Analysing REDD+

Challenges and choices

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Performance indicators and REDD+ implementation

Sheila Wertz-Kanounnikoff and Desmond McNeill

- REDD+ aims to achieve a defined impact – reduced emissions – and payments may be made based on performance towards achieving this goal. This implies that there must be assessments of the results of REDD+ programmes.
- In the medium-term, most payments will be for readiness and policy reforms, rather than proven emissions reductions. Hence good performance indicators are critical for all three REDD+ phases, in particular for phase 2 where the focus is on policy performance.
- Valuable lessons on governance indicators can be learned from the aid sector: avoid seeking the perfect indicator and use expert judgment extensively.

13.1 Challenges

REDD+ aims to achieve a defined impact – reduced emissions – and payments may be made based on performance towards achieving this goal. This implies that there must be assessments of the results of REDD+ programmes. Implementation will occur in three phases: readiness

(phase 1); policy measures (phase 2); and 'results-based actions' (i.e. payments based on changes in emissions and removal) (phase 3). This process is now formalised in an international agreement (UNFCCC 2011e). Although bilateral REDD+ programmes are currently advancing at a faster pace than multilateral processes, they seek to complement the UNFCCC process and should abide by the same principles (for example REDD+ Partnership 2010).

Performance indicators can be used to monitor results. These indicators need to be credible to allow all parties undertaking and funding REDD+ activities to ensure they are successful (Daviet 2009). Performance indicators need to be selected taking into account the different objectives of the three REDD+ implementation phases.

Previous REDD+ measurement, reporting and verification (MRV) initiatives have tended to focus on phase 3, where the challenge is largely technical – to measure greenhouse gas (GHG) emissions and removals (Chapters 14–16). But the more immediate challenge, which has received little attention so far, is to measure performance during the initial phases, and especially during phase 2 where the focus is on policy performance. This chapter aims to clarify and inform the debate around REDD+ performance measures.

13.2 Rationale and types of performance indicators

Performance measurement is not generally an end in itself, but a means to various different ends: to evaluate, control, budget, motivate, promote, celebrate, learn from or improve performance (Behn 2003). No single indicator is appropriate for all uses, so it is crucial to be clear about the purpose of measurement when selecting indicators.

Performance must be measured against agreed benchmarks. Typically, different types of indicators are needed at each stage (Table 13.1). Intermediate (input and process) indicators can allow earlier monitoring to help keep projects on track, but in general it is desirable to measure performance towards the end of the results chain – outputs, outcomes and impacts. However, it is important not to rush this: to prematurely introduce an emission-based system with poor MRV systems and inadequate data for setting reference levels may create payments for unreal emissions reductions, which would destroy credibility and jeopardise the legitimacy of the system.

Performance indicators have been widely used for evaluations in the aid sector. According to the Development Assistance Committee (DAC) of the Organisation of Economic Co-operation and Development (OECD), performance indicators refer to "variables that allow the verification of

changes in development intervention or show results relative to what was planned" (OECD 2002). Indicators should be simple and 'SMART' (specific, measurable, attainable, relevant and time bound) and comparable across countries (OECD 2008).

13.3 Lessons from the development aid sector

Towards the end of the 1990s and early 2000s, countries receiving development aid began to be viewed as partners, and donor aid was increasingly provided for budget support. This allowed recipient countries more freedom in its use, but offered less performance accountability for donors. In recent years donor countries have exerted more pressure for aid to be results-based. The reasons for this are varied, but are linked to growing demands for 'development effectiveness' as stipulated in the 2005 Paris Declaration on Aid Effectiveness (OECD 2005). There is now greater demand for performance measurement – not only of outputs, but also outcomes and impacts – based on objective indicators. This is particularly challenging because it coincides with a shift in aid away from investment in infrastructure such as roads, water supplies and health clinics, towards interventions in governance, human rights, empowerment and conflict resolution, which are far more difficult to evaluate.

REDD+, as originally envisaged, is not development assistance but a payment for a service rendered (Chapter 3). As a business-like transaction, it is perfectly normal that payment is based on results. But in the short-term at least it appears that REDD+ will be largely financed from aid budgets or private sources (Chapter 7). While payment will still be based on results, the motivation for measuring performance is likely to be different. REDD+ implementation can learn from the use of performance indicators in the development aid sector (Box 13.1).

Although ideally assessments will be based on outcomes and impacts, in practice this is difficult for three main reasons: the timing of assessment, attribution of results to intervention, and reliability of information.

The further along the results chain one wishes to measure performance, the more time needs to pass. Impact cannot be measured until several years have elapsed, which is not possible for many donors, NGOs or governments. Although donors would like to base their payments on performance, in reality they cannot wait 10–15 years in order to measure whether the desired impact has been achieved.

Moreover, the further along the results chain one moves, the more difficult it is to attribute an end result to a specific intervention. Impacts are influenced

Table 13.1 The results chain and different types of performance indicators

Level	Input	Process *Often merged with the 'input' category*	Output	Outcome	Impact
Focus	Quantities of financial, human and material resources used in the development intervention, often expressed in dollar amounts or amounts of employee time.	Activities during implementation, i.e. actions taken or work performed through which inputs are mobilised to produce specific outputs.	Immediate results of the intervention. May have a quantity and quality dimension, and often include counts of the number of beneficiaries.	Intermediate effects (observable behavioural, institutional and societal changes that take place over 3 to 10 years) of an intervention's output.	Broader and longer term effects (10 years or more) produced by an intervention (directly or indirectly, intentionally or unintentionally). Often captured by national sector or subsector statistics.
Terms used	Input indicators	Process milestone indicators Process indicators	Output indicators	Results indicators Outcome indicators	Impact indicators Goal indicators
Examples for REDD+	Resources spent Share of budget devoted to environment Person days provided as technical assistance	Date by which a national REDD+ action plan is completed. Free prior informed consent (FPIC) compliant consultations conducted. Roadblocks encountered to policy change or implementation	Policy adopted and enforced. Number of staff trained and deployed. Number of loggers that adopted reduced impact logging practices.	Quantified reductions in deforestation. Increased proportion of restored native forest cover.	Quantified changes in carbon emissions.

Sources: Binnendijk (2001), OECD (2002), Daviet (2009), European Union (2010), OECD (2010), Managing for Development Results (2011)

Box 13.1 Performance indicators in development aid

Input-based indicators, including process indicators, have not proved very effective for measuring performance. They may be disconnected from the end result and risk creating perverse incentives (for example where 'expenditure' or 'numbers of meetings' are used as indicators of performance). Current best practice emphasises the use of indicators starting at the output level (Adam and Gunning 2002; Mumssen *et al*. 2010).

Quantifiable outcome indicators are often not available and are easier to obtain for the social sectors (such as health and education) than for institutional processes such as governance and public financial management (Koeberle *et al*. 2006). This is also a challenge for measuring the implementation of REDD+ policies and transformational reforms such as tenure reform and anticorruption measures.

The attribution of a result to a specific intervention becomes increasingly difficult and time intensive (and hence costly) the further one moves along the results chain. Performance assessment has – in practice – often been limited to output/outcome indicators. This has led to a focus on intermediate results, which do not guarantee achievement of the ultimate goal (Gunning 2006).

The further one moves along the results chain, the greater responsibility the provider (e.g. REDD+ country government) bears for performance. It is important to consider whether the provider is reasonably able to bear that responsibility and at what cost (Binnendijk 2001; Mumssen *et al*. 2010).

Because exogenous factors can hinder performance, governments may be reluctant to use outcome (let alone impact) targets as triggers for financing, because they can be held accountable for outcomes outside their control (e.g. extreme natural events and global financial crises). 'Risk indicators' (Binnendijk 2001) and partial insurance (Gunning 2006) have been recommended to complement the use of outcome indicators.

Independent collection of data for performance measurement is important. If the contract partners (governments) are involved in data collection there is a risk of moral hazard (Gunning 2006; Mumssen *et al*. 2010). This highlights the need for independent verification procedures for REDD+.

Finally, despite all best practice advice, performance measurement has a strong political dimension where good partnership is valued more highly than actual performance.

by a number of factors, which makes it difficult to establish causalities. This is even more difficult when measuring performance of 'soft' projects, such as improved governance (e.g. better justice, tenure reforms, etc.) and capacity building. Performance here is more difficult to measure than for 'hard' infrastructure projects such as water supply or transportation, which have more concretely measurable outputs and outcomes, and more easily established links between output, outcome and impact. It is an illusion to assume that one can develop a purely scientific or technical performance measurement system for all aspects of success.

Finally, the information needed for performance measurement is not always readily available or may be politically contested and unreliable. Information must be collected systematically as an add-on activity with additional costs, which tend to increase as one moves towards the impact end of the results chain.

13.4 Options for measuring REDD+ performance

What do these complexities of performance measurement mean for REDD+? Globally, there are few agreed indicators of REDD+ performance, except that they should be country driven and that ultimately, in phase 3, they should measure changes in GHG emissions and removals. The Meridian Options Assessment Report (OAR) suggests that performance indicators could be developed and approved as part of national REDD+ implementation plans (Meridian Institute 2009). Similarly, readiness preparation proposals (R-PP) submitted to the Forest Carbon Partnership Facility (FCPF) are required to outline how the REDD+ partner country will develop (interim) performance measures. This suggests that REDD+ performance indicators can vary across countries, depending on national circumstances, stakeholder views and REDD+ strategy objectives. Experiences in Guyana, the Democratic Republic of Congo (DRC) and Indonesia bear this out (Table 13.2).

Performance measurement is important for both accountability and for promoting effective REDD+ implementation. Performance indicators need to fulfil two different purposes, which must be considered in their selection: i) to monitor and measure the effects of projects and policies to see what is, or is not, working, in order to design better projects and policies; and ii) to evaluate results as a basis for financial rewards and progress to further phases. This is analogous to the reference level discussion (Chapter 16), where a business as usual scenario is used to measure impact, and to set a crediting baseline for defining payment levels.

The first purpose of performance indicators focuses on measures to improve project design. This requires an *implementation metric* that assesses

progress in, and effects of, planning, piloting and implementing a national REDD+ architecture (in phases 1 and 2). In the case of Guyana (Table 13.2), indicators in this category are termed 'enabling indicators' to reflect the preparatory character of the project or policy interventions. Examples of these enabling indicators include 'MRV system in place' or 'financial mechanism established'.

The second purpose of REDD+ performance indicators is to evaluate results in order to assess payment levels. This requires a *performance metric*, as well as an agreed benchmark (or crediting baseline). In phase 3, performance metrics may be outcome indicators (changes in gross deforestation rate) or impact indicators (changes in carbon emissions). In phase 2, when the focus is on implementing policies and measures, 'interim' performance indicators can be used. In the Norway–Indonesia Partnership, for example, payment is based on indicators such as "existing MRV activities identified and initial assessment on data gaps for the purpose of MRV completed" (Table 13.2). These 'interim' performance indicators will be replaced by outcome or impact indicators as soon as the MRV system matures and the country moves into phase 3.

Outcome indicators (deforestation rates) are sometimes distinguished from impact indicators (carbon emissions), the former being called 'interim' performance indicators. However, outcome indicators are sufficient as a basis for making payments, in combination with IPCC standard emission factors. Deforestation rates are therefore not really applicable as 'interim' performance indicators for phase 2 (e.g. the Guyana–Norway Partnership in Table 13.2), although they are often used.

Figure 13.1 shows types of performance indicators which are relevant to the three REDD+ phases. In phase 1, where the focus is on readiness (and most countries involved in national REDD+ processes are in this phase), performance measures are mainly based on input measures (e.g. consultations conducted) and some output measures (e.g. REDD+ national action plan approved).

The definition of performance indicators is critical in phase 2, where the focus is on implementing policy measures to establish an appropriate national REDD+ architecture. In this phase, the indicators need to play a dual function: i) to measure improvements in the national REDD+ architecture to support progress towards phase 3, and ii) to evaluate performance, primarily using output measures, as a basis for payments.

By phase 3, the national REDD+ architecture should be in place and REDD+ performance can be measured with outcome or impact indicators. Brazil is currently one of the few countries with the capacity for phase 3

Table 13.2 Examples of performance indicators in national REDD+ initiatives

Guyana Sources: Donovan *et al.* (2010), Guyana–Norway Joint Concept Note (2011)	**Democratic Republic of Congo** Source: Government of DRC (2010)	**Indonesia** Source: Indonesia–Norway Joint Concept Note (2010)
Enabling indicators	1. A national REDD+ strategy with a time horizon of 2030 is developed, constructed in a participatory manner comprising: An ambitious and high quality national REDD+ strategy that represents a consensus between different stakeholders The strategy is based on a decision tool (reference scenario) and robust strategic social and environmental evaluation (SESA). A practical, multisectoral and budgeted investment plan for REDD+. 2. An interim institutional framework for REDD+ implementation is ready by 2013, including: A functional register of carbon projects and initiatives An interim national fund/mechanism for carbon finance management Procedures for environmental and social assessment.	1. Preparation for the establishment of a National REDD+ Agency reporting directly to the President: Presidential decree creating a REDD+ Task Force [with specified mandate] […] 2. Groundwork is complete for a 2-year moratorium on forests and peatland concessions: A moratorium is effective from 1 January 2011. […] 3. Initial design is complete for an independent MRV institution. Existing MRV activities identified and initial assessment of data gaps for MRV completed […] 4. Interim financing instrument established […]
1.Strategic framework in place		
2. Continuous multistakeholder consultation process established		
3. Governance strengthened		
4. Financial mechanism in place		
5. System to monitor, report and verify (MRV) in place		
6. Rights of indigenous people and other local forest communities protected.		

Interim performance indicators	3. A comprehensive MRV system for REDD+ is operational including:	5. National REDD+ strategy developed through credible, transparent, inclusive and institutionalised multistakeholder process
Deforestation indicators: Annual gross deforestation […] *Degradation indicators*: Loss of intact forest landscapes Forest management (i.e. selective logging) activities in natural or seminatural forests – all areas to be rigorously monitored and activities documented Area within 500m of new infrastructure to be counted as 50% annual carbon loss through forest degradation Areas and processes of illegal logging to be monitored and documented as practicable Area of forest burnt each year to decrease compared to current amount […] *Indicators of increased carbon removals*: Not monitored in interim period.	An operational MRV system for GHG emissions (deforestation/ degradation) managed at the country level MRV system for social, environmental, governance and economic aspects The dual MRV system is accepted by REDD+ stakeholders.	[…] 6. First pilot province selected […] 7. Focal points in the GoI and GoN appointed […] 8. Independent review group identified […] 9. Communications campaign designed to make REDD+ activities transparent, inclusive and credible […]

The brackets '[…]' indicate that only a subset of performance measures is shown here.

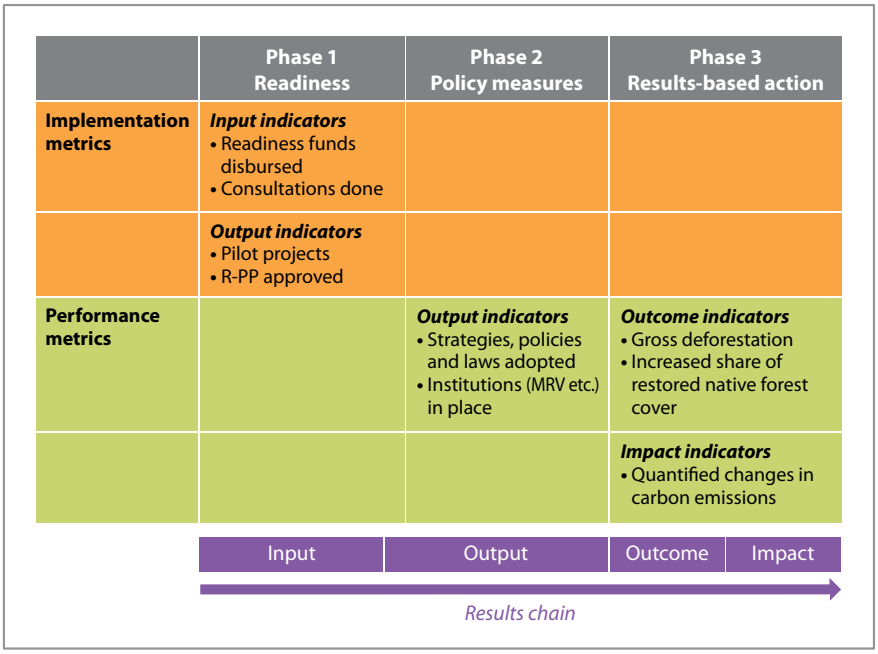

Figure 13.1 Options for performance indicators across REDD+ phases

actions. Although technically the final impact of REDD+ is a reduction in climate change, this will require a long-term trend of reduced emissions. For operational reasons we therefore argue that reduced emissions offer a valid impact indicator for REDD+.

REDD+ performance measurement will also need to deal with specific challenges. First, appropriate indicators for governance related policy change in phase 2 must be defined. Experience from the aid sector suggests that it is more difficult to measure improvements in governance (soft projects) than in infrastructure investment (hard projects). REDD+ is, in a sense, a combination of the two types: the ultimate achievement – reduced deforestation and degradation with resulting reduction in emissions – is 'concrete', but in order to reach this stage it is first necessary to make progress in 'softer' aspects of performance.

Second, REDD+ performance measurement inevitably raises political issues: most notably the questions 'By what standards is performance to be assessed?' and 'Who does the assessment?' As the Guyana case shows (Box 13.2), it is not easy to achieve agreement on the appropriate performance indicators, and the interpretation of standards for evaluation can differ substantially across stakeholders. Any independent assessor brings some level of subjective bias and it is difficult (and costly) to control for that. Even in phase 3, where

clear technical standards are being established for reduced forest emissions and enhanced removals (e.g. the Verified Carbon Standard), there remains a strong political dimension, as exemplified in the setting of reference levels (Chapter 16). Evaluations of REDD+ performance need to be realistic about this.

One solution might be to define qualitative aims and link them to more concrete, scheduled actions. Aims might include areas such as transparency, participation and rights. The actions would focus on implementation to secure the aims: specific plans, systems and laws to be prepared, passed and implemented. Rather than, say, 'laws enacted' a better performance indicator would be 'laws enacted and put into practice'. Performance becomes a set of conditions to be met, with the performance indicators spelled out as clearly as possible upfront, to minimise room for varying interpretations.

Moreover, for the purpose of REDD+, it may well be useful to include expert judgment in the overall assessment. Indicators serve as important tools for objective performance assessment, but they can also fall short in capturing actual performance (or underperformance). As Albert Einstein is said to have put it, "not everything that can be counted counts, and not everything that counts can be counted." To avoid oversimplifying performance measurement – with the risk of incorrect conclusions – the use of simplified performance measures should be preceded by a thorough analysis of their likely effect on stakeholders' behaviour. Valuable lessons could be learned from the independent verification of REDD+ performance in Guyana (Box 13.2).

Finally, the growing body of experience may lead to an international consensus on standards for REDD+ performance measurement, with room for expert reviews. A standardised assessment system, if properly implemented, could then be used to i) compare a country's REDD+ performance with a regional or international set of norms, and ii) assess countries' performances over time. This may reduce the risk of political hijacking of performance assessment, allow more targeted interventions, facilitate collaboration and coordination between donors, and enhance countries' ownership of reform. Such an effort would require the support of international organisations and governments, as well as relevant regional bodies, when designing and piloting the performance measurement framework. In addition to lessons from the aid sector, other UNFCCC processes, such as the discussions around 'programmatic CDM' (Climate Focus 2011), new market mechanisms (OECD 2012) or the expert reviews of Annex I countries' Greenhouse Gas Inventories (UNFCCC 2011b) could help inform the development of a more standardised REDD+ performance measurement framework.

Box 13.2 Performance measurement in the Guyana–Norway REDD+ Partnership

A Memorandum of Understanding (MoU) between Guyana and Norway was signed on 9 November 2009 to formalise cooperation on issues related to climate change, especially those concerning REDD+ (Guyana–Norway Joint Concept Note 2011).

A trust fund, the Guyana REDD+ Investment Fund (GRIF), was established as the financial mechanism for this cooperation. Norway made an initial contribution of approximately US$ 30 million, in the expectation that others would also contribute. The fund will receive up to US$ 250 million from Norway in performance-based payments for the period up until 2015, based on an independent verification of Guyana's deforestation and forest degradation rates and progress on REDD+ enabling activities. The World Bank was appointed to act as trustee and is responsible for providing financial intermediary services to the GRIF (Government of Norway 2010).

A multistakeholder Steering Committee (SC) serves as the oversight and decision making body for disbursements of GRIF funds. It is composed of the Governments of Guyana and Norway, World Bank (Trustee), United Nations Development Programme (UNDP) and Inter-American Development Bank (IDB) as 'Partner Entities', and Observers (NGOs from Norway and Guyana) (Government of Norway 2010).

Projects that contribute to Guyana's Low Carbon Development Strategy (LCDS) are eligible to receive payments from the GRIF. These payments are based on performance in terms of reduced emissions. Project proposals include the controversial Amaila Falls Hydro project, but as of January 2012, only two concept notes had been approved: for institutional strengthening, and small enterprises and alternative livelihoods (Guyana REDD+ Investment Fund 2012).

Guyana's performance in terms of implementing REDD+ and the LCDS is measured, and independently verified, against two sets of indicators (Guyana–Norway Joint Concept Note 2011; see also Table 13.2):

- *Indicators of enabling activities*: a set of policies and safeguards to ensure that REDD+ contributes to the achievement of the goals set out in MoU between Guyana and Norway (2009) for an inclusive and transparent REDD+/LCDS process.
- *REDD+ performance indicators*: a set of forest-based GHG emissions indicators. These are 'interim' performance indicators that will gradually be substituted as a MRV system is established.

Guyana and Norway have agreed that annual independent assessments of progress against the enabling indicators will be conducted by one or

more neutral expert organisations to be jointly appointed. For the period to 30 September 2010, the Rainforest Alliance carried out the independent assessment (Donovan *et al*. 2010), following an international tender process in accordance with Norwegian procurement regulations.

Although described as 'indicators', it is apparent that those above (and in Table 13.2) are not indicators in the strict sense of the word. They are not specific, measurable, attainable, relevant and time bound (SMART) or comparable across countries. Furthermore, no criteria were specified for evaluating the evidence supplied by the Government (Lang 2011a).

For the first independent verification assessment, the Rainforest Alliance therefore defined additional and more tangible verification indicators (Donovan *et al*. 2010). This verification report was heavily criticised by civil society for being superficial and too lenient, thus not providing an accurate picture of progress on the ground (Global Witness *et al*. 2011; Lang 2011a). In an open letter to the Norwegian Minister of Environment, several members of civil society questioned the transfer of a second tranche of funds for 2010–2011 (Lang 2011a).

The Norwegian Government welcomed this criticism as a means of improvement (Lang 2011b) and released the second instalment of approximately US$ 38 million in July 2011. This increased the GRIF budget to US$ 68 million (Earle 2011).

13.5 Conclusions

REDD+ aims to achieve a defined impact – reduced emissions – and payments may be made based on performance towards achieving this goal. This implies that there must be assessments of the results of REDD+ programmes using performance indicators. Although it is generally desirable to measure performance towards the end of the results chain, in order to measure directly the achievement of a project or policy's aims, in the medium-term most payments will be for readiness and policy reforms, rather than proven emissions reductions.

The focus on impacts as the basis for performance assessment has led to a neglect of the intermediate results, at the readiness and policy reform stages (phases 1 and 2), which define the preconditions for achieving cost effective and equitable REDD+ outcomes. Good performance indicators for REDD+ are needed in each of the three phases and not just in phase 3, which has been the focus of past discussions. The immediate challenge relates to measuring performance in phases 1 and 2, and especially in the latter, where the focus

is on policy performance. Here, valuable lessons can be derived from the aid sector, notably concerning performance indicators of governance reforms and the need to complement these with expert judgments to yield a more complete picture of actual progress and achievements realised.

The growing body of experience and data on performance measurement may ultimately allow the establishment of internationally agreed standards for REDD+ performance assessment. A standardised assessment system, if properly implemented, would offer many benefits including a reduced risk of political hijacking. In addition to lessons from the aid sector, such an effort could be informed by other relevant UNFCCC processes such as the discussions on 'programmatic CDM', new market mechanisms and the expert reviews of Annex I countries' Greenhouse Gas Inventories.