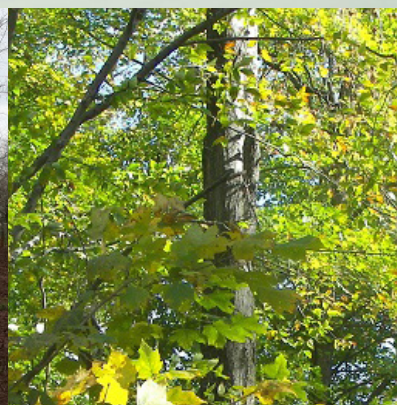
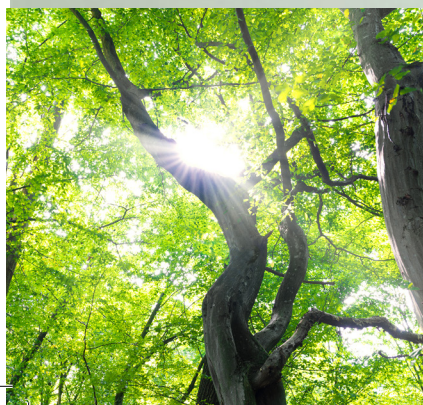




Non-carbon Benefits of REDD+

The Case for Supporting Non-carbon Benefits in Africa





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Acronyms and abbreviations

CCBA	Climate, Community and Biodiversity Alliance
CIFOR	Centre for International Forestry Research
COMIFA	The Central African Forest Commission
CSO	Civil society organizations
ECA	Economic Commission for Africa
FCPF	Forest Carbon Partnership Facility
FPIC	Free, Prior and Informed Consent
ICA	International Consultant Analysis
ICCA	Indigenous and Community Conserved Areas
NCBs	Non-carbon benefits
NGOs	Non-governmental organizations
MRV	Measuring, Reporting and Verification
PES	Payment for Environmental Service
REDD+	United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation and the Role of Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks in Developing Countries
R-PIN	Readiness-Plan Idea Note
R-PP	Readiness-Preparation Proposal
SBSTA	Subsidiary Body for Scientific and Technological Advice
SF	Safeguard Framework
SMART	Specific, Measurable, Attainable/Action-oriented, Relevant, and Time-bound
SPICED	Subjective, Participatory, Interpreted, Communicable, Cross-checked and Compared, Empowering, Diverse and Disaggregated
UNFCCC	United Nations Framework Convention on Climate Change

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Executive summary

The original mandate for the present paper on the non-carbon benefits (NCBs) of REDD+ (the United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation and the Role of Conservation, Sustainable Management of Forests and Enhancement of Forest Carbon Stocks in Developing Countries) emanates from the eighteenth session of the Conference of the Parties, held in Doha in 2012, when countries discussed how they might incentivize NCBs. REDD+ programmes, such as emission reduction programmes, have the potential to generate NCBs through multiple ways. The inclusion of such benefits in the design and implementation of REDD+ programmes is seen as a precondition for the long-term sustainability of these programmes. Such a direction is seen as broadening forest policy objectives beyond carbon to promote sustainable forest management and forest conservation, enhance forest carbon sinks and address the many direct and indirect drivers of deforestation and forest degradation.

The paper differentiates between co-benefits and non-carbon benefits on the basis that the latter are a precondition for the sustainability of REDD+ while the former are opportunistic benefits (so-called “low-hanging fruit”) that have not been specifically planned for. The paper identifies a range of NCBs within the context of Africa. However, it is acknowledged that the type of NCBs that can be generated under REDD+ depends on the country context, the type of REDD+ programme, forest type, costs and who is defining NCBs.

The link between safeguards and NCBs is also acknowledged. However, while safeguards are seen as a means of ensuring that REDD+ programmes do no harm, the idea of securing NCBs goes beyond the “doing no harm” concept to “do more good”.

The delivery of NCBs under REDD+ could face challenges such as who defines NCBs, power relations, equity and the extent to which NCBs are included in the design and implementation of REDD+ initiatives. Further NCBs should not take precedence over carbon benefits.

In order to collect information and validate NCBs in the conception, design and implementation of REDD+ activities and programmes, a four-stage methodological guidance is proposed: one, identify key stakeholders; two, define and identify key NCBs; three, identify indicators; four, develop a monitoring plan and select data collection methods.

There are four main approaches for incentivizing and integrating NCBs into REDD+. They include the composite, premium, non-bundled and the priority/eligibility/quota approaches.

In conclusion, NCBs may lead to greater carbon benefits. This is because it is through the promotion of NCBs that many REDD+ strategies and programmes address the direct and indirect drivers of deforestation and forest degradation, thereby catalysing change that results in emission reductions. Considering the importance of NCBs to the long-term success of REDD+, significant support (financial, technology and capacity) should be provided in phases 1 and 2 (readiness and implementation) activities that generate NCBs.

Introduction

Since gaining wide acceptance, the concept of REDD+ has been predominantly associated with carbon emission reduction activities and related carbon performance-based payments under Phase III. While being acknowledged as critical to the successful long term implementation of REDD+ activities, NCBs have unfortunately not received the same level of support, often being lumped under the broad category of co-benefits.

This paper sets out to argue why NCBs from the implementation of REDD+ activities are critical to the long-term sustainability of REDD+ activities and should therefore benefit from REDD+ phase I¹ and phase II² support. The paper will also explore and propose simple guidance on the provision of information including the nature, scale and importance of NCBs from REDD+³ activities, including potential indicators of successful NCB generation. A starting point for a new thinking around NCBs is the differentiation between the terms “co-benefits” and “non-carbon benefits” and identifying some important non-carbon benefits. The institutional setting necessary for the successful generation of NCBs at the national level will also be briefly looked at. Lastly, the paper examines the different options for incentivizing NCBs.

This paper builds on lessons and experiences from Africa, even though the relationship between NCBs and REDD+ activities is globally applicable. The context for this paper, therefore, is an African one.

The intended audiences of the paper are the United Nations Framework Convention on Climate Change (UNFCCC) negotiators, non-governmental organizations (NGOs), government departments, the private sector, communities, donors, research institutions and civil society organizations (CSOs) working on REDD+.

Several approaches were taken to generating the information and data for this paper. The first was to review REDD+ and specific NCB literature; review and analyse papers on NCBs submitted to the UNFCCC secretariat during the REDD+ negotiations; and review emission reduction programme idea notes submitted to the World Bank's Forest Carbon Partnership Facility (FCPF). The authors sought online written comments from African negotiators and other REDD+ experts. The second draft of the paper was presented to African REDD+ negotiators at a face-to-face workshop for their feedback. The final approach involved participation at the forty-second meeting of the Subsidiary Body for Scientific and Technological Advice and integration of key issues emerging from those discussions.

- 1 Initial support for national REDD strategy development financed by voluntary contributions and grants.
- 2 Capability building and enabling policies and measures and payments for emission reductions measured by proxies funded through grants or other financial means.
- 3 See FCCC/SBSTA/2014/2, paragraphs 50-52 and decision 1/CP.18 para 40.



1. Setting the context

A. Overview of forests in Africa and REDD+

The conversion of natural forests and woodlands, particularly in the tropics, is estimated to account for 17-18 per cent of total annual greenhouse gas production.⁴ Evidence presented by the Stern Review in its 2006 report entitled “The economics of climate change”, as well as in the fifth assessment report of the Intergovernmental Panel on Climate Change, indicates that current greenhouse gas emissions from forests are large (1.7 gigatonnes of carbon) and are key to a future climate change regime. Recent reviews indicate that it will not be possible to keep temperature increases to below 2°C without addressing greenhouse gas emissions produced from land use change.⁵ It is also well established that there will be large impacts of climate change on forests and people. The potential for mitigation through reducing emissions from deforestation and degradation (REDD+) is large. However, to be effective, mitigation activities need to be integrated with adaptation and include sustainable development concerns such as local livelihoods and coping strategies, since local communities often rely on forest resources for their livelihoods.

Africa has an estimated 650 million hectares of forest and woodland cover, equivalent to 21.8 per cent of its land area and 16.8 per cent of global forest cover. It is also home to the Congo Basin, the world’s second largest tropical rainforest. To achieve permanent and large-scale greenhouse gas emission reductions, it is generally accepted that REDD+ will need to provide a wide range of social, environmental and governance benefits. East and southern Africa has over 3 million square kilometres of miombo woodland covering Angola, Malawi, Mozambique, the United Republic of Tanzania, Zimbabwe and Zambia, as well as most of the southern part of the Democratic Republic of

the Congo. The miombo forms a critical life-support system for over 65 million people.⁶

These forests are under pressure from a growing and expanding human population that reached 1.1 billion in 2014.⁷ Population growth is driving demand for forest resources such as firewood and extensive conversion of land to commercial agriculture and small-scale farming driven by demographics and a global demand for food. The distribution of forests and woodlands varies from one subregion to the other, with Northern Africa having the least forest cover while Central Africa has the densest cover. According to the Millennium Ecosystem Assessment, actions to increase one ecosystem service such as food security can cause the degradation of others. So actions designed to increase food production will result in the increased use of water and expansion of agricultural land, leading to reduced water availability for others, degrading water quality, decreasing forest cover and related forest products and loss of biodiversity.⁸

It is now accepted that for REDD+ to be successful in reducing deforestation and forest degradation it should contribute to broader sustainable development goals. This is essential globally, but particularly for a continent like Africa that has some of the world’s fastest growing economies and significant rural communities dependent on forest goods and services for their livelihoods. At the same time, Governments keen to provide economic opportunities for their people, especially the youth, are relying heavily on extractive industries that are in turn driving the transformation of forest landscapes without generating much-needed employment opportunities for young people.

4 See <http://ipcc.ch/report/ar5/> and Stern, N. 2007. The economics of climate change: the Stern Review. Cambridge University Press, Cambridge.

5 Eliasch, J. 2008. Financing Global Forests: The Eliasch Review on Climate and Forests. Office of Climate Change.

6 Dewees, P. and others. 2011. Managing the Miombo Woodlands of Southern Africa: Policies, incentives, and options for the rural poor. Washington, D.C.: Program on Forests.

7 See <http://www.worldpopulationstatistics.com/population-of-africa-2014/>.

8 See <http://www.millenniumassessment.org/documents/document.356.aspx.pdf>.

Implemented in a participative and transparent way, REDD+ can contribute to a range of social, environmental and governance benefits such as helping to address unresolved land and natural resource tenure issues, enhancing biodiversity conservation, recognizing and respecting indigenous rights and knowledge and advancing the maintenance of ecosystem services.

Sustainable forest management has traditionally delivered NCBs and pioneered transformative policies to promote community forestry and forest co-management. Given this, the delivery of NCBs should not be limited to REDD+ programmes designed to deliver emission reduction.

B. Why NCBs are important in making REDD+ work

Since 2005, REDD+ has undergone significant changes in terms of its definition and practice at the national and international levels. The concept was premised on the promise of large-scale market-based funding to reward actors, through performance-based payments, for verified emissions reductions by avoided deforestation.

The evolution of REDD+ was brought about by the adoption of an increasing number of objectives related to issues such as poverty reduction, livelihoods and sustainable forest management. As a result of this, there is general agreement that REDD+ is a potentially powerful policy instrument for influencing how tropical forests are managed and valued.⁹ Despite this, some such as Angelsen and others argue that the formal REDD+ mechanism should not be overburdened by these additional objectives and that the focus should remain on the original objective of carbon emission reductions.¹⁰ However, a singular focus on carbon is seen as likely to drive narrow policy objectives that focus on emission reductions without considering the broader

drivers of deforestation and forest degradation¹¹ and significant non-carbon benefits that are preconditions to successful REDD+ implementation (see figure 1). It is also recognized that the “plus” elements of REDD, namely promoting conservation, promoting sustainable forest management and enhancing carbon sinks, have huge potential to generate more NCBs.

A successful REDD+ mechanism may also have indirect negative impacts such as affecting food security caused by land use change and access and may increase the conversion of other ecosystems – such as savannah and wetlands – to agriculture, with the consequent loss of the biodiversity and ecosystem services provided by those lands.¹² The response has been to promote adherence to environmental and social safeguards in the design and implementation of REDD+ and to support and report on the safeguards (see annex I for a complete list of safeguards). While safeguards are seen as a means to ensuring that REDD+ programmes “do no harm”, the idea of securing non-carbon benefits goes beyond the “doing no harm” concept to “do more good” by delivering environmental, social and economic benefits at the national and international levels.

The potential of REDD+ to deliver non-carbon benefits will vary with forest type, who is defining them and for what and how participative the process is, and the type of REDD+ programme. For example, small-scale farmers, who produce most of Africa’s food, also happen to be less attractive partners for forest carbon projects because of associated higher transaction costs.¹³ This tends to exacerbate gaps between rich and poor farmers as wealthier farmers own larger tracts of land. Since REDD+ programmes in Africa are likely to be implemented mainly on state or communal lands, restricted access to such REDD+ designated forest land could negatively

9 Stickler, C.M. and others. 2009. The potential ecological costs and co-benefits of REDD: A critical review and case study from the Amazon region. *Global Change Biology*, 15: 2803-2824.

10 Angelsen, A. and others (eds). 2012. *Analysing REDD+: Challenges and choices*. CIFOR, Bogor, Indonesia.

11 Okereke, C. and Dooley, K. 2010. Principles of justice in proposals and policy approaches to avoided deforestation: Towards a post-Kyoto climate agreement. *Global Environmental Change*, 20: 82-95.

12 Miles, L., and Kapos, V. 2008. Reducing Greenhouse Gas Emissions from Deforestation and Forest Degradation: Global Land-Use Implications. *Science*, Vol. 320, No. 5882, pp. 1454-14455.

13 Jindal, R., Swallow, B. and Kerr, J., 2008. Forest-based carbon sequestration projects in Africa: Potential benefits and challenges. *Natural Resources Forum*, 32(2):116-130.

affect landless people.¹⁴ Not all NCBs are delivered nationally as some accrue beyond national borders.

Implementers of REDD+ programmes face the real risk of failing to meet expectations leading to a loss of confidence of stakeholders they are serving. Broadening benefits to include NCBs can reduce this risk while increasing the carbon emission reductions potential of REDD+ programmes. Broadening the scope of the REDD+ mechanism could also offer countries with historically low deforestation rates and those with low forest cover and high biodiversity the possibility of benefiting from REDD+ and hence create greater geographical equity in the REDD+ regime.

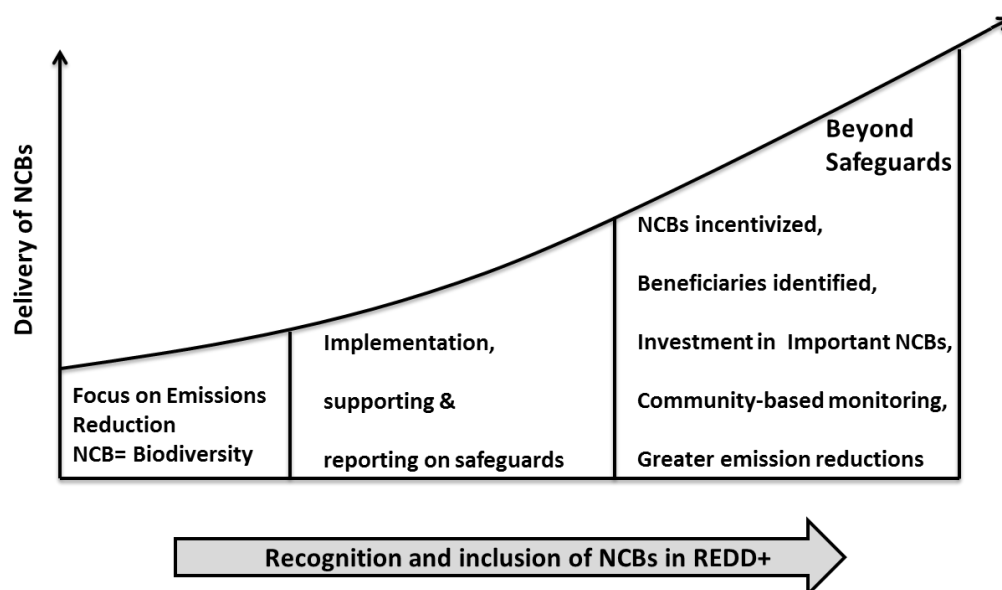
Since REDD+ design and implementation often involves multiple intermediaries, issues of power and control at various government and community levels can influence how benefits are distributed. Weak institutions could undermine equitable distribution of benefits.¹⁵ Figure 1 shows the pathway to

delivering NCBs at scale. The chances of delivering NCBs at scale are enhanced if they are included early in the design of REDD+ initiatives and the focus of REDD+ is not limited to carbon and goes beyond safeguards (see figure 1).

C. NCBs in the United Nations Framework Convention on Climate Change negotiations

This section reviews the development of REDD+ from 2007 to the present day, demonstrating how through the negotiations the concept evolved. This has resulted not only in a broadening of the definition of REDD+ but also its geographical scope, and finally how non-carbon benefits should be considered within the climate negotiations. Therefore, a discussion on non-carbon benefits has to start with a brief review of their evolution from co-benefits under REDD+ negotiations.

Figure 1
Pathway to delivering non-carbon benefits



- 14 Lindhjem, H., and others. 2010. Experiences with benefit sharing: issues and options for REDD-plus, Oslo, Norway. Published for the International Union for the Conservation of Nature by Poyry Management Consulting.
- 15 Ebeling, J. and Yasue, M., 2008. Generating carbon finance through avoided deforestation and its potential to climate, conservation and human development benefits. Philosophical Transactions of the Royal Society, B, 363: 1917-1924.

In Poznan, at the fourteenth session of the Conference of the Parties, the Parties agreed to broaden REDD+ activities beyond the two agreed to in Bali. They added the role of conservation, sustainable forest management and enhancement of forest carbon stocks. The Subsidiary Body for Scientific and Technological Advice notes the importance of

exploring co-benefits in its programme of work arising from decision 2/CP.13 taken in Bali.¹⁶

The fifteenth session of the Conference of the Parties in Copenhagen adopted decision 4/CP.15, which provided methodological guidance for REDD+, based on work undertaken by the Subsidiary Body for Scientific and Technological Advice, as a follow-up to decision 2/CP.13. Developing countries were asked to take into account the importance of co-benefits including biodiversity when promoting sustainable forest management and implementing other international agreements and commitments.¹⁷

At the sixteenth session of the Conference of the Parties in Cancun, the Parties agreed on a list of REDD+ activities in decision 1/CP.16, paragraph 70. Safeguards are listed in appendix I of decision 1/CP.16. The Conference of the Parties requested developing countries to address issues such as drivers of deforestation and forest degradation, land tenure, forest governance and gender considerations, which are also important NCBs.

The original mandate for NCBs emanates from the eighteenth session of the Conference of the Parties, held in Doha in 2012, when countries discussed how they might incentivize NCBs.¹⁸ At the nineteenth session, they went a step further and recognized that the successful implementation of REDD+ required that NCBs be incentivized for the long-term sustainability of REDD+ implementation.¹⁹

The Subsidiary Body for Scientific and Technological Advice was mandated to look into the question of incentivizing NCBs and developing a methodological approach. Parties and observers were then invited by the Conference of the Parties to submit their views on NCBs. The Centre for International Forestry Research (CIFOR) analysed the submissions and summarized emerging common elements from the submissions, such as the close link between safeguards and NCBs, and the recognition that the success of REDD+ is dependent on NCBs.²⁰ The

analysis of submissions by Parties and observers to the Subsidiary Body for Scientific and Technological Advice carried out by CIFOR shows that 83 per cent of the submissions stated that NCBs should be part of REDD+ “enabling conditions” and that by so doing interest in REDD+ would likely increase. The analysis also shows that Parties see a close link between safeguards and NCBs. The importance of NCBs is also highlighted by other REDD+ initiatives, such as the UN-REDD Programme and the Forest Carbon Partnership Facility (FCPF), as well as the Convention on Biological Diversity.²¹

A further review by the authors of 10 submissions by Parties revealed that 7 of the 10 submissions indicated that NCBs should be identified and defined at the national level and that NCBs should not take precedence over carbon benefits. Other elements of the submissions include that REDD+ finance should support REDD+ strategies and programmes that deliver significant NCBs and that the relationship between safeguards and NCBs should be clarified. The submissions state that since NCBs are context-specific, it does not make sense to create new requirements for measuring and monitoring under UNFCCC. Only the submission by the Central African Forest Commission called for NCBs to be incentivized and integrated into results-based finance and for payments for NCBs that support REDD+ implementation to be linked to payments for emission reductions and carbon removals. Brazil wants NCBs to be incentivized at the national level and for countries receiving results-based payments to invest some of this money into initiatives that contribute to enhancement of NCBs.²²

Debates at the fortieth session of the Subsidiary Body for Scientific and Technological Advice revealed that Parties remain divided on the issue of NCBs. Many such as Brazil and Indonesia stated that since the Warsaw Framework is now in place, no further UNFCCC decisions or guidance are needed. However, Tuvalu and the United Republic of Tanzania argued that international guidance is still required to address issues of leakage. There was also a range of views across developed countries as to

16 See <http://unfccc.int/resource/docs/2008/sbsta/eng/13.pdf>.

17 See <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf#page=11>.

18 See <http://unfccc.int/resource/docs/2012/cop18/eng/08a01.pdf>.

19 Decision 9/CP.19, paragraph 22.

20 See http://www.cifor.org/publications/pdf_files/infobrief/4549-infobrief.pdf.

21 See <http://reddplussafeguards.com>.

22 See <http://unfccc.int/resource/docs/2014/sbsta/eng/misc04.pdf>.



whether guidance should be adopted by UNFCCC or in other related fora. Others noted that NCBs are included in the readiness phase and are essentially an outcome of the safeguards.

Most countries felt that NCBs should be defined nationally as an international definition would not reflect differing national circumstances. Civil society groups such as the REDD+ Safeguards Working Group, the Accra Caucus and the Indigenous Peoples Caucus continued to make a case for international guidance on how NCBs should be incentivized. They argued that UNFCCC has the mandate to provide flexible guidance that gives confidence to REDD+ countries that NCBs will be incentivized as part of REDD+ finance. NCBs should be determined in the context of promoting sustainable development, respecting rights, protecting biodiversity, supporting adaptation goals, and addressing drivers of deforestation. At the end of the forty-second session of the Subsidiary Body for Scientific and Technological Advice, a draft decision was reached by parties on NCBs of REDD+ activities (see box 1). It took into consideration the related methodological issues. This decision is an indication that NCBs will remain relevant and will continue to attract serious attention in the implementation of REDD+ activities and the sustainable management of forests in the medium and long term.

Box 1

Draft decision on NCBs taken at the forty-second session of the Subsidiary Body for Scientific and Technological Advice²³

The decision:

- Recognizes that multiple non-carbon benefits are associated with REDD+ activities and are unique to countries' national circumstances, sovereignty, legislation, policies and priorities. Countries seeking financial, technological and capacity building supports to generate NCBs from REDD+ activities may provide among others information regarding the nature, scale and importance of the non-carbon benefits
- Encourages REDD+ implementing countries to share NCBs information through the web platform on the UNFCCC website and also for consideration by interested Parties and relevant financing entities
- States that methodological issues related to NCBs do not constitute a requirement for developing country Parties seeking to receive results-based payments in REDD+ phase III
- Concludes methodological issues related to NCBs of REDD+ activities.

23 FCCC/SBSTA/2015/L.5/Add.3. See <http://unfccc.int/resource/docs/2015/sbsta/eng/105a03.pdf>.

2. Setting the context

A. Defining non-carbon benefits

Sorting out methodological issues related to NCBs should begin with a set of criteria to help define NCBs. Trying to define the NCBs that arise from the implementation of REDD+ is difficult because of the diverse ecological and social conditions under which REDD+ is implemented. This would suggest that NCBs should be identified in a participatory manner and at different levels based on context and prevailing needs and conditions. In situations where a group of countries have a shared ecosystem such as the Congo Basin or the Miombo Woodlands, these countries could opt to define regionally important NCBs. The type of REDD+ initiatives will also influence the type of NCBs that can be delivered. Countries could benefit from some international guidance on how to determine which NCBs can be recognized. Such guidance could be in the form of flexible criteria (see box 2).

CIFOR's analysis of submissions by Parties and observers shows that 63 per cent of respondents feel that NCBs should be identified at the national level and not by UNFCCC due to the diversity and complexity of NCBs. However, there was some disagreement on this issue. There is little disagreement that integrating NCBs into the design of emission reduction programmes is critical for the successful implementation of REDD+. In addition, CIFOR found that 83 per cent of submissions agreed that NCBs needed to be included in REDD+ "enabling conditions", which would increase interest in REDD+. ²⁴

Box 2

Examples of criteria to define NCBs²⁵

- NCB is connected to a particular forest function
- A particular REDD+ programme can contribute to the said benefit
- Going beyond the minimum requirements of the Cancun Safeguards in enhancing biodiversity, strengthening recognition of the rights of indigenous peoples and local communities, and strengthening forest governance
- Contribution to the permanence of emission reductions through and the long-term sustainability of REDD+ at the national level
- NCB has potential to address specific drivers of deforestation and forest degradation through improved forest governance and recognition of land tenure
- Contribution to synergies with relevant climate change adaptation objectives
- NCB can be monitored and reported on in a robust manner and with options for community monitoring
- NCB can contribute to income and employment

B. Types of non-carbon benefits

Which NCBs are generated and the identity of the beneficiaries will be shaped by the social, ecological and institutional context in which REDD+ is implemented. That is, the location of the forests that benefit from REDD+ funding, the national policies put in place, and the forest management approaches employed will all influence the delivery of non-carbon benefits. This means that NCBs from REDD+ programmes can be defined at a national or international level.

24 Elias, P. and others. 2014. Synergies across a REDD+ landscape Non-carbon benefits, joint mitigation and adaptation, and an analysis of submissions to the SBSTA. CIFOR Info Brief Number 71, Bogor, Indonesia.

25 See <https://www.google.co.zw/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=FCPF+non+carbon+benefits&start=10>.

Table 1 proposes a typology for non-carbon benefits and also indicating whether a particular NCB is national or international in character.

The NCBs in table 1 are broad, as are the categories under which these are defined. All these can be grouped under social, environmental and governance benefits. They also include national and international NCBs. For instance employment and improved livelihoods are national NCBs while biodiversity conservation and improved forest governance are both international and national NCBs. This means attempting to identify specific NCBs to be promoted or targeted under national REDD+ strategies and programmes can be challenging. Yet if REDD+ strategies and programmes are to promote specific NCBs and to incentivize them, these need to be identified and prioritized in advance and in accordance with national and international conditions and circumstances.²⁶

There are several reasons why this is important. The first is that particular REDD+ initiatives will promote certain NCBs more than others. For instance, Lawlor and others found that REDD+ initiatives implementing Payment for Ecosystem Services initiatives, agroforestry and tree planting generated more benefits in terms of jobs and income than those focusing on avoided deforestation. Furthermore, the authors found that most of these benefits were produced by REDD+ projects on Africa. In this case, jobs and income would be national NCBs. However, avoided deforestation projects might be more effective in conserving biodiversity benefits than other REDD+ initiatives. Countries with high numbers of endemic species such as Madagascar or the Democratic Republic of the Congo could deliver significant international NCBs.

As might be expected the geographic location of REDD+ initiatives is a factor in determining the type

Table 1

Types of non-carbon benefits and level at which benefits accrue²⁶

Improved forest governance	Ecosystem services provision	Climate change adaptation	Improved economic and livelihoods	Supported social and cultural values
<ul style="list-style-type: none"> Improved security (N) Reduced land conflicts (N) Clear carbon rights support (N&I) Indigenous People's rights including FPIC respected (N) Gender, and equity improved (N) Improved land rights (N) More effective national and local Institutions (N) Forest governance is addressed (N&I) Improved participation and inclusion (N) Land and resource rights recognized (N) 	<ul style="list-style-type: none"> Maintenance of water regulation (N&I) Soil quality enhanced (N) Biodiversity conserved (N&I) International tourism potential enhanced (N&I) Scenic beauty preserved (N&I) Areas under protection supported (N&I) Maintenance of water provisioning (N) 	<ul style="list-style-type: none"> Financial commitments for adaptation increased (N&I) Enhanced food security (N&I) Adaptation of forest and agricultural systems (N&I) More resilient communities (N) 	<ul style="list-style-type: none"> Increased supply of genetic resources for medical plants and food crops (N&I) Employment & Income improved (N) Improved livelihoods (N) Increased contribution of forests to economic development (N) Improved support health (N) 	<ul style="list-style-type: none"> UNESCO sites preserved (I) Support for indigenous and community conserved areas Forest conserved for cultural spiritual and services (N&I) Science and knowledge, including traditional knowledge promoted (N)

Note: N=National; I=International

²⁶ This is an elaboration of Peter Minang (ICRAF). See http://unfccc.int/files/methods/redd/coordination_of_support/application/pdf/2._peter_minang_unfccc_redd_finance_workshop_august_2013.pdf and Central Africa Forest Commission. 2014. Methodological issues related to non-carbon benefits resulting from the implementation of REDD+ activities.

of NCBs that can be delivered. For instance, intact forests can be expected to yield more biodiversity benefits than degraded one. Achieving desired NCBs can be costly. Allocating investments for NCBs will depend on the identified priorities in a given country. Tenure reforms can be complex, political and take time and demand huge investments. So countries will have to decide whether securing forest tenure is a priority and worth the high investment. Where tenure is not contested this may not be an issue. So, once again the country context is important in defining which NCBs to prioritize and to inform investment decisions. Since weak tenure systems could undermine biodiversity conservation, this becomes an important international NCB.

C. Distinguishing between co-benefits and non-carbon benefits of REDD+

In defining NCBs and co-benefits it was important to recognize that REDD+ is the policy framework for reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. It is the “plus” of REDD, namely the role of conservation, sustainable management of forests and enhancement of forest carbon stocks, that will deliver significant NCBs. Furthermore, the readiness and implementation phases of REDD+ will require significant investment in order to deliver key NCBs such as transformative policies for developing countries to transition to low-carbon economies and address economic development challenges.

NCBs are benefits that are considered part of the results of REDD+ activities and associated costs and are specifically included in REDD+ design and implementation.

NCBs are specifically defined at the conception and design stages and are included in the national REDD+ strategies and programmes. Recognizing and rewarding countries deliver NCBs in REDD+ initiatives is considered critical to the long term success of REDD+ and to broadening country participation and support for REDD+ in the short-term. Delivery of NCBs is not limited to emission reduction programmes but includes NCBs from the other three activities of REDD+ namely promoting conservation, promoting sustainable forest management and enhancing carbon sinks.

Co-benefits are benefits arising from the implementation of REDD+ activities but that were not specifically part of the design and do not incur additional costs.

D. Potential critical uncertainties for delivering NCBs

The delivery of NCBs under REDD+ ultimately depends on a broad range of factors or uncertainties. The factors such as who defines NCBs, power relations, equity and the extent to which NCBs are included in REDD+ initiatives are not cast in stone and can be influenced but they nonetheless represent uncertainties.

Countries will have to decide whether NCBs are defined at the country or regional level or through UNFCCC, as some have argued. Even if they are defined at the country or regional level there are issues of how this is done. Figure 2 offers one possible scenario of where countries might want to position themselves in these discussions.

Those opposed to UNFCCC driving the process to define and incentivize NCBs have to contend with a concern that a region or country-driven process would likely lead to the following:

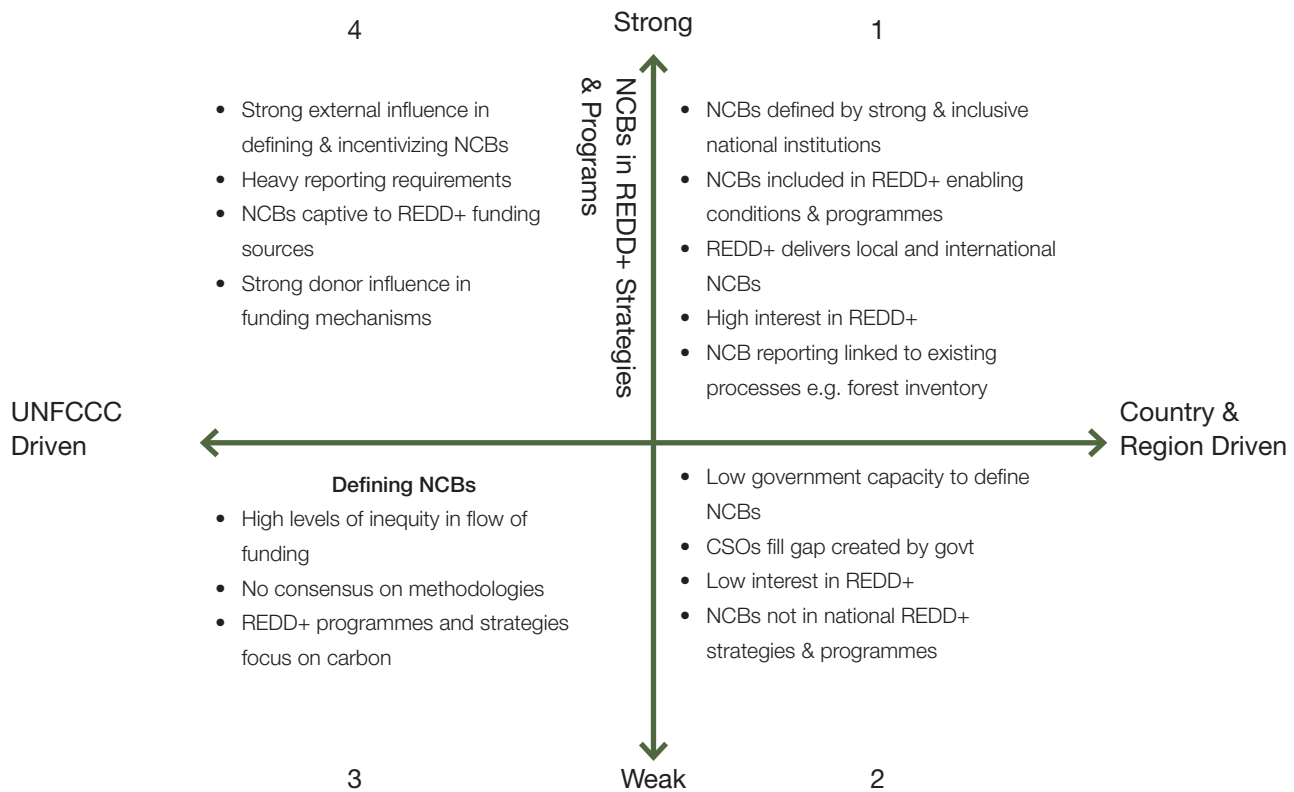
- NCBs could become a lower priority in REDD+ strategies and programmes;
- NCBs risk being dependent on the source of funding;
- Smaller forest countries, with high biodiversity but comparatively less carbon sequestration potential, may not be able to attract much-needed finance to protect their forests and improve the livelihoods of local communities who depend on those forests;
- The opportunity to provide direction for the Green Climate Fund’s frameworks on land-use, forests, joint adaptation and mitigation and ecosystem resilience would be diluted.²⁷

²⁷ See <http://reddplussafeguards.com/?p=1053>.

Those in favour of a region or country-driven process argue that:

- UNFCCC is a global climate change convention and involving the Convention could make it difficult to convince donors to agree to pay for NCBs separately to emission reductions;
- To convince donors to pay for NCBs would require establishing attribution between NCBs and emission reductions, something considered to be very difficult;
- Involvement of UNFCCC would require complex and expensive reporting which many developing countries might find difficult to meet;
- The fact that more funding needs to be directed towards joint adaptation and mitigation and to forest poor countries is undeniable. They suggest that perhaps this is a question to be taken up in the finance discussion.

Figure 2
Possible scenarios for delivering non-carbon benefits



3. Information and validation of NCBs

A. Stages for validating the generation of NCBs

To appreciate the type of NCBs being generated, countries would need some capacity to collect relevant information. This paper therefore proposes a four-stage information and validation process for NCBs that can be adapted and used by REDD+ countries, programmes and projects. Table 2 shows the different stages and potential elements for consideration.

Table 2
Stages for validating NCBs

NCB validation stages	Proposed elements
Stage 1 Identification of stakeholders (Who is involved?)	<ul style="list-style-type: none"> Actors in national REDD+ process and strategy Actors in REDD+ projects, programmes, etc. Method: Stakeholder analysis, field survey, literature review, etc.
Stage 2 Definition and identification of key NCBs (Who defines NCBs?)	<ul style="list-style-type: none"> Actors in national REDD+ process and strategy Actors in REDD+ projects, programmes, etc. Method: Stakeholder meetings, participatory rural appraisal, feedback workshop, etc.
Stage 3 Identification and agreement on indicators (What information do we need?)	<ul style="list-style-type: none"> Progress in achieving the identified NCBs Method: indicators selected by local and national experts with input from REDD+ actors, draw on existing proposals (see annex II)
Stage 4 Development of monitoring plan and selection of data collection methods (What NCB is generated and how do we know?)	<ul style="list-style-type: none"> Select appropriate methods, tools, and frameworks for data collection and analysis (see annex II) Community-based participatory approaches Use standards established at sub-national, national, regional or international levels

Stage 1: Identification of stakeholders

There are two ways of identifying stakeholders in the process of validating REDD+ activities that generate NCBs. The first one is through the national REDD+ process that normally brings together all key REDD+ actors to participate in the elaboration of key REDD+ readiness and policy documents such as R-PIN, R-PP and the national strategy and policy. The second way is very context specific to REDD+ actors in areas where REDD+ projects, programmes and initiatives are implemented. Issues linked to the nature of individual representation are highly dependent on specific internal institutional, cultural and local procedures.

Stage 2: Definition and Identification of NCBs

In terms of identifying particular NCBs, individual countries or projects may need to develop criteria for selecting a particular NCB. Participatory methods linked to ranking and scoring can be for example used in this case. However, different NCBs are found in different locations within a country or region, making many NCBs specific to particular sub-national and local levels.

Stage 3: Identification and agreement on NCBs indicators

The diverse nature and categories of NCBs will likely make information-gathering complex and challenging and may require specific indicators for each selected priority NCB during the implementation of national or subnational REDD+ programmes.

In general, indicators are often “SMART” or “SPICED” or a mix of both. SMART indicators are Specific, Measurable, Attainable and Action-oriented, Relevant, and Time-bound. SMART indicators are mainly quantitative, top-down and commonly used for project monitoring and evaluation. SPICED indicators are Subjective, Participatory, Interpreted and communicable, Cross-checked and compared, Empowering, and Diverse and disaggregated. They are mainly qualitative and bottom-up in nature and can easily be measured by community members with low level of education. Depending on the type of NCB, indicators can be:

- Input indicators e.g. funds for hiring a local eco-guard;
- Process indicator e.g. Free, Prior and Informed Consent (FPIC) conducted;
- Output indicator e.g. number of farmers implementing forest management plan;
- Outcome indicator e.g. reduction in elephant poaching;

Box 3

NCBs and indicators in emission reduction programmes²⁸

Examples from the Democratic Republic of the Congo

NCB: Maintain and enhance biodiversity and ecosystem services

Indicators:

- Change in natural forest cover (overall and core)
- Change in abundance and distribution of target wildlife species

NCB: Statutory and customary rights to lands, territories and resources are recognized, respected and strengthened

Indicators:

- Percentage of indigenous peoples and local or forest communities with clear legally recognized use and/or tenure rights
- Number of business sector actors with improved concession tenure
- Level and quality of community and indigenous peoples participation (by gender) in decision making and monitoring
- Number of people trained in the FPIC process
- Hectares of land mapped with participatory mapping and number of communities covered

NCB: REDD+ benefits are shared equitably and improve long-term livelihood security and well-being of stakeholders with special attention to the most vulnerable groups

Indicators:

- Amount and type of benefits (monetary and non-monetary) distributed for ecosystem services
- National poverty assessments show relative improvements in the areas where ER Programme activities are implemented
- Increase in productive employment related to REDD+, including potentially vulnerable or marginalized people.

Examples from Ghana

NCB: Livelihoods of farmers involved in cocoa production are improved

Indicators:

- Farmers' average cocoa yield per hectare is doubled
- Farmers' income from cocoa is also doubled

NCB: Catalyse and implement tree tenure reforms

Indicators:

- Quality of farmers' users right to benefit economically from trees in their farms
- Level, number and size of farms mapped
- Level of implementation of land-use planning

²⁸ Source: World Bank FCPC website <https://www.forestcarbonpartnership.org>.

- Impact indicator e.g. verified increase in wildlife population.

Most of the input and process indicators could be verified at the early stage of REDD+ implementation while outcome and impact indicators appear in the later stage of REDD+ implementation. It is important for countries to limit the number of indicators in order to reduce the cost of validating NCBs generated. In some cases, countries can focus on few key indicators that are SMART or SPICED.

The selected NCB indicators will be more realistic to attain if they are identified by countries (see box 3) or stakeholders on the ground (country-driven or region-driven like in the Congo Basin). Annex II presents potential indicators and a variety of methods for getting information on NCBs generated.

Stage 4: Designing a monitoring plan and data collection methods

A robust monitoring plan for NCBs should:

- Have a clear objective;
- State the identified indicators and their measurement methods;
- Have a dedicated person or persons responsible for collecting data;
- Indicate the periodicity or frequency of data collection;
- Specify the location or geographic coverage;
- Specify the cost of fully implementing the monitoring plan;
- Have the stakeholders involved to select methods for data collection and analysis within the monitoring plan and validation of NCBs generated.

The selection and application of specific methods for any given NCB is determined by a number of internal and external factors. The internal factors include: the availability and relevance of baseline and new project/programme data; the time required to gather information; the financial resources and cost of gathering information; the size of the population affected; and the local and national technical skills

and capacities on NCBs in the country.²⁹ A likely external factor is linked to the cost of hiring external experts to gather information of the generated NCBs.

When selecting a particular monitoring and data collection method, consider the following. First, information gathering and validation methods of NCBs should be designed to keep costs low by selecting simple tools and methods available and use proxies to track NCBs generated. This will ensure that the entire cost is less than the expected incentives of generating NCBs. In this light, REDD+ countries could evaluate the strengths, weaknesses, opportunities and threats (so-called “SWOT analysis”) of existing information gathering methods for NCBs. Second, simple methods will easily promote locally-based monitoring systems of NCBs. Experience with indigenous and community-based measuring, reporting and verification (MRV) of carbon, biomass, biodiversity and natural resources exists in the Democratic Republic of the Congo, Madagascar and the United Republic of Tanzania.³⁰ Third, countries could build on existing methods and datasets used by for example the national forest monitoring systems, national statistics and relevant government and research institutions. Regional databases such as those of river basin authorities may also be an important source of information for monitoring hydrological regimes.

Before selecting a particular information gathering method for NCBs, it is important to make a preliminary assessment of the time and funds needed, available local/national skills and capacities to collect information. In general, irrespective of the method selected and used, the collection of information about some NCBs will require more time, funds, capacity and data than others. Collection of information on hydrological regimes (water quality and quantity), for example, may likely take a longer time, resources and data than the collection of information and validation of improved tenure and rights that can be easily detected once there is a favourable tenure policy and legislation in place. So, depending on

29 FCMC. 2013. Methods for assessing and evaluating social impacts of programme-level REDD+ Forest, Carbon, Markets and Communities (FCMC) Programme. USAID, Washington, D.C.

30 International Work Group for Indigenous Affairs and others. 2014. Submission to SBSTA 40 on Non-Carbon Benefits as an Imperative for the Sustainability of REDD+.

the state of the internal factors, different NCBs can fall in one of the different quadrants as shown in figure 3. Some NCBs require very little new data and so will demand minimum time and resources to collect required data. More complex NCBs such as watershed protection require more data, time and resources to validate.

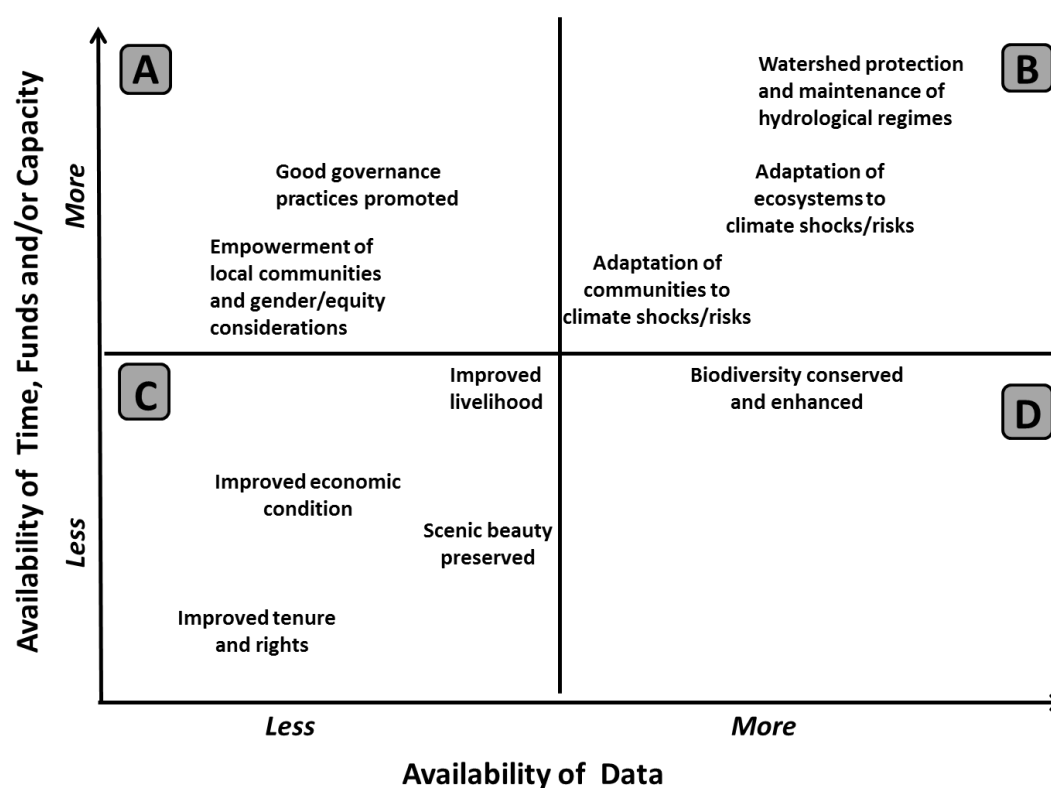
B. Institutional framework for NCBs

To support the operationalization of information collection on NCBs, this should be integrated into existing REDD+ institutions and frameworks. This is in line with UNFCCC³¹ recommendations that encourage the use of mandates and capacities

of existing national institutions and frameworks. This approach is likely to be more efficient and cost effective than creating new mechanisms, frameworks and institutions specifically for NCBs.

REDD+ countries are expected to have a national REDD+ entity with a measuring, reporting and verification entity, a national forest monitoring system, safeguard systems, etc. One of these systems may take up the responsibility to capture information on non-carbon benefits generated during the implementation of REDD+ activities. In Africa, a few countries such as the United Republic of Tanzania, Ghana and the Democratic Republic of the Congo have or are in the process of elaborating national measuring, reporting and verification, national forest monitoring and safeguard systems.

Figure 3
Relationship between time and resources necessary to collect data for validating different NCBs



31 UNFCCC. 2013. Toolkit for Non-Annex I Parties on Establishing and Maintaining Institutional Arrangements for Preparing National Communications and Biennial Update Reports.

4. Incentivizing NCBs

A. Approaches for incentivizing NCBs

There are four main approaches for incentivizing and integrating NCBs into REDD+ result-based finance. They include the composite, premium, non-bundled and the priority/eligibility/quota approaches.³²

1. Composite approach

In the composite, integrated or bundled approach, NCBs are fully integrated into the conceptualization, design and implementation of REDD+ rather than treated as an add-on. It is a bottom-up approach and also falls within the UNFCCC mandate. Additional payments for NCBs are expected to be made as part of a “package” of results that includes carbon emission reductions. Measuring, reporting and verification and payment for performance are therefore considered not only for carbon but also for non-carbon objectives and outcomes. Carbon and non-carbon objectives are treated equally at all the three phases of the REDD+ process. If well implemented, this approach provides more assurance on the sustainability, permanence, quality and quantity of emissions reduced. Possible drawbacks, however, may include the lack of established and adopted international and/or national guidelines for measuring, reporting and verifying diverse NCBs. REDD+ countries should therefore take the lead in developing and proposing simple methodological guidelines and indicators of priority NCBs specific to their context. This approach could make a case for payment within financial mechanisms under the convention such as the Green Climate Fund (see box 4). The one challenge with this approach is that

Box 4

Green Climate Fund³³

The results-based finance decision from Warsaw not only reaffirms the Durban decision that finance for REDD+ “may come from a variety of sources”, but it also identifies the Green Climate Fund (GCF) as the foremost channel through which finance should flow. The Warsaw decision also seeks to keep the discussion on finance going, with the aim of helping to “scale up and improve the effectiveness” of finance. GCF has become increasingly important in relation to the prioritization of finance for land use and forest sectors. A recent study undertaken by CIFOR across 23 REDD+ projects in 6 countries has shown that finance and tenure insecurity to be the main implementation barriers of REDD+. ³⁴ Significant scaling up of finance is required for the successful and sustainable implementation of REDD+. To date, there has been little private sector investment and funding has come primarily from aid/development sources. GCF is a combination of private and public funding that is well poised to make a significant contribution. Due to the long history of development and conservation work in developing countries through both local and international CSOs as well as multilateral development banks, identifying implementing entities and intermediaries should not prove difficult. Many likely implementing entities already exist and are undertaking work that is of relevance and could benefit from GCF funding in both a land use and forests, mitigation and adaptation context. When considering investment risks, GCF should give consideration to REDD+ projects and programmes and NCB outcomes, as there is support for the notion that more NCB outcomes will give rise to lower risk associated with REDD+ activities.

32 Sources include submissions by parties and observers to SBSTA 40 UNFCCC on methodological issues related to non-carbon benefits resulting from the implementation of REDD+ activities. The organizations include: Central Africa Forestry Commission (COMIFAC), World Wide Fund for Nature (WWF), Conservation International (CI), Environmental Defense Fund (EDF), National Wildlife Federation (NWF), Rainforest Alliance (RA), The Nature Conservancy (NC), and Union of Concerned Scientists (UCS), REDD+ Safeguard Working Group (RSWG), The Accra Caucas, and Indigenous Peoples' Caucus and COICA.

33 See more at the Green Climate Fund website <http://news.gcfund.org/>.

34 CIFOR. 2014. The challenge of establishing REDD+ on the ground: Insights from 23 subnational initiatives in six countries.

performance based payments under phase III are for emission reductions measured in terms of tons of carbon dioxide equivalent reduced. This would mean that a country would have to decide what percentage, if any, of the performance-based payment it may wish to allocate to NCBs.

2. Premium approach

The premium approach is closely associated with the carbon market or voluntary market certifications by different standards (see box 5). The premium approach puts a higher price on emission reduction programmes that generate NCBs. Investors in the voluntary carbon market are increasingly interested in the social, environmental and multiple benefits of REDD+ emission reduction programmes. REDD+ programmes that generate both carbon credits and NCBs are promoted and sold at higher price in the voluntary carbon market.³⁵ REDD+ projects using

the Verified Carbon Standard do not explicitly consider NCBs in their design and implementation and generally sell carbon at a lower average price when compared with the Gold Standard that considers both carbon and non-carbon benefits. This premium approach works for REDD+ countries that are targeting the voluntary carbon market. However, the global carbon market is shrinking as the price and volume of carbon drops. This negative trend is making many REDD+ countries to lose confidence in the market-based approach to REDD+. Moreover, the premium approach to NCBs could discourage many countries who do not understand and cannot effectively implement different existing market certification standards. In a future situation where developed countries set out ambitious emission reduction targets, the market demand and price for carbon will likely increase and become a more attractive option for REDD+ countries to consider.

Box 5

Market standards for NCBs

There is currently no standard that provides comprehensive coverage of the social and other environmental criteria. Various certification standards provide comprehensive assessments of the sustainable forest management criterion. Experience in using these standards in pilot projects shows that projects combining several standards as part of their strategy are able to improve their ability to attract investment, but costs of implementing several certification schemes remains a concern. Other concerns centre on weak and inconsistent considerations for communities and biodiversity.³⁶ Despite these limitations, certification provides useful practical experience that should feed into the design and integration of NCBs in REDD+ regime. In 2011, a review to compare and evaluate the practical application to REDD+ of ten forest management, social, environmental and carbon standards that are currently active worldwide³⁷: Climate, Community and Biodiversity (CCB), CCB REDD+ Social and Environmental Standards (CCBA REDD+ S&E), CarbonFix Standard (CFS), Forest Stewardship Council (FSC), Global Conservation Standard (GCS), ISO 14064:2006, Plan Vivo Standard, Programme for Endorsement of Forest Certification (PEFC), Social Carbon Standard and the Verified Carbon Standard. The findings were that no standard provides comprehensive coverage of the social and other environmental criteria. Different certifications have different emphasis and strengths. For example FSC, PEFC and CarbonFix provide comprehensive assessments of the sustainable forest management criterion. CCBA REDD+ S&E, CCB, and GCS provide comprehensive coverage of the biodiversity and poverty alleviation criteria. The recommendation is therefore that experiences on voluntary certification, and in particular combining certification standards may provide useful insights in attracting investments for REDD+. However, the question remains if market based approaches alone are suitable mechanisms for addressing complex forest conservation. Or if fund based systems that truly integrate development, biodiversity and climate dimensions are the means to achieving REDD+.

35 Forest Trend. 2014. Sharing the stage: State of the voluntary carbon market 2014. Executive summary. See http://www.forest-trends.org/documents/files/doc_4501.pdf.

36 SSNC. 2013. REDD Plus or REDD "Light"? Biodiversity, communities and forest carbon certification. See <http://www.naturskyddsforeningen.se/sites/default/files/dokument-media/REDD%20Plus%20or%20REDD%20Light.pdf>.

37 Sustainable Management of Forests and Biodiversity Conservation. 2011. Options for REDD+ Voluntary Certification to Ensure Net GHG Benefits, Poverty Alleviation. See www.mdpi.com/journal/forests

3. Eligibility approach

The eligibility or priority approach considers the inclusion of NCBs into REDD+ projects and programmes as an extra condition to be fulfilled before having access or eligibility to REDD+ funds. Unlike the composite approach, this approach makes the implementation of REDD+ more difficult for many countries that have to put in additional resources and time to measure, report and verify NCBs. This approach has so far been favoured by multilateral institutions, bilateral agreements and even UNFCCC. An example is the World Bank carbon fund emission reduction programme that requires countries to show how substantial NCBs will be generated and promoted (see box 6). For REDD+ countries such as the Democratic Republic of the Congo, the Congo, Ghana, Ethiopia and Madagascar which are engaged and interested in accessing the carbon fund, this approach is an obligation and not an option. Similarly, under the convention, only countries that are able to show how safeguards are being addressed and respected are eligible to payments. This is important because some social and environmental NCBs are related to safeguards.

4. Non-bundled approach

The non-bundled approach explores separate additional mechanisms to incentivize or pay for NCBs generated within a REDD+ emission reduction programme. This approach is increasingly being promoted under different mechanisms such as the payment for environmental services (PES). PES is common in Central and Latin America, especially Costa Rica and Mexico, and specifically in the areas of watershed protection and biodiversity conservation. While there is strong performance of financing incentives and service providers, PES schemes work best in places where there is strong private land ownership, and this is unfortunately not the case in many African countries.

Box 6

Carbon funds³⁸

Under FCPF, NCBs are defined broadly as “benefits produced by or in relation to the implementation and operation of an emission reduction programme, such as the improvement of local livelihoods, the building of transparent and effective forest governance structures, progress on securing land tenure, and enhancing or maintaining biodiversity and/or other ecosystem services.” FCPF therefore considers that while the carbon emission reduction price negotiations offer an opportunity for NCB benefits to be taken into consideration, there would be no systematic quantification of NCBs for pricing under the carbon fund. This means that NCBs are considered as part of the ER programme selection rather than as a price component. The FCPF methodological framework therefore encourages ER programmes to enhance these benefits as part of broader sustainable development³⁹. All countries with the exception of Costa Rica have identified NCBs within their national submissions to FCPF.

B. Incentives for NCBs and the different phases of REDD+

It is through the promotion of NCBs that many REDD+ strategies address the root causes of drivers of deforestation and forest degradation, thereby catalysing change that results in emission reductions. NCBs may lead to greater carbon benefits. Considering the importance of NCBs to the success of REDD+, ways to incentivize NCBs in different phases of REDD+ as well as identifying economically and logistically feasible funding sources remains a central issue.

38 See <https://www.forestcarbonpartnership.org/carbon-fund-0>.

39 See <https://www.forestcarbonpartnership.org/sites/fcp/files/2014/MArch/CF9%205.%20Update%20on%20pricing%20approach.pdf>



In phases 1 and 2 (readiness and investment), significant public funding should be invested in activities that generate NCBs and which lay the foundation for the long-term success of REDD+. Much of the efforts to secure NCBs and indeed REDD+ such as securing land tenure or improving transparent and participatory forest governance, conservation of watersheds, natural forests and biodiversity for enhanced resiliency of ecosystems, require large outlays of investment. Thus support for NCBs linked to Phase I and II of REDD+ will be required to maximize the generation of NCBs with the associated benefits in reducing emissions in Phase III.

While some NCBs may be relatively cost-effective to generate, more costly NCBs may merit higher technological, implementation capacity and financial investment if they align with a country's top priorities. National contexts and priorities of NCBs must be understood in order for these types of funding allocation decisions to be made. For instance, the process of undergoing land tenure reform may involve significant and sustained investments over time, effort, and funds. This level of investment may not be appropriate in a national context in which land tenure is largely uncontested. However, high investment in securing land tenure may be necessary in many African countries with highly insecure land tenure in forest areas. Payments for REDD+ results should be sufficiently large to cover the costs of continued investment in the promotion of this kind of NCBs.

Annexes

Annex I: UNFCCC safeguards articulated in the Cancun Agreement⁴⁰

1. Actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements
2. Transparent and effective national forest governance structures, taking into account national legislation and sovereignty
3. Respect for knowledge and rights of indigenous people and local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the UN Declaration on the Rights of Indigenous Peoples
4. Full and effective participation of relevant stakeholders, in particular indigenous people and local communities, in the actions referred to in paragraphs 70 and 72 of this decision
5. Actions are consistent with the conservation of natural forests and biological diversity, ensuring that actions referred to in paragraph 70 of this decision are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social benefits
6. Actions to address the risk of reversals
7. Actions to reduce the displacement of emissions

⁴⁰ The Cancun agreements: outcome of the work of the ad hoc working group on long-term cooperation under the Convention. Decision 1/CP.16. Report of the Conference of the Parties on its sixteenth session, held in Cancun from 29 November to 10 December 2010. FCC/ CP/2010/7 Add.1.

Annex II: Potential indicators and monitoring methods for NCBs⁴¹

Specific NCBs	Potential NCB indicators	Potential monitoring and data collection methods
NCB Category: Improved economic and livelihood conditions		
Improved livelihood and well-being	<ul style="list-style-type: none"> Household incomes increased Men and women income and assets Men and women access to natural resources Change in access to basic services Community income/wealth increased Poverty of communities reduced Change in community infrastructure Increased number of NTFPs collected for subsistence and income generation Amount and type of benefit distributed (monetary and non-monetary) 	<p>Methods for using existing data</p> <ul style="list-style-type: none"> Living Standards and Measurement Surveys LSMS Household Budget Surveys Human Development Index HDI Gross Domestic Products GDP Gender-related Development Index GDI Millennium Development Goal MDG Country-specific sources (e.g. REPEAT in Uganda) Ibrahim Index of African Governance (IIAG)
Increased contribution of forest sector to economic development	<ul style="list-style-type: none"> Number of REDD+ jobs and employment created Contribution of REDD+ to GDP Increased revenue from forestry sector Local economies improved Increased number of micro and small scale businesses increased expansion of agribusiness and (agro)forestry on degraded lands venture capital earnings invested in forest Economic profitability of activities supported by the project participation in new markets Hectares of land mapped with participatory mapping and number of communities covered Number of business sector actors with improved concession tenure 	<p>Participatory and non-experimental methods for collecting your own data</p> <ul style="list-style-type: none"> Participatory Impact Assessment, Monitoring and Evaluation Participatory Rural Appraisal Participatory Mapping Participatory Action Research Household Economy Approach CIFOR Global Comparative Study on REDD+ Survey Instruments Basic Necessities Survey (BNS) Stages of Progress Most Significant Change Sustainable Livelihoods Framework CIFOR Poverty and Environment Network Survey Instruments National poverty assessment with focus on programme area Household Livelihood Security Index HHLI Economic modelling Household economic approach Impact evaluation techniques: Randomization; Repeated Time Series ; and Matching Free, Prior and Informed Consent FPIC Consultative Impact Monitoring of Policy – CoIMPact PROFOR user guide for assessing and monitoring forest governance WRI Governance of Forests Initiative Indicator Framework UN-REDD Participatory Governance Assessment for REDD (e.g. Nigeria) National Forest Inventory VPA FLEGT procedure FSC certification standards

41 Sources for this table include: Submissions by parties and observers to SBSTA 40 UNFCCC on methodological issues related to non-carbon benefits resulting from the implementation of REDD+ activities; and submissions and presentations of Emission Reduction Programme Idea Notes by REDD+ countries to the World Bank Carbon Fund (countries include the Democratic Republic of the Congo, the Congo, Madagascar, Ghana, Ethiopia, Indonesia, Nepal, Vietnam, Peru and Guatemala).

Specific NCBs	Potential NCB indicators	Potential monitoring and data collection methods
NCB Category: Improved forest governance		
Improved tenure (land and forest) and rights (statutory and customary)	<ul style="list-style-type: none"> • Decline in competing land claims and land related conflicts • Area of land macro or micro-zoned for different land use practices • National program on land-use planning • Revision of national forest law or policy • Establishment of national guidelines on FPIC • Number of titles, right of use or access to land and natural resources granted to local communities • Number of indigenous peoples, local/forest communities with clear legally recognized use and tenure rights • Level and quality of community and indigenous peoples participation in activities, decision making and monitoring • Area of community land registered or officially recognized • Tree tenure policies/laws/legislations favourable to farmers • Land tenure policies/laws/legislations favourable to farmer • Customary/statutory rights to resources recognized, respected, or strengthened • Improved land management • Increased area under local management by smallholders • Number of hectares of legally titled land • Number of people trained in FPIC process 	
Good governance practices promoted	<ul style="list-style-type: none"> • Forest planning agreements • Effectiveness of forest law enforcement • Increased and effective participation in governance platforms • Increased transparency in management • Effective conflict management systems • Adoption of national REDD+ policy • Adoption of national climate policy • Establishment of national multi-stakeholder platform • Establishment of national REDD+ committee • Increased environmental education • Adoption of consultation protocol • Reduced number of conflicts • Increased proportion of conflicts in process of mediation • Increased area of land under sustainable management (e.g. RSPO, FSC, etc.) • Increased number of forest management plans • Proportion of area under certified management (e.g. RSPO, FSC, ISPO) 	

Specific NCBs	Potential NCB indicators	Potential monitoring and data collection methods
	<ul style="list-style-type: none"> • Reduction in illegal logging activities • Reduction in bush meat hunting • Agreements between different stakeholders on REDD+ matters • Establishment of MRV systems • Approved instruments and mechanisms for facilitating land use planning • Community early warning anti-corruption mechanism • Number of conflicts handled and pending • Extent of resolution of grievance raised by Ombudsman • Results of external evaluator on REDD+ programme governance mechanism • Level of coordination and collaboration between government bodies • Level of coordination and collaboration between government, NGOs and communities 	
Empowerment of local communities and gender/equity considerations	<ul style="list-style-type: none"> • Gender considerations enhanced • Increase social inclusion of women and indigenous peoples • Number of women leaders and managers • Consideration of most vulnerable groups • Differentiated services for indigenous populations • Number of consultations with communities • Percentage of community members consulted • Percentage of indigenous peoples participating in activities and decision making • Percentage of women participating in activities and decision making • Improved autonomy of women • Number of approved community forest management plans • Development of national legislations on community forest management • Regulating and applying community forest management instruments • Funds received and utilized for implementation and reward for performance 	

Specific NCBs	Potential NCB indicators	Potential monitoring and data collection methods
NCB Category: Ecosystem services provision		
Biodiversity conserved and enhanced	<ul style="list-style-type: none"> • Change in (natural) forest cover • Number of different flowering plants • Change in (target) wildlife abundance • Change in wildlife species distribution • Number of known mammalian species • Number or percentage of unique mammalian species • Number of endemic wildlife species • Number of threatened wildlife species • Number of genera of birds • Increased ecosystem connectivity • Variation of rate and area in forest fragmentation • Reduction in rate of native forest loss in the area of intervention • Reduced encroachment into protected forest • Vegetation types and characteristics, plant species diversity, • Forest protection and management • Growing stock (size class distribution, plant density of herbs, green biomass, vegetation height), • Regeneration, • Threat reduction strategy on fire, grazing, encroachment, biomass removal, etc. • Demography, cattle population, household-wide forest product demand, agricultural land, education • Community participation in conservation, forest management, harvesting and use 	<ul style="list-style-type: none"> • Participatory Biodiversity Monitoring in Community Managed Forest • National Biodiversity Monitoring Framework (e.g. South Africa) • BioMAT tool • Biodiversity Inventory and Monitoring Toolbox • Resource Inventory • Transect Walk • Forest Management Unit and enterprise records • Experimental plots • Key Informant Survey • Focus Group Discussion • Household survey • Fix point photo monitoring • FSC Simple monitoring methods • Standardized recording of routine observations
Watershed protection and maintenance of hydrological regimes	<ul style="list-style-type: none"> • Water quality and quantity maintenance • Improved water quantity and quality • Reduction in siltation • Percentage population without access to clean water • Percentage population without access to irrigation water • Increase in size of watershed forest • Reduction in deforestation • Tree planting around watershed 	<ul style="list-style-type: none"> • Water Poverty Index WPI • Environmental Performance Index EPI • Participatory approach for hydro-meteorological monitoring in the Blue Nile River Basin • National Nile Basin Water Quality Monitoring Baseline • Hydrological monitoring in the Congo River Basin

Specific NCBs	Potential NCB indicators	Potential monitoring and data collection methods
NCB Category: Climate change adaptation		
Adaptation of communities to climate shocks/risks	<ul style="list-style-type: none"> • Availability of climate change scenarios. • Availability of vulnerability assessments. • Availability of disaster plans. • Level of stakeholder engagement. • Availability of local adaptation guidance • Availability of early warning systems • Percentage of population dependent on agriculture • Cereal production per hectare • Number of flood prone population • Number of drought prone population • Number of climate-related epidemics • Frequency of extreme temperatures and heat waves and surges • Level of education • Level and quality of physical infrastructure • Level of social capital • Geography of the REDD+ project site • Level of economic well being • Level of health and nutrition • Capacity to used science and technology • Occurrence of famine • Dependency ration • Frequency of windstorms • Level of use of drought-flood resistant seeds • Number of community-based adaptation initiatives • Level of reliance on forest products during famine, drought and flood events 	<ul style="list-style-type: none"> • WRI Bellagio Framework for Adaptation Assessment and Prioritization • Adaptation Decision Matrix ADM • Tearfund Climate change and Environmental Degradation Risk and Adaptation CEDRA • UKCIP AdaptME toolkit • SEI Decision climate envelopes • Cost-benefit Analysis • Cost-Effectiveness Analysis • Estimating Adaptation Costs • Multicriteria Analysis • Livelihood Sensitivity Exercise • Multistakeholder Processes • Community-based Risk Screening Tool – Adaptation and Livelihoods CRiSTAL • CARE Climate Vulnerability and Capacity Assessment CVCA • OXFAM Participatory Capacities and Vulnerabilities Assessment • Action Aid Participatory Vulnerability Analysis • IFRC Vulnerability and Capacity Assessment • Environmental Vulnerability Index EVI • Environmental Sustainability Index ESI • Demographic and Health Surveys (DHS) • GINI Index • GDP per capita • Expert Judgment • Review of REDD+ project documents and reports • Vulnerability Indices
Adaptation of ecosystems to climate shocks/risks	<ul style="list-style-type: none"> • Quality of ecosystem services • Quantity of ecosystem services • Forest change rate • Percentage of forest cover • Percentage of protected areas • Percentage of land managed • Percentage of land unmanaged • Population density in REDD+ project area • Level of use of fertilizers • Number and reduction of forest and wild fires • Level of risk management strategies used 	<ul style="list-style-type: none"> • UNEP Disaster Risk Index • UNDP Adaptation Policy Framework • WRI's National Adaptive Capacity Framework • Intergovernmental Panel on Climate Change Technical Guidelines for Assessing Climate Change Impacts and Adaptations • World Bank ADAPT • Climate Quick Scans • NOAA Community Vulnerability Assessment Tool



About ClimDev-Africa

The ClimDev-Africa Programme is an initiative of the African Union Commission (AUC), the United Nations Economic Commission for Africa (ECA) and the African Development Bank (AfDB). It is mandated at the highest level by African leaders (AU Summit of Heads of State and Government). The Programme was established to create a solid foundation for Africa's response to climate change and works closely with other African and non-African institutions and partners specialised in climate and development.



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