R-PP progress reports tend to disclose all relevant activities that

have taken place in the country, but do not attribute the activities to specific funding modalities or donor support programmes. This information would be very useful in order to understand the effectiveness of different programmes and interventions.

Finding 30. The extent of co-operation and co-ordination between NICFI and other donors and national partners is mixed.

Although it was only a small sample, the international informants interviewed suggest that at the international level, NICFI’s co-operation and co-ordination with other actors was good (Figure 2). One informant commented on the “mutual sharing relationship with MRV staff at NICFI” in which they had “been invited to share our expertise and learn from NICFI with dialogue and opportunities to work together to develop the best possible solutions”.

Figure 2 Responses from international informants on the NICFI co-ordination



How well have NICFI MRV activities been co-ordinated with other actors and agencies?

At the country level the extent of co-operation and co-ordination between NICFI, other donors, and national implementation partners, is mixed, with instances of both good and limited co-ordination.

A respondent in Tanzania noted that donor co-ordination improved after the NICFI baseline evaluation in 2010²⁶, but has since fallen back, with other donors not really knowing what is being done with NICFI financing in Tanzania. In Indonesia co-ordination appears to be limited, with NICFI interacting with other donors in the country in respect of information sharing (when NICFI staff visit), but with limited co-ordination or harmonisation beyond this. Poor co-ordination between actors (donors and the national implementation agency) appeared to contribute to the initial delays in Mexico.

26 Salmi J., Lindroos K. and Karani I., (2010). Real-Time Evaluation of Norway’s International Climate and Forest Initiative – Contributions to National REDD+ Strategies. Country Report: Tanzania Evaluation Report 17/2010 <http://www.norad.no/en/tools-and-publications/publications/publication?key=333472>

In contrast, there appears to be good donor co-ordination in Guyana where the MRV roadmap is regularly updated with current activities and the list of donors supporting each activity.

In relation to the multilateral institutions, the picture was also quite mixed. Poor co-ordination within UN-REDD and with other agencies, including FCPF and GEO contributed to slow initial progress, but this situation appears to have improved since 2011.

In Indonesia, the UN-REDD programme was well co-ordinated with the Ministry of Forestry, where efforts have been made to identify and address gaps in the support provided by others. However, UN-REDD appears to have been less well co-ordinated with Indonesia's National REDD+ Taskforce, for example, UN-REDD (in consultation with the Ministry of Forestry) selected Central Sulawesi as its pilot province, whereas this was not initially selected as a priority province by the Taskforce. In larger countries in particular, inter-agency coordination can be challenging.

It was reported by UN-REDD that the new joint country coordinator shared with the FAO-Finland programme in Zambia had greatly facilitated progress by both programmes, and this was confirmed by the FAO-Finland programme leader. This is a good example of coordination between multilateral initiatives being of great benefit to the partner country.

In DRC donor co-ordination was regular and generally perceived as efficient (and considered exemplary between UN-REDD and FCPF). There appeared to be a good degree of data sharing among the international partners, which has been to the benefit of the TerraCongo forest monitoring system. The preparation of a unified annual work plan and budget across all donors appears to have been a helpful activity in ensuring co-ordination. An international stakeholder pointed out that an important factor in the cases of both Zambia and DRC is that co-ordination among the different initiatives is promoted at the country level.

The majority of informants interviewed in NICFI's focal countries either did not know about or were not engaged with the GEO initiative. This suggests a low level of co-ordination between GEO and both national implementation agencies and other support channels. This may partially be because of the highly technical nature of the work covered through GEO and it is also possible that there is low awareness of GEO because GEO is an umbrella organisation covering many partners. Many of its activities are implemented through partners, who may not communicate GEO's involvement. However, in cases where national actors and informants were aware of GEO, the view was still that the initiative was not well co-ordinated with others.

The importance of co-ordinating between donors was highlighted by a large number of informants, with the identified issues including multiple reporting requirements and timescales, duplication of effort, and the resource cost of engaging with multiple initiatives and donors. An international stakeholder

pointed out that this is becoming ever more challenging as pilot activities proliferate.

Finding 31. There are instances of delayed disbursement and high administrative burdens associated with payments, with knock-on effects for programme delivery.

There are a number of instances of delayed disbursements, which has had consequences for the effectiveness and efficiency of the programmes affected. For example, Guyana has not yet received funding from the FCPF because of problems transitioning between the World Bank and the Inter-American Development Bank as project partners, and as a result other donors have had to be sought or national funds used. This has also meant that different parts of the MRV roadmap have been ‘parcelled off’ among a range of donors, and each have their own ideas and agendas.

As a separate issue, the Guyana Forestry Commission (GFC) is now receiving funding in annual grants from the Guyana REDD+ Investment Fund (GRIF), but the administrative burden is viewed as high as GFC need to reapply each year. In addition it takes some months for the funding to come through, leaving a gap during which no funds are available, and in turn this reduces the amount of time available to undertake the annual assessment. Because of this there is a need to decrease the length of time GFC spends on undertaking their annual assessments.

A further example is from the Ministry of Forestry in Indonesia, which has reported problems due to delayed payments from the FCPF. Also in Indonesia, the UNDP was criticised by several informants as being an inefficient administrator of the Indonesia – Norway Letter of Intent Phase 1 funding (“United Nations for Delayed Payment”).

In DRC the FCPF was also seen by a number of informants as bureaucratic and slow to release funds. This is in part due to the fact that a) FCPF staff are not resident in country, and b) the Fiduciary Management Unit is shared with the much bigger World Bank Forest Conservation & Nature Project, that tends to be given priority. However, the FCPF process itself (Readiness Plan Idea Note, Readiness Preparation Proposal, REDD+ Strategy, Investment Plan) is viewed as rigorous and clearly defined. An international stakeholder noted that while the FCPF is very good at launching the Readiness process it is difficult for it to implement these grants on the ground, which are small compared with the size of regular World Bank projects.

UN-REDD procedures are viewed as less onerous than FCPF but there are still reports of delays in programme implementation (in part due to bureaucratic delays). However, there are also positive examples where UN-REDD has moved budgets from the Global Programme to a National Programme in order to avoid delays (with the National Programme later repaying the Global Programme).

Finding 32. The NICFI MRV and reference level work track lacks detailed, operational level planning and risk assessment to guide its activities.

While NICFI has high level objectives and high level discussion of risk in documentation to the Starting to guide their work, there is no formally structured document such as a logical framework to provide detailed information on the planned implementation of activities, nor on the assumptions that have been made for the progression from activities to outputs and ultimately outcomes. Nor is there a detailed, formal, operational level assessment of risks that could influence the planned progress towards the outcomes.

While we have not found any evidence to suggest that the NICFI MRV and reference level activities are in any way inconsistent with the high level objectives, there is no detailed documentation that could be reviewed against to check that activities are on track and moving in the right direction to achieve the four NICFI core objectives. This is especially pertinent in a dynamic and rapidly evolving context such as that of REDD+. Furthermore, as three separate government institutions are involved in the management of NICFI, there is a particularly important need for great clarity on direction, focus and progress.

6. Sustainability

The findings presented under Sustainability focus on the probability of continued long-term benefits after NICFI support has ended.

Finding 33. Ensuring prospects of results-based payments is important for maintaining the momentum of measurement, reporting, verification (MRV) system development, and the sustainability of the system components developed so far.

The realistic prospect of results-based payments appears to be a highly significant factor in driving and maintaining the development of MRV systems. The bilateral agreement for results-based payments between Norway and Guyana was instrumental in motivating the development of the Guyanese MRV system. This suggests that where agreements for results-based payments have not yet been established the momentum for MRV system development may not be maintained. The United Nations Collaborative Programme on Reducing Emissions (UN-REDD) noted that without clarity on precise monitoring requirements and performance measures set out in results based payment agreements it would be difficult to advance beyond initial training, capacity building and demonstration projects.

This national level picture appears to be replicated at the project level in Tanzania where achieving revenues through Verified Emissions Reductions (VER) sales will be crucial for sustaining the activities of the projects, including MRV.

A related issue pointed out as critical by an international informant is that either there needs to be results-based payments, or NICFI/others need to continue providing a sufficient level of support so that what has been developed is not lost.

Finding 34. For MRV systems to be sustainable the cost of maintaining the system must be proportional to the potential for results-based payments.

Even where agreements for results-based payments have been established it is important that the costs of the MRV system (in the specific sense of only what is needed to secure results-based payments) are small in relation to the potential payments, particularly given that payments will need to cover the costs of REDD+ activity implementation as well as MRV. Given the current uncertainty

over precisely what will be required, it is important that flexibility for adaptation of the MRV system in the future is built in. Given the uncertainty of the timing and magnitude of future REDD+ payments that many countries face, it is logical for them to try and include MRV requirements within a wider forest monitoring and information system. At the same time, REDD+ payments alone cannot be expected to cover the cost of a full forest monitoring system. These payments should, however, be sufficient to cover the incremental costs of MRV.

The reported running costs of the Guyana MRV system are in the region of US \$500,000 per year, which compares favourably with the estimated annual results-based payments of up to US \$40 million per year. Comparative data for on-going costs is limited as very few countries have fully established MRV systems.

The system planned for Indonesia involves a high level of decentralisation which could be expensive to maintain, administratively complex, and a challenge to ensure consistency. There also appears to be some duplication of effort with competing agencies or ministries providing similar MRV system components. Some informants also questioned the efficiency of the sample plot system used by the Ministry of Forestry, which involves inventory of all stems in one hectare plots (i.e. even stems <10 centimetres in diameter at breast height are recorded across the entire hectare), however, this is the preference of the Ministry of Forestry. The draft Indonesian MRV strategy does discuss the importance of balancing the costs and the complexity of the MRV system, and this need for an appropriate balance appears to apply generally across all countries.

Finding 35. The potential added-value to countries from MRV system establishment is an important consideration in their sustainability.

Many informants expect that added-value benefits will accrue from MRV system development. This suggests that there will be positive reasons for sustaining the systems developed, in addition to enabling Reducing Emissions from Deforestation and Forest Degradation (REDD+) payments. A number of informants suggested that the MRV information will be useful for land management generally, including the monitoring and enforcement of land use concessions and extraction agreements.

The Guyana Forestry Commission is already using its MRV system to check for compliance of concessionaires with their timber harvesting plans, and suggested there would be added-value in terms of aiding compliance with timber trade measures such as European Union Forest Law Enforcement, Governance and Trade action plan (EU FLEGT) and the US Lacey Act. The Guyana Geology and Mines Commission is also using the data from the MRV system to identify illegal mining activity. Similarly, the Mexican MRV system was described as a “multi-functional” instrument, serving as a guide for social, economic, and environmental policies.

There were mixed views on the added value from the process of developing MRV systems. For example there were differing views on whether the negotiations over the MRV institution in Indonesia will have a beneficial effect in terms of driving improved transparency and co-operation, or cause an entrenchment of established positions.

UN-REDD are fully aware of the need for both clarity and flexibility and are also keen to encourage the development of MRV systems within wider National Forest Monitoring systems, aware of the need for both elements to provide cost-effective information that will be adequate for REDD+ payments and for wider planning and decision making purposes. In doing so, it is important that there is clarity and agreement on the terminology surrounding MRV, forest monitoring and information systems and safeguard monitoring systems.

As pointed out by an international informant, given the lack of clarity on MRV modalities at the UNFCCC level, it is important to develop flexible and robust MRV systems designed to cope with the possible expected scenarios for performance based payments. Over defining systems and over complexity will not be cost effective and helpful at this stage. Integration of the MRV system in the national structures and domestic use of data collected is also essential to ensure sustainability.

Related to this, an informant noted that costs should be lower if well integrated with government institutions that can use the data generated for domestically – in this way the cost could be shared.

Finding 36. Remuneration structures and employment conditions within forestry / environment departments are a threat to sustainability in many countries.

Countries face many challenges in building and retaining capable teams of technical staff within the relevant departments or ministries responsible for MRV systems. These staff will normally be retained on standard civil service terms and subject to prevailing employment terms, institutional processes and cultures.

Historically many countries (Guyana and Tanzania of the NICFI partners but this a widespread problem in Sub-Saharan Africa – notably Zambia, Uganda and Kenya, all of which have a history of losing key government personnel) have found it difficult to maintain highly qualified staff beyond the term of externally funded projects, as there are likely to be better prospects available overseas or in the private sector.

The *per diem* culture can be an obstacle to maintaining effectiveness and efficiency in many places, where staff can earn more from attending meetings and workshops than carrying out their core technical roles and this needs to be resolved if REDD+, or any other long-term forestry initiative, is to be sustained outside a largely uncontrolled private forestry sector

Finding 37: Choices about technology may have been made without due consideration of what may be best value and most robust over the long-term.

UN-REDD (FAO) strongly emphasized their commitment to promoting free, open source software, processing technologies and free data. While GEO also advocates the use of free or low cost satellite data for monitoring, it felt that the packages promoted by FAO were not always fully considered in terms of the long term capability of countries to maintain computing infrastructure, keep on top of software updates and the information technology surrounding the tasks of image analysis and data management.

FAO has widely promoted the use of software and processes used by the National Institute for Space Research (INPE) and the Brazilian Space Agency for their very successful deforestation detection programme in Amazonia. This programme is staffed by around 30 full-time remote sensing specialists and has institutional backing from a department with relatively sophisticated computing infrastructure. If the software is used “as is” and images are pre-treated, then the personnel demand is considerably lower than has been the case to date in Brazil.

While open source software is free to acquire, overall cost estimates need to consider operation, code maintenance and training, which costs may in the longer term prove to be considerable. FAO have also pointed out that the staffing needs of the Brazilian system are much lower if the developed software is used. They noted that while Brazil made substantial personnel inputs to develop the software, in use the personnel requirements could be greatly lowered by the need for limited adaptation to local conditions, especially if image pre-treatment could be done at a regional centre.

7. Impact

This section briefly summarises potential impact from the MRV work track studied in this evaluation against the *four objectives of NICFI support* (Section 1.2) and against the *Three Objectives forming the Purpose of the Evaluation* (Section 1.3), noting that the emphasis is [to be] on institutional, political and economic perspectives, less on technical aspects, and cover the period from 2007 onwards.

7.1 Impact against the four objectives of Norway's International Climate and Forest Initiative

- 1 *For improving the prospects of the inclusion of a REDD+ mechanism in a post-2012 climate regime*

Findings 4 and 19 note the substantial contributions of the NICFI MRV activities and support to UNFCCC discussions. Technical discussions held in SBSTA have so far only delivered guidance, not developed methodologies) both directly and through the sharing of practical experience although as Finding 5 notes, without finally agreed definitions and guidance from UNFCCC, countries' progress on MRV remains challenging as they cannot clearly define their needs.

Although much communication of NICFI MRV work track activity progress is taking place, potentially transferable lessons that could increase the impact of the work track against this objective are not yet being adequately identified and communicated (Findings 19 and 22).

- 2 *For the preparation of mechanisms and implementation of activities to attain verifiable reductions in greenhouse gas emissions*

The focus has been on the development of functional MRV systems. So far, only Guyana has achieved a working system (Finding 8). Other countries are predominantly still in the preparatory stages (Findings 10 and 12) and while there has been good progress with this, such as capacity building in DRC (Finding 6) it has not yet reached the end point of a workable system. Resolving debate on institutional structures seems to be crucial. This was not a major issue in Guyana (the institution was already extant at the start of the support although it has had to develop) but has been a major barrier in Indonesia (Finding 11).

3 *For the conservation of natural forests to maintain their carbon storage capacity*

There has been positive impact accruing through measurements relating to the forest resource that may yield new or improved information, for example, the identification and determination of centres of forest loss, as has occurred in Guyana (Finding 35).

Preparatory work on improved transparency on forest governance and information reporting could ultimately have a potential positive impact on natural forest conservation but this would require further action on the part of partner governments if this potential impact were to be secured.

At the same time, in countries with limited personnel resources, there is at least a potential danger that concentration on MRV may divert personnel from direct engagement with forest protection and management.

4 *[Supported activities are to be compliant with] the general objectives of Norwegian development cooperation, such as those related to livelihoods, economic and social development and the environment*

By and large activities supported under the MRV work track have been neutral, or even blind, insofar as direct impact on the general objectives of Norwegian development cooperation; this is neither unexpected nor inappropriate given the nature of the activities.

The process of developing MRV systems while largely so far resulting only in greater collaboration with other ministries should progress to wider consultation leading to increased transparency on forest governance and more accessible information. While this expected impact is generally valid, such an outcome is not a foregone conclusion and may also lead to entrenched positions (Finding 35).

The potential for livelihood benefits, for example through community engagement is only just taking off. There has been support to this in Guyana through Iwokrama and Civil Society Fund support but it is too soon to make any judgement on the scale of the impact or its transferability.

7.2 Impact in respect of the Three Objectives forming the Purpose of the Evaluation

1 *Assess to what extent the support has contributed to national capacity building, institutional strengthening and MRV and forest inventory systems*

In the partner countries visited, the most striking impact on capacity building has been in DRC (Finding 6), which started from a very low capability base in terms of existing human (rather than technical) capacity. Guyana has built solid and

appropriate capacity for MRV as part of its overall national MRV system (Finding 8) but it started from a much higher capability base than DRC did. Guyana, being much smaller in size and less diverse than DRC, also faced far fewer challenges in capacity building.

While some capacity building has taken place in both Indonesia and Tanzania, the lack of an effective, agreed institutional structure in the former (Findings 10 and 11) and the lack of coherence in the latter (Findings 12 and 13) have limited impact from capacity building.

Although there has been a strong focus on capacity building within the NICFI MRV work track, the complexity and diversity of the support modalities and the lack of consistent, clear baseline and reporting information makes it hard to assess impact so far and unless changed, this is likely to continue to be so.

2 Assess to what extent the support has been coordinated with the efforts of other actors

Finding 30 notes that the evaluation found a mixed picture in respect of coordination with other donors. At the international level informants reported positively on interaction between NICFI and other actors but within the multilateral agencies (FCPF, GEO, UNREDD) the evidence was less positive although matters had improved since 2011 and there are some examples of good coordination.

At partner country level, with the exception of Guyana, the evidence shows that coordination could be usefully improved. It is obvious that coordination will be more difficult in larger and more complex countries but the value of a clear road-map into which all agencies “buy-in” has been very valuable for securing good coordination in Guyana. The other countries reviewed all noted examples where coordination needed to be improved.

3 Assess the effectiveness and efficiency of different channels of support, where possible comparing these

It is generally too early to make useful comparisons on the different channels of support. Bilateral support to Guyana has been very successful (Finding 8) while in DRC, UN-REDD support has been effective and has been able to provide leverage and influence sufficient to create a benchmark for COMIFAC countries (Finding 7 and Findings 6 and 14). By contrast, despite Tanzania receiving substantial UN-REDD (and other) funding, it has not yet made solid progress (Finding 12).

In general, based on this evaluation (Finding 15), progress has been less with multilateral than bilateral funding. Criticisms were made of all the multilateral agencies in respect of delayed disbursements and excessive bureaucracy, but no such criticisms were reported in respect of bilateral support.

8. Conclusions

Conclusion 1. NICFI has made a major contribution to the development of international REDD+ MRV policy and has secured generally good alignment with its own and partner priorities and requirements.

NICFI has made a major contribution to the UNFCCC discussions on MRV and reference levels through consensus building activities, and through supporting MRV system development at the country-level, the practical lessons from which have subsequently been used to inform and shape the UNFCCC discussions (Findings 1, 4, 19). International negotiators commented very favourably on the timeliness of the reports commissioned by NICFI, and on the substantial value to them of the real-world experiences provided by NICFI supported pilots and activities (Finding 1 and 4).

In the process of delivering support for MRV, Norway has been largely able to meet its own priorities and definition of the scope of MRV (Finding 2) while maintaining generally good alignment with the priorities and requirements of its partners (Finding 3).

Conclusion 2. Guyana, through the NICFI bilateral agreement, has made effective progress in developing its MRV system and reference level; while other bilateral partners have made progress, none is yet close to achieving a fully operational MRV system.

Guyana started from a low level of capacity in 2009, in terms of both forest monitoring and carbon stock assessment, but has now completed two annual national-level measurement, reporting, and verification cycles, and is expected to propose the first REDD+ reference level to the UNFCCC in 2014 (Finding 8). Guyana's progress is particularly notable when compared against the other focal countries supported by NICFI (Indonesia, Tanzania, and DRC) which, while they are progressing, have not achieved fully functioning MRV systems or reference levels (Findings 6, 7, 10, 12,17 and 18).

Conclusion 3. There has been some progress in Tanzania, but the level of funding has been very high given the level of outputs.

The level of progress in Tanzania has been low given the amount of funding provided (Findings 12, 13, 23, 24, and 26). This may be explained, in part, by Tanzania's limited capacity starting point, but is also a reflection of a number of other factors, including: a piecemeal approach to the activities funded; problems

with co-ordination between the existing National Forest Inventory (NFI) and NICFI-supported projects such as the LiDAR project, and the Zanzibar Woody Biomass Survey; and support for project-level activities that appear to be expensive and may not necessarily contribute to the development of a national-level MRV system.

Additionally, there is the fact that there is no agreement for results-based payments between Norway and Tanzania, and therefore no incentive for Tanzania to complete the establishment of its MRV system (Finding 11). Linked to this is the problem of a highly eroded salary structure, which creates huge problems for developing an effective institutional structure through which MRV can be undertaken and results based payments earned (Finding 36).

It must also be noted that investment in Tanzania was meant, at least in part, to provide information of wide regional value but even so, the relative costs remain high compared with other bilateral partners.

Conclusion 4. There is a question about how far countries can progress in developing their MRV systems in the absence of an agreement for results based payments.

An agreement on results based payments is important for maintaining momentum in MRV system and reference level establishment (Finding 33). It is also important for financing system development given that the funding available through multilateral institutions is limited (Finding 15, Finding 23) and the cost of MRV system establishment is likely to be high (Finding 25); and countries are unable to finalise their MRV system design in the absence of final information on the basis on which results based payments would be made (Finding 5).

Another potential issue is that if systems are operational, for instance by 2015, but agreement on results-based payments is not realistically expected before 2020, then REDD+ countries will have to cover the system costs themselves or seek more donor support (Finding 1). There is considerable risk that the systems and capacity that has been developed will not be maintained during this period, especially in countries which are unwilling or unable to provide funding from national sources for this.

Conclusion 5. There has not been sufficient consideration of many of the cost elements for MRV establishment in NICFI supported activities.

Given that many stakeholders voiced concern about the level of funding being allocated to MRV compared with other aspects of REDD+, Finding 23 is revealing on the proportion of NICFI funds spent on MRV and establishment of reference levels, noting that there may be uncouncted finance due to limited information available to the team. While costs in Tanzania are a higher percentage than in the other countries visited, the percentage expenditure on MRV compared with other readiness activities within the NICFI MRV work track

seem to be substantially below what is anticipated on average in Readiness Preparation Proposals. There is at least preliminary evidence that MRV costs incurred by NICFI are neither excessive nor disproportional.

There has been a lack of effort made to key aspects of the cost of MRV system establishment, development and maintenance, including:

- Cost implications of using different approaches;
- Cost implication of increasing precision;
- Cost of increasing the number of carbon pools and REDD+ activities covered;
- Potential running costs; and
- Cost of MRV system establishment versus potential for results-based payments.

These estimates are needed so that REDD+ countries and donors can make informed decisions about the economic feasibility of MRV system establishment and to clarify the cost implications of different approaches, levels of technical detail, and moving up IPCC tiers. In this respect, it is noted that for capacity building, for example, there is little qualitative reporting (Finding 20) and attention will be required to securing both qualitative and quantitative information on all aspects to make full sense of the cost implications.

Cost of MRV technology is an important consideration for many countries, especially those that are planning for the day when the costs are met internally rather than by donors. There is some evidence (Finding 37) that choices of technology are being made without full consideration of what might be best in the long-term. The highly technical projects have proved to be expensive, and there have been instances of apparent misunderstandings of the needs (Finding 16) and the best approach (Finding 3) for the partner country. This suggests that more attention is required from NICFI at the contracting stage to ensure there is a clear consensus.

The absence of such estimates presents a risk that the systems developed may lack economic feasibility, economic efficiency and, most importantly, sustainability. In some cases, concerns were expressed that over engineered technical solutions were being promoted (Finding 32) – this is of significance given the importance of economic viability.

Although many informants were well-aware of the added value of MRV processes and outputs, and there are examples of such benefits already from several partner countries (Finding 35) these benefits are incremental to the value of REDD+ and would not, in the absence of positive economic benefits from MRV securing REDD+ payments, justify the work on their own.

Conclusion 6. Several factors critical for progress on MRV and reference level establishment are emerging.

From the information gathered it is possible to identify an emerging set of “success” or “enabling” factors. Where these factors are not present, or are not adequately addressed then it is likely that progress will be more difficult. This list of factors can be used to identify potential obstacles when engaging with REDD+ countries, and for planning actions to address the absence of key success factors. The list below is not intended to be exhaustive, but represents the main factors identified through this evaluation:

- a. High quality and timely technical support.** The Guyana Forestry Commission identified this factor as highly beneficial to the development of the MRV system (Finding 9).
- b. Clear route map for MRV system development.** This also appears to have been instrumental to the rapid progress made by Guyana (Finding 9).
- c. Agreement for results-based payments.** Having an agreement for results-based payments provides the incentive for countries to progress and maintain their MRV systems (e.g. Guyana, Finding 9), and where there is no agreement for results-based payments there is less incentive to progress to a fully functioning system (e.g. possibly Tanzania, where there may be more incentive to remain at the development stage in order to continue receiving funding for activities).
- d. Good co-ordination between donors and implementing agencies.** Good donor co-ordination has been achieved in both DRC and Guyana (Finding 30), and both countries have achieved significant progress in their MRV system development. Similarly the rate of progress in Zambia has reportedly improved greatly following the appointment of a joint co-ordinator for FAO Finland and UN-REDD (Finding 30).
- e. Clear definition and legal basis for institutional roles.** There is a clear institutional framework in Guyana, which has enabled rapid progress (Findings 9 and 21), whereas in Indonesia the difficulties in establishing the MRV institution appear to be the main obstacle to progress (Findings 11 and 21).

Conclusion 7. The slow delivery of funds through the current international structures is a threat to progress .

All focal countries experienced delays in disbursement of funds through the multilateral institutions, particularly the FCPF, causing activities to be postponed or other donors to be found, adding to the administrative burden (Finding 31). Had Guyana not been willing to provide substantial bridging finance, and actively seek alternative donors (including NICFI funds from ITTO REDDES Thematic Programme) it would not have made the progress it has. This is not a good example for other REDD+ countries.

Conclusion 8. The Guyana case is not an appropriate benchmark for the progress that might be made by countries with complex forest, forest use and social and political dynamics, nor is the Indonesia case yet sufficiently developed to provide such an exemplar.

Although Guyana has been highly successful in developing its MRV system and reference level (Finding 8), the lessons provided by Guyana have not been widely transferred to other REDD+ countries. This is largely because Guyana has a relatively simple forest structure and low levels of deforestation, and is viewed as being unrepresentative of other countries which have more complex characteristics (Finding 19). Indonesia provides an example of a country with a complex forest structure, and complex socio-political characteristics, but the system in Indonesia is not yet sufficiently advanced to act as an exemplar for other countries to follow (Finding 10 and 11).

There is a need to provide an exemplar for countries with complex forest types (and other complex characteristics) and Indonesia would serve this purpose well, if its MRV system can be fully established. Progress on MRV in Indonesia is also highly important in its own right, given the country's high emissions from deforestation.

Conclusion 9. While there is considerable demand for the services that GEO FCT/GFOI aims to provide, there is a lack of understanding on the scope of GEO FCT/GFOI, and GEO does not appear to be providing the services that REDD+ countries are expecting from the initiative.

For reasons that it was not possible to elucidate fully, GEO does not appear to have engaged effectively with REDD+ countries and although some of the lack of awareness of GEO may be due to the way in which the initiative works through implementation partners, even where there is direct awareness of GEO it is reported that engagement has not been effective (Findings 14 and 22). There also appears to be a discrepancy between REDD+ countries' expectations of GEO (e.g. co-ordinated and low-cost access to remotely sensed data) and what GEO is actually providing (Finding 27).

It is suspected that there has been major misunderstanding about what GEO can provide and in part this may be due to the indirect route through which the funding was channelled, via the Norwegian Space Centre and initially through the Civil Society Support Scheme. As a high technology intervention, as with the LiDAR work in Tanzania – which also is linked with GEO and the Norwegian Space Centre – it appears that much closer and more frequent contact with experts within NICFI might have been helpful for progress.

Conclusion 10. The number of donors that are active in REDD+ countries and the coordination of these donors can create a significant burden for in-country institutions.

There appears to be considerable need and potential for more co-ordination between and among donors, and national implementation agencies (Finding 31). There are examples of where donor co-ordination is being managed more effectively (Guyana and DRC), and these cases may offer possible models for improved co-ordination elsewhere (Finding 30). Countries in need of substantial support are likely to face considerable problems in coordinating action with multiple donor partners.

Conclusion 11. There appears to be a wealth of lessons being generated from the activities that are taking place on MRV and reference level development, but the focus of but communication on these could be further optimised.

Whilst the practical/real-world lessons generated by the NICFI MRV and reference level work track appear to be highly appreciated at the UNFCCC negotiation level, there is less evidence of perceived value among other REDD+ countries (Finding 19). As countries have tended to focus their communication on documenting national progress and their own lessons learned, those of the lessons that are transferable may not be evident to others, especially where the country context is perceived as very different (Finding 19, Finding 22). This suggests that communication of lessons could be optimised if effort was focused on distilling and emphasising the lessons that are transferable. It also suggests that national actors who are immersed in their own country processes might not be best placed to identify transferable lessons.

Conclusion 12. Although NICFI MRV personnel have managed to provide efficient communications and interactions within NICFI and with embassies and national counterparts in partner countries, the level of staffing for MRV within NICFI seems light compared with both the importance of MRV and level of financing.

Notwithstanding very positive findings on communications and interactions, the current NICFI MRV staff members appear to be over-burdened to the point where this is noticeable externally by other international actors outside of Norway (Finding 28, Finding 29). The newly recruited additional staff member with a sole focus on MRV should improve this but given the nature of the work and the overall level of financing, NICFI remains in our view understaffed.

The number of embassy staff (two positions) focused on the NICFI at the Royal Norwegian Embassy in Jakarta also appears to be low (as mentioned in a previous evaluation) given the highly complex and demanding political context in Indonesia. The highly political objective in the Letter of Intent with Indonesia for establishment of an independent MRV institution (Finding 11), and importance of making progress on this given the high potential to achieve emissions reductions

in Indonesia, suggests a need for stronger high level political engagement. Intensive engagement from staff on the ground is also needed to aid understanding of the complex dynamics in such a political landscape and to keep abreast of developments.

REDD+, including MRV, is a dynamic area of activity and subject to continuous evolution at the global policy level. Individual countries are making progress at varying rates, and REDD+ in every country is subjected to a range of influences which are also dynamic. Given this context, we believe that formalising NICFI actions through the development of a logical framework (or if appropriate a nested series of frameworks) plus a structured theory of change would be helpful for clarity and transparency and aid common understanding for all relevant actors and stakeholders (Finding 32).

9. Recommendations

Recommendation 1. NICFI should promote and facilitate efforts to estimate MRV costs, including cost implications of different approaches and levels of system sophistication, versus potential for emissions reductions and generating results-based payments.

Given the need for clarity on the economic implications of different approaches for MRV system development and improvement, and the risk of economic inefficiency, feasibility and sustainability (Conclusions 4, 5), a programme of work to establish these costs in the NICFI focal countries, supported by an overarching assessment of general lessons on this, is likely to be particularly useful to REDD+ countries, donors and UNFCCC negotiators.

There is also a need for assessments aimed at identifying the adequate and appropriate level of ambition and technical sophistication of MRV systems and reference levels. These should not be more sophisticated than necessary, and should have good potential to be sustained in the long-term economically and in terms of capacity and added value (Conclusion 5). Further consideration should also be given to the institutional and technical requirements for maintaining a monitoring system that uses and generates a large amount of data.

Recommendation 2. Priority should be given to exemplars of MRV systems in countries with complex forest structures, high rates of deforestation, and complex political and social contexts.

Indonesia would fulfil this role well if agreement can be reached on the institutional arrangements. In addition, where the barriers to progress are of a political rather than technical nature, Norway should consider using more high level political engagement.

Recommendation 3. NICFI should give consideration to the “enabling/ success” factors that have been identified when planning its engagement with partner countries, and support for the multilateral programmes.

The “enabling/success” factors listed (Conclusion 7) should be used to identify potential barriers to developing MRV systems and reference levels within individual countries, and for planning interventions to address those barriers. Consideration of these factors can also be used to estimate realistic timelines for progress.

Recommendation 4. NICFI should develop clear, operational level, documentation of its MRV activities.

Because of the tri-partite structure of NICFI, more formalised documentation, such as logical framework(s) and a clear and agreed theory of change (Conclusion 1) would also aid internal communication and consistency in decision making.

Recommendation 5. NICFI should develop a clear plan on the timing of system development, particularly in relation to the expected availability of results-based payments.

NICFI needs to address the danger that there will be a gap between the period when REDD+ countries are developing their systems and capacity for MRV, and the availability of results-based payments. One possibility is to plan for steady but slow progress up to 2020 for most countries (assuming this is the likely timing for an UNFCCC mechanism for REDD+ payments), with the possibility of fast-tracking a smaller number of countries where there is the possibility of interim bilateral payments for results.

Another option is to provide payments for reporting, in order to bridge the time gap and to provide incentives for maintaining MRV systems in the interim. However, data are not yet available on the on-going running costs of MRV systems, and it is possible that the required payments for reporting will be high; reporting in itself is not expected to produce reductions in greenhouse gas emissions.

Recommendation 6. NICFI should continue to emphasise the need for MRV systems that create added value (i.e. “no regrets” options), due to the uncertainty over the future availability of results-based payments.

NICFI already encourages the design of systems that have added-value or multiple benefits beyond MRV, but NICFI could place more emphasis on this in its MRV work, given that there is not yet any internationally agreed REDD+ mechanism for provision of results-based payments. Funding “no regrets” options means that the systems will have value, even if international agreement is not reached on results-based payments for REDD+, or in the situation that bilateral support is not available for all REDD+ countries. Creating “no regrets” systems also helps address to problem posed by any time lag between MRV systems being developed and results-based payments starting. This reduces risk for NICFI and its partners.

Recommendation 7. NICFI should undertake a needs assessment to clarify the scope of activities and services required by the international community from GEO FCT / GFOI and then assess the capacity of GEO FCT / GFOI to undertake this role.

There is an important role for GEO or similar to fulfil in ensuring availability and best use of satellite data, reviewing and standardising approaches for the processing, interpretation and storage of data, but the scope of the role needs to be clarified to ensure that services provided are well aligned with the needs of REDD+ countries and the international community (Conclusion 9). There then needs to be an assessment of whether GEO FCT / GFOI is institutionally equipped and resourced to fulfil this role. If this proves not to be the case then an alternative solution needs to be sought.

Recommendation 8. NICFI should establish an activity focused on identification and communication of transferable lessons on MRV and reference level establishment.

REDD+ countries are perhaps not best placed to identify and communicate the transferable lessons being generated through national level pilots and activities (Conclusion 11) because their own progress will naturally dominate their thinking about this. While NICFI MRV staff probably have a wider and more balanced view, they have limited time available to undertake this work. A research activity to identify and promulgate transferable lessons might be best undertaken through a new project or programme implemented through a grant and/or contract to an outside institution.

Recommendation 9. More attention should be given to co-ordinating efforts with other donors at the country level.

The co-ordination of donors can present a significant burden to partner countries (Conclusion 10), and the ability of partner countries to provide effective coordination appears to have been overestimated in some cases. The slow disbursement of funding through some channels (Conclusion 7) has been unhelpful in these cases. Guyana and DRC provide examples of how this can be done, with the FCPF – UN-REDD Readiness Preparation Proposal providing a structure for matching donors to planned activities. This is also vital where support is provided via discrete projects so as to ensure optimal outcomes from the support (Conclusion 3, Conclusion 9).

Recommendation 10. NICFI should consider increasing staffing or reallocating resources within the NICFI Secretariat to focus on MRV, provision of additional support to the Royal Norwegian Embassy in Jakarta, and more active management of high technology activities.

Given that the NICFI Secretariat MRV work track appears understaffed at the same time as being in increasing demand (Conclusion 12), an increase in staff

responsible, or reallocation of resources within the Secretariat, for MRV is needed to maintain current levels of efficiency. Similarly, the complex context in Indonesia, along with a highly political objective in the bilateral agreement requires strong engagement to facilitate progress (Conclusion 12 and Recommendation 6). More active management by NICFI Secretariat staff of expensive, high technology activities would also be useful to ensure that these are optimally targeted to meet NICFI and partner country needs (Conclusion 9).

Annexes



Annex 1: People Interviewed

NICFI Secretariat	
Maarten van der Eynden	Norway Ministry of Environment, Focus on MRV
Andreas Tveteraas	Norway Ministry of Environment, Deputy Leader
Gry Asp Solstad	Norway Ministry of Environment, Focus on UN-REDD
Jo-Kristian Rottereng	Norway Ministry of Environment, Focus on DRC
Anahita Youseffi	Norway Ministry of Environment, Focus on Guyana (Acting)
Eirik Brun Sørli	Norway Ministry of Environment, also Norway's REDD+ negotiator

Royal Norwegian Embassy Staff	
Inger Gerd Næss	Royal Norwegian Embassy, Dar es Salaam
Mille Lund	Royal Norwegian Embassy, Dar es Salaam
Fredrik Werring	Royal Norwegian Embassy, Dar es Salaam
Jostein Lindland	Royal Norwegian Embassy, Luanda (stationed in Kinshasa)
Marthe Hotvedt	Royal Norwegian Embassy, Jakarta

REDD+ MRV Implementation	
Julius Ningu	REDD+ Task Force Chair, Vice President's Office, Tanzania
Richard Muyungi	UNFCCC focal point, Vice President's Office, Tanzania
Pius Yanda	REDD+ Secretariat, Institute for Resource Assessment, Tanzania
Eliakhim Zahabu	Technical Working Group on MRV, Sokoine University of Agriculture, Tanzania
Evarist Nashanda	REDD+ focal point, Tanzania Forest Service
Jared Otieno	Tanzania Forest Service
Edwin Nssoko	Technical Working Group on MRV, Jane Goodall Institute project, Tanzania
Theron Brown	REDD+ Technical Advisor, TFCG/MJUMITA, Tanzania

Amour Bakar	CARE HIMA project, Zanzibar
Mary Swai	TaTEDO, Tanzania
Robert Otsinya	Technical advisor to TaTEDO, Tanzania
Steve Ball	CTA, Mpingo Conservation and Development Initiative , Tanzania
Deo Gmassa	Wildlife Conservation Society of Tanzania
R.P. Yonazi	Wildlife Conservation Society of Tanzania
Neil Burgess	World Wildlife Fund for Nature UK (involved in Tanzania pilot project)
David Loubser	African Wildlife Foundation, Tanzania
Tim Davenport	Wildlife Conservation Society, Tanzania
Søren Dalsgaard	CTA, NAFORMA Project, Tanzania
Erkki Tomppo	Finnish Forest Research Institute, (designed NAFORMA, Tanzania)
Jarmo Ylinen	CTA Zanzibar Woody Biomass Survey
Ilkka Norjamäki	Indufor (Zanzibar woody biomass survey)
Dalton Valeriano	Instituto Nacional de Pesquisas Espaciais (INPE), involved in GEO
Miriam Baltuck	Commonwealth Scientific and Industrial Research Organisation (CSIRO), involved in GEO
Evie Merethe Hagen	Norwegian Space Center, involved in GEO and the Tanzania LIDAR project
Victor Kabengele	Coordonnateur National RDC, Coordination National REDD/RDC (National Coordinator DRC, National Coordination REDD/DRC)
Bruneau Hugel	Conseiller Technique/RDC, Coordination National REDD/ RDC (Technical Adviser, National Coordination REDD/ DRC)
Raoul Kamanda Mangafu	Expert en communication/CN-REDD, CN-REDD/IEC (Communication Expert/CN-REDD, CN-REDD/IEC)
Christophe Musampa	Head of DIAF Inventory and Forest Management Division/ Geomatic Division, Ministry of Environment Nature Conservation and Tourism, DRC
André Kondjo	Head of Inventory, MECNT(DIAF), DRC
Aimé Mbuyi Kalombo	Head of Climate Change, Division, MECNT(DDD), DRC
Pradeepa Bholanath	REDD+ Secretariat, Guyana Forestry Commission
Nasheta Dewnath	REDD+ Secretariat, Guyana Forestry Commission
Hansrajie Sukhdeo	Guyana Forestry Commission
Carey Bhojedat	Guyana Forestry Commission
Karlon Warde	Guyana Forestry Commission
Jagdesch Singh	Guyana Forestry Commission

James Singh	Guyana Forestry Commission
Sandra Brown	Winrock International, Technical Support to Guyana
Pete Watt	Indufor Asia Pacific, client of GEO for Guyana work, Technical support to Guyana
Arief Darmawan	National REDD+ Task Force, and UKP4, Indonesia
Roy Rahendra	REDD+ Task Force, Indonesia
Orbita Roswintiarti	LAPAN (Indonesian National Institute of Aeronautics and Space)
William Sabandar	UKP4, Indonesia
Satya Tripathi	UN Office for REDD Co-ordination in Indonesia
Mayana Meilantina	Central Kalimantan REDD+ Joint Secretariat, Indonesia
Emanuel Migo	Central Kalimantan REDD+ Joint Secretariat, Indonesia
Nur Masripatin	Ministry of Forestry (Indonesia)
Kirsfianti L. Ginoga	Ministry of Forestry (Indonesia)
Iwayan Susi D.	Ministry of Forestry (Indonesia)
Noria Widyaningtyas	Ministry of Forestry (Indonesia)
Haruni Krisawati	Ministry of Forestry (Indonesia)
Diau Nugralia	Ministry of Forestry (Indonesia)
Ari Wibow	Ministry of Forestry (Indonesia)
Virni Budi A.	Ministry of Forestry (Indonesia)
Windyo L.	Ministry of Forestry (Indonesia)
Andi Andriarti	Ministry of Forestry (Indonesia)
Anny Meilani	Ministry of Forestry (Indonesia)
Triastuti N.	Ministry of Forestry (Indonesia)
Soi Musniningtyas	Ministry of Forestry (Indonesia)
unknown	Ministry of Forestry (Indonesia)

NICFI Supported Multilateral Institutions

Thaïs Linhares-Juvenal	UN-REDD Secretariat, Geneva
Maria Sanz Sanchez	UN-REDD (FAO), Rome
Mette Løyche Wilkie	UN-REDD (FAO), Rome
Peter Holmgren	Ex UN-REDD (FAO), now CIFOR
Almas Kashindy	UN-REDD, Tanzania
Ralf Ernst	UN-REDD, Tanzania
Gilbert Atanda	Chargé de programme UN-REDD (FAO) Projet UNJP/DRC/041/UNJ, DRC

Salis Antonelo	Consultant IFN, UN-REDD(FAO), DRC
Carlos Riano	Conseiller Technique (Technical Adviser) UN-REDD TERA CONGO-SNSF, UN-REDD (FAO), DRC
Rogier Klaver	UN-REDD (FAO), Indonesia
Abdul Wahib Situmorang	UNDP, Indonesia
Takako Morita	UNDP, Indonesia
Alexander Lotsche	FCPF, World Bank, US

Other Governmental Departments

Mr Carlos de Wasseige	Coordonnateur Régional (Regional Coordinator), OFAC, DRC
Shyam Notka	Office of the President, Guyana
Preeya Rampersaud	Office of the President, Guyana
Joe Singh	Special Assistant to the President of Guyana
Donald Singh	Guyana Geology and Mines Commission, Guyana
Geeta Singh	Environmental Protection Agency, Guyana
Godfrey Marshall	Forestry Training Centre, Guyana

Other Donors

Ken Creighton	Acting CARPE Spécialiste en changement climatique, USAID, DRC
Son Hoang Nguyen	Directeur Adjoint CARPE, DRC
Arito Kobayashi	International coopération Group, JICA/JAFTA, DRC
Ito Hiroimi	International coopération Group, JICA/JAFTA, DRC
Olivier Diemby	Directeur adjoint du programme (secteur de la formation professionnelle), chargé des programmes en RDC, JICA/JAFTA, DRC
Graham Watkins	Inter-American Development Bank, Washington DC, US (regarding FCPF Guyana)
Patrick Chesney	UNDP, Guyana
Thomas Harvey	Indonesia-Australia Forest Carbon Partnership / AUSAID, Indonesia
Gordon Church	US Embassy to Indonesia
unknown	US Embassy to Indonesia
Merja Makela	Embassy of Finland, Tanzania
Mikko Leppanen	FAO-Finland Forestry Programme (regarding Tanzania)

UNFCCC Negotiators	
Audun Rosland	Norway
Christina Voigt	Norway
Keith Anderson	Switzerland
Michael Bucki	European Commission
Bas Clabbers	Netherlands
Steve Cornelius	UK
Peter Graham	Canada
Tony la Viña	Philippines
Jim Penman	previously UK
Vicky Tauli Corpuz	Philippines

Civil Society	
Confidential Informant #1	
Confidential Informant #2	
Pipa Elias	Union of Concerned Scientists
Bruce Cabarle	WWF International, US
Mads Halfdan Lie	WWF Norway
Nigel Sizer	World Resources Institute, US
Fred Stolle	World Resources Institute, US
Charlotte Streck	Climate Focus, US
Josué Laurent Mukeba	Groupe de Travail Climat REDD, DRC
Stanis Bakatushiya	Groupe de Travail Climat REDD, DRC
Raphael Mboyo	Centre international de défense des droits des Batwa, DRC
Kedy Bosulu	Coordonateur, CAPID, DRC
Alain Parfait Ngulungu	Réseau des communicateurs de l'environnement, DRC
Pasteur Mathieu Yela	Cercle pour la défense de l'environnement (CEDEN), Coordonnateur Nationale, DRC
Remond Lumbuenamu	Directeur Nationale, WWF-RDC (National Director of WWF-DRC)
Bruno Perodeau	WWF DRC
Flory Botamba	WWF DRC
David Singh	Conservation International, Guyana

Dane Gobin	Iwokrama / GCP project, Guyana
Raquel Thomas	Iwokrama / GCP project, Guyana
Mohindra (Neil) Chand	Barama Company Ltd, Guyana Manufacturers' Association and Forest Products Association, Guyana
Nyoman Iswarayoga	WWF Indonesia
Arif Budiman	WWF Indonesia
Ari Rompas	Walhi, Indonesia
Dimas Hartono	Betang Borneo, Indonesia
Safrudin Mahendra	Save Our Borneo, Indonesia
Welly Yesie	Mitra Insani Foundation

Academia	
Erik Naeset	Norwegian University of Life Sciences
Louis Verchot	CIFOR
Arief Wijaya	CIFOR
Maria Brockhaus	CIFOR
(Peter Holmgren	CIFOR, also included under UN-REDD)
Prof Biloso Apolinaire	Prof Faculté d'Agronomie, Université de Kinshasa (Faculté d'Agronomie) (Professor of Agronomy Faculty)
Prof Kinkela Savy	Prof Faculté d'Agronomie, Université de Kinshasa (Faculté d'Agronomie) (Professor of Agronomy Faculty)
Prof Mate Mweru	Secrétaire Générale, ERAIFT
Bruno Muyaya	Laboratoire de Géomatique appliquée et Environnementétrie, (Laboratory of Applied Geomatics and Envirometrics) ERAIFT
Owen Bovell	Dean, Faculty of Agriculture and Forestry, University of Guyana
Rory Fraser	Alabama A&M University, USA
Jessica Hatfield	Clenergen, UK
Alue Dohong	Palangkaraya University, Indonesia
Bismart Ferry	Palangkaraya University, Indonesia
Yusurum Jagau	Palangkaraya University, Indonesia

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Annex 3: Terms of Reference

Real-time evaluation of Norway's International Climate and Forest Initiative: Monitoring, Reporting, Verification (MRV)

1. Background

1. REDD+ and Norway's Initiative

The Government of Norway's International Climate and Forest Initiative (NICFI) was launched in December 2007, pledging substantial development cooperation funding towards efforts to reduce emissions from deforestation and forest degradation in developing countries (REDD²⁷). The primary objective of the Norwegian Government's climate policy is to play a part in establishing a global, binding, long-term post-2012 regime that will ensure deep enough cuts in global greenhouse gas emissions for the average rise in global temperature to be limited to no more than 2°C above the pre-industrial level.²⁸ The international climate policy has changed since the Initiative was initiated with no new comprehensive agreement in place within the United Nations Framework Convention on Climate Change (UNFCCC), although some achievements were made on climate and forest under the Cancun Agreement in 2010, and further progress was made on technical issues in Durban in 2011. However, according to the Norwegian government's annual proposition No.1 (Prop.1S 2012-2013) is the rationale behind the government's climate and forest initiative still valid and the strategy and objectives for the Initiative remains.

- The funding shall be used in accordance with the objectives of NICFI²⁹:
- To work towards the inclusion of emissions from deforestation and forest degradation in a new international climate regime;
- To take early action to achieve cost-effective and verifiable reductions in greenhouse gas emissions;

27 REDD stands for Reducing Emissions from Deforestation and forest degradation in Developing countries. REDD+ includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.

28 NICFI website: <http://www.regjeringen.no/en/dep/md/Selected-topics/climate/the-government-of-norways-international-/why-a-climate-and-forest-initiative.html?id=547202> NICFI website: <http://www.regjeringen.no/en/dep/md/Selected-topics/climate/the-government-of-norways-international-/why-a-climate-and-forest-initiative.html?id=547202>

29 NICFI website: <http://www.regjeringen.no/en/dep/md/Selected-topics/climate/the-government-of-norways-international-/why-a-climate-and-forest-initiative.html?id=547202> NICFI website: <http://www.regjeringen.no/en/dep/md/Selected-topics/climate/the-government-of-norways-international-/why-a-climate-and-forest-initiative.html?id=547202>

- To promote the conservation of natural forests to maintain their carbon storage capacity.

Sustainable development and poverty alleviation are overarching goals of Norwegian foreign and development policy. Thus, in addition to the climate-related goals, these are essential goals for NICFI. In pursuing the different goals, the climate policy and the development policy should be mutually supportive. NICFI is working through four main areas; negotiations under the UNFCCC, partnerships with individual countries, multilateral programs, and support for civil society. The majority of NICFI's financial support is channelled through multilateral units including; the UN-REDD Programme (hosted by United Nations Environment Program, United Nations Development Program, and Food and Agriculture Organization of the United Nations), the Forest Carbon Partnership Facility (hosted by the World Bank), the Forest Investment Program (hosted by the World Bank), the Guyana REDD+ Investment Fund (GRIF), and the Congo Basin Forest Fund managed by the African Development Bank. Norway has also entered into formal agreements with Brazil (where funding is provided to the Amazon fund managed by the Brazilian National Development Bank), Indonesia, Mexico, Tanzania. A climate partnership with Ethiopia was launched during the UNFCCC negotiations in Durban in 2011 and formalized agreement is to be signed in the coming months. Non-governmental organisations are funded through a support scheme administered by the Norwegian Agency for Development Cooperation (Norad).

2. Context and the evaluation object

REDD+ is aiming to be a performance-based mechanism where developing countries receive financial support for emission reduction from reduced deforestation and forest degradation. The developing countries need capacity to measure, report and verify their carbon emissions reductions, essential for assuring the REDD+ financiers that payments are made for real emission reductions. REDD+ is built on and depends on a transparent, independent, robust and sustainable MRV system for payment of reduction of greenhouse gas emissions (GHG). A MRV system can be useful not only for REDD+ but for forest resource management in general and the linkages to national forest inventory systems (if existing) is of importance. This evaluation aims to evaluate NICFI's support to Monitoring, Reporting and Verification (MRV). The evaluation shall capture lessons learned and develop operational recommendations for future work.

Two main types of data will be required in order to estimate the emissions for REDD; 1) data on how much area that is changing from one land-use category to another (ex. forest to non-forest, forest to degraded forest), obtained by remote sensing and ground measurement, 2) data on the amount of carbon emitted or absorbed per area unit – e.g. tonnes carbon emitted per hectare forest converted to non-forest. This is normally referred to as activity data and emission factors, respectively.

Emissions vary depending on forest type and what it is converted to, and a robust national forest inventory is an important tool to improve these data³⁰. Political and technical challenges include estimation of reference levels, leakage (e.g. deforestation avoided in one place might move to another area or country), coordination of sub-national and national approaches, and local and national MRV capacity building. In order to support countries that lack detailed MRV data to take part in REDD+, it was decided at the UNFCCC negotiations in Durban 2011 to allow the use of simple MRV methods to set forest reference emission levels that can be improved (this is referred to as the “step-wise approach”).

Norway has stated that “MRV systems for REDD+ should be national in scope to allow for the tracking of potential displacement of emissions from one area to another. MRV systems for REDD+ should also be integrated with overall national arrangements for developing national GHG inventories”³¹. Norway has also emphasised the need for governance measures and broad stakeholder involvement. Key priorities for Norway in the MRV work are capacity-building and institutional strengthening. Norway supports capacity building and institutional strengthening both through bilateral agreements and multinational initiatives. Norway promotes a step-wise approach where approximate values of carbon storage in combination with data on area change are used in early stages. By applying conservative estimates, the results-based compensation can be initiated without over-estimating the results achieved.³² Norway sees this as a means to encourage countries to reduce the uncertainties of reported results, thereby making it easier to reduce uncertainty based discounts in payments.

The strategy for the Norwegian Climate and Forest Initiative states the following about MRV and Norway’s role:³³

- To play a part in establishing a credible system for monitoring, reporting and verification (MRV) of reductions in emissions from deforestation and forest degradation. This includes expertise and capacity for monitoring trends in forest cover and biomass, for collection of data on forest carbon volumes and for analysis of data to provide reports on emission levels. This capacity must be established both at national level in the partner countries, and at international level. The principles established by the IPCC and in negotiations under the UNFCCC form the basis for this work.
- In most cases, capacity building in the recipient country must be given priority in the preliminary phase. This will include building capacity for

30 Booklet about the Climate and Forest Initiative: http://www.regjeringen.no/upload/MD/2011/vedlegg/klima/klima_skogprosjektet/Infohefte_kos_sep2012versjon.pdfhttp://www.regjeringen.no/upload/MD/2011/vedlegg/klima/klima_skogprosjektet/Infohefte_kos_sep2012versjon.pdf

31 Submission by Norway on methodological guidance for REDD (SBSTA) – forest monitoring MRV and drivers of deforestation – Norway’s views on “issues identified in decision 1/CP.16, paragraph 72 and appendix II, in particular on how to address drivers of deforestation and forest degradation and on robust and transparent national forest monitoring systems”. March 2012

32 Booklet about the Climate and Forest Initiative: http://www.regjeringen.no/upload/MD/2011/vedlegg/klima/klima_skogprosjektet/Infohefte_kos_sep2012versjon.pdfhttp://www.regjeringen.no/upload/MD/2011/vedlegg/klima/klima_skogprosjektet/Infohefte_kos_sep2012versjon.pdf

33 <http://www.regjeringen.no/en/dep/md/Selected-topics/climate/the-government-of-norways-international-why-a-climate-and-forest-initiative.html?id=547202> <http://www.regjeringen.no/en/dep/md/Selected-topics/climate/the-government-of-norways-international-why-a-climate-and-forest-initiative.html?id=547202>

monitoring of forest cover and biomass, for measurement of forest carbon volumes, for reporting on emission levels, for policy development and legislation, and for law enforcement. The initiative will also contribute to capacity building at international level. Suitable international institutions, primarily within the UN system, must be given adequate resources so that they can build up the capacity that is needed.

Norway understands MRV for REDD+ as “the measuring, reporting and verification of greenhouse gas (GHG) emissions/removals, based on the latest Intergovernmental Panel for Climate Change (IPCC) guidance and guidelines³⁴, in relation to REDD+ activities”³⁵. Norway makes a distinction between MRV and national forest monitoring systems, seen as “systems for the monitoring of additional forest-related variables that could be useful for parties when implementing and operationalizing REDD+”.³⁶ A broader forest monitoring system could include monitoring of and provide information on multiple benefits beyond carbon storage, including biodiversity, land tenure, secured livelihoods, logging history and information on drivers of deforestation. This broader definition of MRV is part of an on-going discussion within the UN Framework Convention on Climate Change (UNFCCC) negotiations where proposals for the 18th Conference of the Parties (COP-18) highlight the need to monitor the multiple functions of forests. Norway’s view is that these functions are better treated in the safeguards information system (also under the UNFCCC).

NICFI supports work on MRV through a variety of channels and in several countries:

2. The Guyana-Norway Cooperation³⁷

In November 2009, Norway and Guyana signed a Memorandum of Understanding. Guyana has developed a national framework for MRV and a three year roadmap towards a full MRV system. Guyana is an early example of a country with high forest cover and low deforestation rate trying to benefit from the REDD+ mechanism. Guyanese institutions had little existing capacity to conduct MRV, and capacity building by the use of consultants is important. The short-term objective for the Guyana-Norway cooperation is an improved capacity in Guyanese institutions and gradually a more accurate system to monitor Guyana’s forests. The long term objective is a fully operational MRV-system, complying with international requirements in terms of methods and reporting.

34 The IPCC reporting principles: transparency, completeness, consistency, comparability and accuracy.

35 Submission by Norway on methodological guidance for REDD (SBSTA) – forest monitoring MRV and drivers of deforestation – Norway’s views on “issues identified in decision 1/CP.16, paragraph 72 and appendix II, in particular on how to address drivers of deforestation and forest degradation and on robust and transparent national forest monitoring systems”. March 2012.

36 Submission by Norway on methodological guidance for REDD (SBSTA) – forest monitoring MRV and drivers of deforestation – Norway’s views on “issues identified in decision 1/CP.16, paragraph 72 and appendix II, in particular on how to address drivers of deforestation and forest degradation and on robust and transparent national forest monitoring systems”. March 2012.

37 In relation to MRV support to Guyana, the Global Canopy Programs supported by Norad’s Civil Society Department looks at the development of a model for community MRV. This involves developing an internet-based tool for demonstrating the value of ecosystem services and local forest managers, training in the use of handheld GPS, and to link this to national MRV systems.

3. The Mexico-Norway Cooperation

Mexico has a comprehensive forest inventory system, but its data based system for analysis of land use change has limited coverage. Mexico has significant experience with payment for ecosystem services. The Mexico-Norway cooperation has three main objectives: further development of Mexico's MRV-system (consolidate tier 2³⁸ reporting in Mexico), promotion of Mexico as a centre of excellence for south-south REDD+ and MRV cooperation, and characterisation of local incentives through research on case studies in Mexico.

4. Indonesia

MRV is an important part of the Indonesia-Norway partnership, where the goal is to move rapidly to results-based payments. The two countries' Letter of Intent and Joint Concept Note include the establishment of an independent MRV institution as a main component. The main objective is to establish an independent MRV institution and develop an MRV-system.

5. Tanzania

The emphasis of the MRV support to Tanzania is on advanced remote sensing techniques, to increase the general MRV capacity and explore how advanced techniques can be applied. A National Carbon Monitoring Centre is under development. The funding is channelled through the Norwegian embassy in Dar es Salaam.

6. Brazil

The agreement between Norway and Brazil does not include support to an MRV function as a specific component since the Brazilian MRV system was already operational and could be used to collect the data that payments are based on. However, the Amazon Fund, can support MRV projects both in Brazil and in other countries (20 % of the fund can be used for this). The Brazilian MRV approach, using satellite based data combined with conservative proxies for carbon emission estimates, was important for Norway in terms of developing their overall MRV approach.

7. Ethiopia

The REDD+ MRV cooperation with Ethiopia is part of a larger climate partnership between the two countries. The cooperation is in the inception phase. A concept note for developing an MRV roadmap³⁹ has been prepared and is related to Ethiopia's (REDD) Readiness Preparation Proposal and its broader "Climate Resilient Green Economy strategy.

38 IPCC uses three tiers for estimating emissions with increasing data accuracy: Tier 1 uses default emission factors (indirect estimation of the emissions based on canopy cover reduction) for forest activities ('activity data') that are collected nationally or globally. Tier 2 applies emission factors and activity data from country-specific data. Tier 3 uses methods, models and inventory measurement systems that are repeated over time, driven by high-resolution activity data and disaggregated sub-nationally at a finer scale. (Source: CIFOR info brief No.16, November 2008).

39 A workshop was held in Addis Abeba from 30 October to 1 November 2012, and the preparation of a roadmap has started. Ethiopia has also requested assistance for their overall GHG-inventory. The possibility of providing such assistance through the Norwegian Climate and Pollution Agency is currently being investigated.

8. International initiatives

NICFI is also supporting MRV work through multilateral channels, such as UN-REDD/FAO, Forest Carbon Partnership Facility (FCPF), Norwegian Space Center/Group on Earth Observation⁴⁰, and civil society organisations (managed by Norad)⁴¹. NICFI is also active in the REDD+ MRV discussions under the UN Framework Convention on Climate Change (UNFCCC), but do not financially support MRV work under the UNFCCC. The MRV work in the Congo Basin is implemented by several units and at regional and national levels; on national level by the national coordination units supported by UN-REDD and FCPF, and at regional level Congo basin Forest Fund (CBFF) has signed an agreement with Central African Forest Commission on a regional MRV initiative.⁴²

9. Budget and disbursements

Support to MRV is integrated in broader programmes and information on NICFI's financial support to MRV is uncertain. The two tables below give an indication of budget and actual expenditures of both the total NICIF portfolio and specific MRV activities.

40 Group on Earth Observation's Forest Carbon Tracking Task (GEO- FCT/GFOI). One of its main goals is to strengthen and coordinate gathering of satellite-based forest data, and to make these data and necessary training available to forest countries together with the building of necessary institutions. The methods are being developed and tested in a number of countries. FCT seeks to do research and development, develop methodological guidance and build capacity on forest monitoring, while the goal of GFOI is to ensure sustained supply of remotely sensed data for forest monitoring - through coordinated data acquisition, lower prices can be negotiated from private providers of remotely sensed data. GFOI is an effort to institutionalize the experiences generated from FCT.

41 Several civil society organisations have a MRV components in their portfolio, for example: Global Canopy Programs, Forest Peoples Programme (FPP), International Centre for Integrated Mountain Development (ICIMOD), World Wildlife Fund (WWF), World Agroforestry Centre (ICRAF), Centre for International Forestry Research (CIFOR), Global Witness, Fauna and Flora International, Conservation International, International Institute for Sustainable Development (IISD), International Institute for Environment and Development (IIED).

42 The African Development Bank (AfDB) through the Congo Basin Forest Fund (CBFF), signed on June 2012 a grant agreement with the Central African Forest Commission (COMIFAC) worth 6.15 million Euros for the implementation of the project entitled "Congo Basin MRV Regional Project –Phase I". The project, which will cover 18 months in ten Congo Basin countries, was approved by the Governing Council on 21 June 2011. The overall goal of the project is to support the design and implementation of national monitoring and MRV systems in line with international recommendations and requirements, including coordination and capacity building at regional level. The project shall be implemented by FAO, with the technical collaboration of the Brazilian Space Agency. <http://www.cbf-fund.org/en/launch-of-the-support-project-for-expanded-natural-resource-management-training-in-the-congo-basin> <http://www.cbf-fund.org/en/launch-of-the-support-project-for-expanded-natural-resource-management-training-in-the-congo-basin>

Table 1. Total NICFI disbursement 2009-2011 (in 1000 Norwegian kroner). Institutions and organisations with MRV components are mentioned.

Bistand til kapitelpost 166.73. 2009-2011 (NOK 1000)				
Recipient country	Agreement partner	2009	2010	2011
Africa Regional	AFDB - African Development Bank (This support goes to Congo Basin Forest Fond)	105 000	160 000	
	Others	1 348		
America Regional			2 500	2 000
Asia Regional		2 700	3 537	3 500
Brazil	BNDES - Brazilian Development Bank	26 985	1 426 563	1 000 000
Congo, Dem. Rep.	UNDP - UN Development Programme		6 250	
Ghana		3 500	1 421	3 733
Global Unspecified	CI – Conservation International	2 800	6 800	6 089
	CIFOR - Center for International Forestry Research	20 000	20 000	20 000
	FFP - Forest Peoples Programme	3 000	3 000	3 000
	GCP - Global Canopy Programme		1 025	860
	Global Witness	2 400	3 000	3 000
	IBRD - International Bank for Reconstruction and Development	168 714	340 908	350 000
	<i>Out of which goes to Forest Carbon Partnership Facility (FCPF)</i>	168 714	55 908	
	<i>Out of the which goes to Forest Investment Program (FIP)</i>		285 000	350 000
	ICRAF - World Agroforestry Centre	6 900	9 000	9 000
	IIED - International Institute for Environment and Development	1 500	2 336	4 988
	IISD - International Institute for Sustainable Development	5 000	4 000	2 000
	Norsk Romsenter (Norwegian Space Center)	5 500	5 600	5 600
	UNDP - UN Development Programme (This support goes to UN-REDD)	283 683	200 000	122 250
	UNEP - UN Environment Programme		528	
	FAO - Food and Agricultural Organization of the United Nations			
WRI - World Resources Institute	4 500	5 100	5 100	
WWF - World Wildlife Fund	11 000	11 000	11 000	
Support to several other CSOs	114172	74 680	116 650	
Guyana			176681	218981
Indonesia		12800	189859	8950

Liberia	Fauna and Flora International	7 000	2 000	4 922
Madagascar			4 610	3 794
Malaysia				1 370
Mexico	UNDP - UN Development Programme			45 000
Nepal	ICIMOD - International Centre for Integrated Mountain Development	4 000	3 319	3 490
Papua New Guinea		1 400	1 000	
Peru		3 000	3 500	3 500
Tanzania		41325	43545	58521
Total		838 227	2 711 761	2 017 143

Source: Statistical database, Statistical team, Norad, 5 November 2012

Table 2 lists the limited information there is on the specific MRV funding and disbursement. To be complemented during the evaluation

Table 2. NICFI MRV appropriations and disbursements 2008-2011.

CBFF	A grant agreement worth 6.15 million EUR is signed with Central African Forest Commission the project entitled "Congo Basin MRV Regional Project –Phase I". The project, which will cover 18 months in ten Congo
UN-REDD (total budget)	Mostly through FAO. Uncertain/preliminary information: (http://mptf.undp.org/factsheet/fund/CCF00): 668 682 561 NOK (105.81 million USD) disbursed by Norway 2008--2011 of a total of 118.9 million USD. 46 million USD has been budgeted to FAO (total UN-REDD budget approx. of 117.5 million USD), of which 38.7 million USD has been disbursed
Tanzania	The project "Enhancing the Measuring, Reporting and Verification (MRV) of forests in Tanzania through the application of advanced remote sensing techniques" run by Sokoine University of Agriculture has in November 2012 been approved an extension under the same budget. The project now runs through May 2011-May 2015 with an approved budget of 27.5 million NOK. This budget does not include support to the national MRV process
Mexico	Budget 57 million NOK. Total budget for Mexico agreement is 90 million NOK
Guyana	Budget for 2011-2012 is 6.6 million NOK+ 682 300 for a verification contract with Det Norske Veritas
Indonesia	7.2 million USD (4.8 million USD used by 30 Sept. 2012)
Norwegian Space Centre & GEO(FCT+GFOI)	16.7 million NOK disbursed during 2009-2011

Sources: NICFI secretariat, November 2012 (incomplete).

3. Purpose, Objectives and Scope

The purpose of the evaluation is to assess NICFI's support to monitoring, reporting and verification (MRV) and the extent to which this support has contributed to NICFI's general objectives. To achieve this purpose, the evaluation has the following three objectives:

1. Assess to what extent the support has contributed to national capacity building, institutional strengthening and MRV and forest inventory systems
2. Assess to what extent the support has been coordinated with the efforts of other actors
3. Assess the effectiveness and efficiency of different channels of support, where possible comparing these.

The emphasis shall be on institutional, political and economic perspectives, less on technical aspects, and cover the period from 2007 onwards. Where possible, the evaluation should include baseline data made available by previous evaluations and studies⁴³.

Where possible, the information on MRV funding presented in these Terms of Reference shall be complemented.

The evaluation shall develop lessons learned and recommendations for future NICFI support. Lessons should be assessed against existing international best knowledge.

4. Methods

The evaluation shall be objective, transparent and evidence-based and use multiple information sources and triangulation of data to substantiate findings and assessments.

In connection with questions where the team does not find sufficient information to make meaningful assessments, the team shall list the sources sought and not found and describe the type of information sources they would have required to carry out such an assessment.

The quality of the study will be assessed on the extent to which it identifies credible program theories and underlying assumptions. Furthermore, the extent to which the underlying assumptions are grounded on real evidence and directly tested by the evaluation will be important.

43 NICFI funded an MRV-status report in 99 developing countries published in 2009 which can be used as a benchmark: Herold M: An assessment of national forest monitoring capabilities in tropical non-Annex I countries: Recommendations for capacity building. GOF-C-GOLD Land Cover Project Office, Friedrich Schiller University Jena. July 8, 2009.
http://unfccc.int/files/methods_science/redd/country_specific_information/application/pdf/redd_nat_capacity_report_herold_july09_publ.pdf July 8, 2009.
http://unfccc.int/files/methods_science/redd/country_specific_information/application/pdf/redd_nat_capacity_report_herold_july09_publ.pdf

The evaluation shall be conducted in accordance with the OECD/DAC Evaluation Quality Standards. Gender aspects shall be taken into account where relevant.

5. Evaluation activities and deliverables

Inception report

During the inception phase, the team shall review relevant project documents, baseline surveys, reviews and evaluations. The inception report shall provide an overview of the MRV portfolio and construct a theory of change underlying NICFI's MRV support. A list of information collected to date shall be included, and information gaps shall be identified as well as a strategy on how to fill the gaps. The relationship to NICFI (conflict of interest) shall be pointed out in the list of interviewees/information.

The inception report shall include an evaluation framework and evaluation questions. The evaluation questions shall preferably be related to relevant

OECD/DAC evaluation criteria. The inception report shall also include suggestions for field studies to assess selected countries and international initiatives in detail.

Final report

The final report shall be prepared in accordance to the Guidelines for Reports and not exceed 50 pages excluding annexes. The executive summary shall not exceed one tenth of the length of the main report and shall function as an independent excerpt free of references to other parts of the report.

Communication Brief

Based on the executive summary, a communication brief not exceeding two pages shall be prepared. It shall include the most important findings, conclusions, lessons learned and recommendations. It shall be written in an accessible language, possibly including clarifying examples, and be evidence based. The specific format for the communication brief may be agreed in more detail later.

All reports shall be written in a non-technical and accessible language, with the use of acronyms kept to a minimum. Findings and conclusions must refer to specific and well-documented sources and references and shall include an analysis that shows how and why the evidence presented supports the position taken. This should also include a presentation of comparisons with other studies, significant trends if any, and uncertainties and limitations relevant to the analysis presented. In general, all the reports shall be prepared in accordance to the "Guidelines for Reports under the call-off orders" (annex 5 in the tender document).

Deliverables and timeframe:

22 February: Inception report

April/May: Stakeholder Workshop in Oslo to present results and develop recommendations

6 May: Draft final report

30 July: Final report

21 August: Final seminar

6. Evaluation team

The evaluation will require a team with extensive knowledge of REDD, MRV and strategies at international, national and local level, as well as knowledge of the countries and international initiatives under study. Preferably at least one member of each of the previous country evaluations should take part in the corresponding country teams of this evaluation.

The team leader shall have documented experience in managing complex, multi-disciplinary evaluations. The team leader shall ensure methodological and conceptual consistency throughout the evaluation.

LTS International shall suggest a composition of the team, taking into account the size of the evaluation and the expected distribution of personnel categories (see tender document).

7. Budget

LTS International shall propose a budget based on the personnel requirements and the expected travel and subsistence expenses. Approximately 45 consultant weeks is expected to be needed.

Appendix: The real-time evaluation framework

The need for timely information and continuous learning about the fast-moving developments in REDD+ calls for a real-time evaluation approach. The purpose of a real-time evaluation (følgeevaluering) is to facilitate rapid learning. This type of evaluation progressively assesses the results of an intervention with regard to its objectives, gives advice at an early enough stage for changes in implementation still to be feasible, and provides timely information to the national and international community that could be useful for similar endeavours, as well as the public at large.

The overall approach of the evaluation is guided by the OECD/DAC evaluation criteria: relevance, efficiency, effectiveness, impact and sustainability. The approach involves a range of evaluation activities of specific thematic or geographic areas carried out irregularly, but it can also be repeated at regular intervals during the life of the intervention.

Real-time evaluation differs from regular monitoring in that it is carried out by external researchers/consultants in order to achieve impartiality or the

perception of such, not by the program officers themselves, and seeks to address the issue of plausible contribution through the methods agreed.

The real-time evaluation is administered by Norad's Evaluation Department and carried out through 2010-2013 by a consortium of independent experts led by LTS International in collaboration with Indufor Oy, Ecometrica and Chr. Michelsen Institute. Three evaluations have so far been completed:

- NICFI's contribution to a global REDD+ regime 2007-2010. Report 12:2011
- NICFI's contribution to national REDD+ processes 2007-2010 (Brazil, Guyana, DR Congo, Tanzania and Indonesia). Report 13-17:2011
- Evaluation of NICFI's support to Civil Society Organisations 2009-2012 (field studies in Indonesia, Cameroon, DR Congo and Peru). Report nr 5:2012

EVALUATION REPORTS

5.00	Evaluation of the NUFU programme	4.08	Evaluation: Evaluation of Norwegian HIV/AIDS Responses
6.00	Making Government Smaller and More Efficient. The Botswana Case	5.08	Evaluation: Evaluation of the Norwegian Research and Development Activities in Conflict Prevention and Peace-building
7.00	Evaluation of the Norwegian Plan of Action for Nuclear Safety Priorities, Organisation, Implementation	6.08	Evaluation: Evaluation of Norwegian Development Cooperation in the Fisheries Sector
8.00	Evaluation of the Norwegian Mixed Credits Programme	1.09	Evaluation: Joint Evaluation of Nepal's Education for All 2004-2009 Sector Programme
9.00	"Norwegians? Who needs Norwegians?" Explaining the Oslo Back Channel: Norway's Political Past in the Middle East	1.09	Study Report: Global Aid Architecture and the Health Millennium Development Goals
10.00	Taken for Granted? An Evaluation of Norway's Special Grant for the Environment	2.09	Evaluation: Mid-Term Evaluation of the Joint Donor Team in Juba, Sudan
1.01	Evaluation of the Norwegian Human Rights Fund	2.09	Study Report: A synthesis of Evaluations of Environment Assistance by Multilateral Organisations
2.01	Economic Impacts on the Least Developed Countries of the Elimination of Import Tariffs on their Products	3.09	Evaluation: Evaluation of Norwegian Development Cooperation through Norwegian Non-Governmental Organisations in Northern Uganda (2003-2007)
3.01	Evaluation of the Public Support to the Norwegian NGOs Working in Nicaragua 1994-1999	3.09	Study Report: Evaluation of Norwegian Business-related Assistance Sri Lanka Case Study
3A.01	Evaluación del Apoyo Público a las ONGs Noruegas que Trabajan en Nicaragua 1994-1999	4.09	Evaluation: Evaluation of Norwegian Support to the Protection of Cultural Heritage
4.01	The International Monetary Fund and the World Bank Cooperation on Poverty Reduction	4.09	Study Report: Norwegian Environmental Action Plan
5.01	Evaluation of Development Co-operation between Bangladesh and Norway, 1995-2000	5.09	Evaluation: Evaluation of Norwegian Support to Peacebuilding in Haiti 1998-2008
6.01	Can democratisation prevent conflicts? Lessons from sub-Saharan Africa	6.09	Evaluation: Evaluation of the Humanitarian Mine Action Activities of Norwegian People's Aid
7.01	Reconciliation Among Young People in the Balkans An Evaluation of the Post Pessimist Network	7.09	Evaluation: Evaluation of the Norwegian Programme for Development, Research and Education (NUFU) and of Norad's Programme for Master Studies (NOMA)
1.02	Evaluation of the Norwegian Resource Bank for Democracy and Human Rights (NORDEM)	1.10	Evaluation: Evaluation of the Norwegian Centre for Democracy Support 2002-2009
2.02	Evaluation of the International Humanitarian Assistance of the Norwegian Red Cross	2.10	Synthesis Study: Support to Legislatures
3.02	Evaluation of ACOPAM An ILO program for "Cooperative and Organizational Support to Grassroots Initiatives" in Western Africa 1978 - 1999	3.10	Synthesis Main Report: Evaluation of Norwegian Business-related Assistance
3A.02	Évaluation du programme ACOPAM Un programme du BIT sur l'« Appui associatif et coopératif aux Initiatives de Développement à la Base » en Afrique de l'Ouest de 1978 à 1999	4.10	Study: Evaluation of Norwegian Business-related Assistance South Africa Case Study
4.02	Legal Aid Against the Odds Evaluation of the Civil Rights Project (CRP) of the Norwegian Refugee Council in former Yugoslavia	5.10	Study: Evaluation of Norwegian Business-related Assistance Bangladesh Case Study
1.03	Evaluation of the Norwegian Investment Fund for Developing Countries (Norfund)	6.10	Study: Evaluation of Norwegian Business-related Assistance Uganda Case Study
2.03	Evaluation of the Norwegian Education Trust Fund for African the World Bank	7.10	Evaluation: Evaluation of Norwegian Development Cooperation with the Western Balkans
3.03	Evaluering av Bistandsforgets Evalueringsnettverk	8.10	Evaluation: Evaluation of Transparency International
1.04	Towards Strategic Framework for Peace-building: Getting Their Act Together. Overview Report of the Joint Utstein Study of the Peacebuilding.	9.10	Study: Evaluability Study of Partnership Initiatives
2.04	Norwegian Peace-building policies: Lessons Learnt and Challenges Ahead	10.10	Evaluation: Democracy Support through the United Nations
3.04	Evaluation of CESAR's activities in the Middle East Funded by Norway	11.10	Evaluation: Evaluation of the International Organization for Migration and its Efforts to Combat Human Trafficking
4.04	Evaluering av ordningen med støtte gjennom paraplyorganisasjoner. Eksemplifisert ved støtte til Norsk Misjons Bistandsnemda og Atlas-alliansen	12.10	Evaluation: Real-Time Evaluation of Norway's International Climate and Forest Initiative (NICFI)
5.04	Study of the impact of the work of FORUT in Sri Lanka: Building Civil Society	13.10	Evaluation: Real-Time Evaluation of Norway's International Climate and Forest Initiative. Country Report: Brasil
6.04	Study of the impact of the work of Save the Children Norway in Ethiopia: Building Civil Society	14.10	Evaluation: Real-Time Evaluation of Norway's International Climate and Forest Initiative. Country Report: Democratic Republic of Congo
1.05	-Study: Study of the impact of the work of FORUT in Sri Lanka and Save the Children Norway in Ethiopia: Building Civil Society	15.10	Evaluation: Real-Time Evaluation of Norway's International Climate and Forest Initiative. Country Report: Guyana
1.05	-Evaluation: Evaluation of the Norad Fellowship Programme	16.10	Evaluation: Real-Time Evaluation of Norway's International Climate and Forest Initiative. Country Report: Indonesia
2.05	-Evaluation: Women Can Do It - an evaluation of the WCDI programme in the Western Balkans	17.10	Evaluation: Real-Time Evaluation of Norway's International Climate and Forest Initiative. Country Report: Tanzania
3.05	Gender and Development - a review of evaluation report 1997-2004	18.10	Evaluation: Real-Time Evaluation of Norway's International Climate and Forest Initiative
4.05	Evaluation of the Framework Agreement between the Government of Norway and the United Nations Environment Programme (UNEP)	1.11	Evaluation: Results of Development Cooperation through Norwegian NGO's in East Africa
5.05	Evaluation of the "Strategy for Women and Gender Equality in Development Cooperation (1997-2005)"	2.11	Evaluation: Evaluation of Research on Norwegian Development Assistance
1.06	Inter-Ministerial Cooperation. An Effective Model for Capacity Development?	3.11	Evaluation: Evaluation of the Strategy for Norway's Culture and Sports Cooperation with Countries in the South
2.06	Evaluation of Fredskorpset	4.11	Study: Contextual Choices in Fighting Corruption: Lessons Learned
1.06	- Synthesis Report: Lessons from Evaluations of Women and Gender Equality in Development Cooperation	5.11	Pawns of Peace. Evaluation of Norwegian peace efforts in Sri Lanka, 1997-2009
1.07	Evaluation of the Norwegian Petroleum-Related Assistance	6.11	Joint Evaluation of Support to Anti-Corruption Efforts, 2002-2009
1.07	- Synteserapport: Humanitær innsats ved naturkatastrofer: En syntese av evalueringsfunn	7.11	Evaluation: Evaluation of Norwegian Development Cooperation to Promote Human Rights
1.07	- Study: The Norwegian International Effort against Female Genital Mutilation	8.11	Norway's Trade Related Assistance through Multilateral Organizations: A Synthesis Study
2.07	Evaluation of Norwegian Power-related Assistance	9.11	Activity-Based Financial Flows in UN System: A study of Select UN Organisations Volume 1 Synthesis Volume 2 Case Studies
2.07	- Study Development Cooperation through Norwegian NGOs in South America	10.11	Evaluation of Norwegian Health Sector Support to Botswana
3.07	Evaluation of the Effects of the using M-621 Cargo Trucks in Humanitarian Transport Operations	1.12	Mainstreaming disability in the new development paradigm. Evaluation of Norwegian support to promote the rights of persons with disabilities.
4.07	Evaluation of Norwegian Development Support to Zambia (1991 - 2005)	2.12	Hunting for Per Diem. The uses and Abuses of Travel Compensation in Three Developing Countries
5.07	Evaluation of the Development Cooperation to Norwegian NGOs in Guatemala	3.12	Evaluation of Norwegian Development Cooperation with Afghanistan 2001-2011
1.08	Evaluation: Evaluation of the Norwegian Emergency Preparedness System (NOREPS)	4.12	Evaluation of the Health Results Innovation Trust Fund
1.08	Study: The challenge of Assessing Aid Impact: A review of Norwegian Evaluation Practise	5.12	Real-Time Evaluation of Norway's International Climate and Forest Initiative. Lessons Learned from Support to Civil Society Organisations.
1.08	Synthesis Study: On Best Practise and Innovative Approaches to Capacity Development in Low Income African Countries	6.12	Facing the Resource Curse: Norway's Oil for Development Program A Study of Monitoring and Evaluation in Six Norwegian Civil Society Organisations
2.08	Evaluation: Joint Evaluation of the Trust Fund for Environmentally and Socially Sustainable Development (TFESSD)	7.12	Use of Evaluations in the Norwegian Development Cooperation System
2.08	Synthesis Study: Cash Transfers Contributing to Social Protection: A Synthesis of Evaluation Findings	8.12	Evaluation of Norway's Bilateral Agricultural Support to Food Security A Framework for Analysing Participation in Development
2.08	Study: Anti-Corruption Approaches. A Literature Review	1.13	Local Perceptions, Participation and Accountability in Malawi's Health Sector
3.08	Evaluation: Mid-term Evaluation the EEA Grants	2.13	Evaluation of the Norwegian India Partnership Initiative
		3.13	Evaluation of Five Humanitarian Programmes of the Norwegian Refugee Council (NRC) and of the Standby Roster NORCAP
		4.13	

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