United Nations Development Programme

CONSIDERATIONS FOR INTEGRATING NATURE-BASED SOLUTIONS IN NATIONALLY DETERMINED CONTRIBUTIONS: ILLUSTRATING THE POTENTIAL THROUGH REDD+

CLIMATE AND FORESTS PROGRAMME

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Nature-Based Solutions (NBS) in Nationally Determined Contributions (NDCs) could provide a cost-effective solution for climate mitigation, adaptation and slowing of biodiversity loss[1,2]. NBS are increasingly viewed as an effective strategy to address climate change and biodiversity loss, two of the biggest global challenges of this century. In order to meet targets for the Agriculture, Forestry and Other Land-Use sector, or AFOLU, approximately 56 countries have made an explicit link or included a reference to "Reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries", otherwise known as REDD+, in their first NDCs[3].

Drawing from REDD+ experience and lessons learned, this Information Note highlights some of the considerations and potential solutions to enhance mitigation action through NBS in future iterations of NDCs, particularly in the second NDCs being developed by countries in 2021.

Seven key considerations are presented for policy makers and policy advisors to consider addressing when evaluating how to enhance the NDCs through NBS. For each challenge, experience from REDD+ implementation and how this could be relevant to a broader suite of NBS options are shared, as illustrated in the figure below.

The central recommendation for policy makers or those advising national governments in scaling up ambition in NDCs in 2021 through NBS is to build upon existing national initiatives, programmes and projects without re-inventing the wheel. It is key that NDCs are implementable. After over 10 years of REDD+ experience, there are insights provided from REDD+ readiness and implementation that are very relevant for NBS in NDCs.

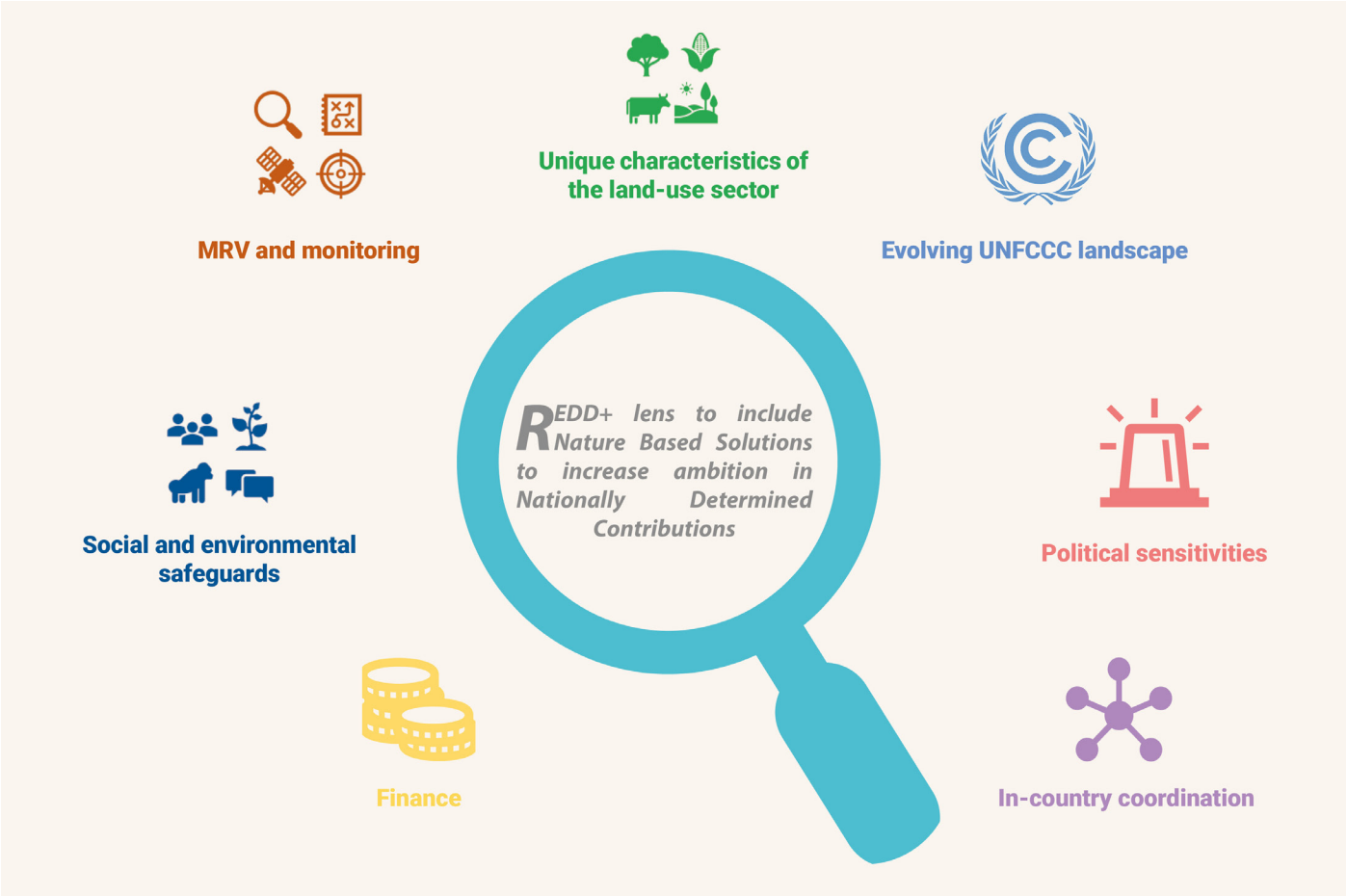


Figure. The seven key considerations to take into account when increasing ambition for NBS in NDCs. UNFCCC stands for the United Nations Framework Convention on Climate Change and MRV stands for Measurement, Reporting and Verification.

Moreover, given REDD+ results are measured in tonnes of CO_2 equivalent, it can be considered as already in the same "currency" as that of the NDCs. Furthermore, streamlining national efforts across the three Rio Conventions as well as the Sustainable Development Goals can generate increased efficiency in general and in particular for NBS.

Key take-away messages are the following, summarized by key consideration identified.

Though this Information Note focuses on consideration, it is not promoting inaction on enhancing NBS in the NDCs. To the contrary, it is a call to acknowledge areas of uncertainty so that they can be overcome.

Unique characteristics of the land-use sector: The land-use sector, where much of the NBS potential lies to scale up ambition in NDCs, has unique characteristics (e.g. highly dynamic, already occurring impacts of climate change) that need to be carefully considered when designing NBS. This includes the risk of reversals as well as emissions displacement. The unique aspects of this sector have over-arching and cross-cutting impacts on the other six challenges identified in this Information Note.

Evolving UNFCCC landscape: The UNFCCC landscape is an ever evolving one. In particular, final negotiations on the Article 6 aspects of the Paris Rulebook will provide a clearer framework for countries to work within.

Political sensitivities: While increasing ambition, countries may still seek to maintain flexibility to meet their NDC goals or targets as needed, amongst sectors while committing to a higher-level cross-sectoral or economy-wide target. In these cases, the focus for specifying the role and contribution of NBS may be placed on implementation and investment planning for the NDC, versus the NDC content itself.

In-country coordination: National coordination on data collection and reporting to the UNFCCC (and other Conventions) can be challenging and sometimes leads to the duplication of efforts. Creating or strengthening existing relevant inter-ministerial coordination bodies at the institutional level can help overcome this challenge, including leveraging those already established for REDD+, where applicable.

Finance: Finance related to climate action, NDCs, REDD+ and NBS is a critical component to achieve successful climate change mitigation action below 2°C. The conditional components of NDCs are complex and the level of finance to support the achievement of current conditional NDC targets has not yet been delivered. Nonetheless, linking climate finance (e.g. Green Climate Fund) to climate mitigation implementation programmes may allow countries to provide increased commitments and ambition in the land-use sector in their NDCs.

Social and environmental safeguards: Social and environmental safeguards are a central theme to NBS. Countries engaged in REDD+ have invested, learned and progressed considerably in promoting and supporting social and environmental safeguards for the implementation of REDD+ policies and measures. Scaling up of NBS in NDCs should build on existing processes and experiences in countries that are engaged in REDD+.

Measurement, Reporting, Verification (MRV) and monitoring: Although much progress has been made in the field of MRV and monitoring for REDD+, this is not yet prevalent for the broader land-use sector. In seeking to include and scale up NBS in NDCs, it will be important for countries to build upon existing MRV and monitoring systems. REDD+ MRV and national forest monitoring systems can be a good starting point as these can potentially be expanded to include wider MRV and monitoring for the land-use sector.

1. INTRODUCTION

Land-Use, Land-use Change and Forestry, or LULUCF, is among the most referenced sector in countries' mitigation contributions in their Nationally Determined Contributions (NDCs). More specifically, in the case of land-use, approximately 83% of NDCs reference LULUCF, but only about 20% of NDCs include quantitative mitigation (or adaptation) targets, such as hectares reforested, and an even smaller proportion put forward greenhouse gas (GHG)-based targets for the sector[4].

Since 2016 the terms "Nature-Based Solutions" (NBS) or "Natural Climate Solutions" (NCS) have gained a lot of attention and traction in terms of the role they could play towards mitigating climate change. NBS can be considered as actions that work with and enhance nature to help address societal challenges. The concept is grounded in the knowledge that healthy natural and managed ecosystems produce a diverse range of services on which human wellbeing depends[5]. More specifically, NCS are activities that increase climate change mitigation from nature and may include the adaptation benefits of these activities. The AFOLU sector can be considered roughly equivalent to NBS or NCS. For the purposes of this Information Note we use the definition and approach proposed by Beasly et al. (2019)[6] and Griscom et al. (2020)[7] (see Box 1) when using the terms NBS and NCS.

Box 1. Natural climate solutions are activities that increase climate change mitigation from nature and may include the adaptation benefits of these activities.

"Natural Climate Solutions" are interchangeable with terms like "Nature-Based Solutions"[8], the land sector, and the Agriculture, Forestry and Other Land-Use sector (AFOLU)[9], to the extent that they refer to the mitigation efforts associated with these sectors. More specifically, Natural Climate Solutions can be considered as an ensemble of improved land management, protection and restoration pathways that generate climate mitigation outcomes. Nature-Based Solutions go beyond climate change mitigation and also deliver strong results for adaptation and resilience (which are not detailed here).

A recent study[10] found that cost effective tropical NCS can offer significant global climate mitigation in the coming decades, from 2030-2050: 6.56 Pg CO_2e yr^{-1} at less than US$ 100 per Mg CO_2e. They find that in half of the tropical countries they assessed, cost-effective NCS could mitigate over half of national emissions, and that in more than a quarter of those countries, cost-effective NCS potential is greater than national emissions. What is important to consider is that most of the tropical countries assessed in this study have been engaged in the REDD+[11] process for over a decade.

So if there is so much potential, how do countries, especially tropical forest countries, consider NBS in their NDCs? In many cases, countries have made an explicit link between the NDCs and REDD+, specifically referencing intention to implement REDD+ as a component of the NDCs, in order to meet targets for the AFOLU sector. In total, approximately 56 countries include a reference to REDD+ in their NDCs[12].

Embedding forest-related mitigation action through REDD+ in the NDC context in the way these countries have already done can clearly provide an opportunity to scale up and enhance momentum of REDD+ implementation. However, there are also challenges in doing so and these are relevant to NBS in NDCs.

Overall, even if not necessarily quantitative targets, most countries have at least signalled their intent to include forest emissions and removals as part of mitigation NDCs. However, broader commitments to NBS, in other AFOLU land-use categories, such as wetlands, were still largely absent in the first NDCs. Instead, other NBS such as improved land management practices have been represented largely from an adaptation perspective in most current NDCs – thus their mitigation potential is not fully recognized.

Several publications present guides[13], steps or pathways to include NBS in NDCs[14] or to enhance the contribution of the land-use sector in NDCs[15]. While exploring the contribution of NBS toward countries' mitigation targets and how these can feature more prominently in future NDCs, it is imperative to build on the lessons learned from, amongst other relevant policy mechanisms, over 10 years of REDD+ readiness and implementation (see Box 2 for summary points on considerations gleaned from successful REDD+ readiness and implementation). The considerations are not all necessarily unique to NBS but there are aspects that are, and even for those which are not, the land-use sector is marked by unique attributes that can make these more complex. Several countries that have been engaged in the REDD+ process are considering NBS in NDCs.

In terms of its primary objective, REDD+ (a mitigation effort) can be considered as an NCS, but it also has wider implications as an NBS given the cross-sectoral implementation, gender considerations, governance and promoting and respecting social and environmental safeguards. Using a REDD+ perspective, the objective of this Information Note is to highlight some of the considerations and opportunities to enhance mitigation action through NBS in future iterations of NDCs, including those being prepared now and into 2021, and as part of their implementation. Barriers that need to be addressed include institutional, technological, and political factors, plus fundamental constraints on land available and competing uses of land for food production, conservation, and carbon goals[16].

As indicated in Box 2, REDD+ helps to illustrate several key considerations which should be taken into account when offering NDC enhancements through NBS.

The target audience for this Information Note includes policy makers as well as experts supporting countries in formulating their future NDCs and considering enhancing the role of NBS therein, with a primary focus on enhancing ambition in 2021.

The Information Note is complementary to existing documents and reports on NDCs and NBS[17] as it seeks to approach the issues through experience with REDD+ readiness and/or early implementation efforts.

"[...] Indonesia has adopted a variety of other effective mitigation policies and nature-based solutions. Three significant moratoriums policies, e.g., a permanent forest moratorium, a peatland moratorium, a palm oil moratorium, social forestry, coordinated law enforcement, and policy tools for protection and restoration of mangroves and tackling peat and forest fires have been in place. It aims to continue and scale up the mitigation efforts towards reaching our NDC goals, particularly reducing emissions from deforestation and forest degradation plus (REDD+)"

Dr. Ruandha Sugardiman Director-General for Climate Change Control, Ministry of Environment and Forestry Indonesia.
Photo-credit FAO Forestry

Box 2. What can we learn from REDD+ implementation to scale up NBS in NDCs?

Maniatis et al. (2019)[18] presented a comprehensive review of REDD+ implementation and lessons learned. Summary points on challenges to consider from this study which are also very relevant to scaling up NBS in countries' NDCs and providing the conditions for successful implementation are the following:

1. ***Scale of implementation:*** REDD+, like other climate mitigation options, is being implemented at various scales—national, subnational, and local. Given the unique complexities of the land use sector, this brings its own set of challenges on how to account for emission reductions at the national level (e.g. across the various scales: applying the same methods and approaches in accounting, avoiding double-counting, consistent implementation of Policies and Measures, etc.) so that they can be reflected in a countries' NDC.
2. ***Quick and low-cost emission reductions:*** REDD+ has not yet delivered on its original promise for quick and low-cost emission reductions due to the technical systems and political, economical, and regulatory transformations that need to take place in developing countries. The necessary level of investment to support these transformations has not been realized.
3. ***Time needed for governance and policy reforms:*** Great advances have been made on technical aspects of REDD+, and these will have benefits for countries beyond REDD+, e.g., for improved governance, monitoring, understanding of drivers and barriers, policy making, and management. Nevertheless, the governance reforms needed and policy making around REDD+ take longer than initially expected when REDD+ was first formulated, and few countries have started large-scale implementation.
4. ***Safeguards:*** Nearly a decade of advocacy, analysis, and practice related to REDD+ safeguards reveal normative and operational deficits that need to be addressed to ensure the safeguard requirements and objectives agreed within the UNFCCC are achieved. Although there are no safeguards for NDCs specifically, countries are encouraged to report on co-benefits. Some of this information could, among other sources, be derived from REDD+ safeguards.
5. ***MRV and monitoring:*** Countries have started developing robust technical methods for MRV and National Forest Monitoring Systems (NFMS), but most countries have yet to develop the capacity, institutional set up and secure finance necessary to administer MRV and NFMS, to ensure their sustainability and adaptability over time and to inculcate good governance in MRV. This will be a crucial component of the success of REDD+ implementation and Results Based Payments (RBPs).
6. ***Linking REDD+, NDCs and SDGs:*** Linkages between REDD+ and countries' NDCs and commitment to the SDGs are becoming increasingly important to ensure the sustainability and scaling up of REDD+ activities, but operationalizing such linkages appears to be complex at the country level. Nonetheless, creating stronger links with SDGs, as well as alignment with development and sectoral plans and targets (e.g. REDD+), fall within the second most common category of planned revisions to NDCs, as cited by 88 governments in their responses to a survey conducted by UNDP[19]. Only strengthening of underlying data and evidence (92 nations) ranked higher.

We present seven key considerations which we believe policy makers and policy advisors would benefit from focusing on when evaluating opportunities for enhancements through NBS in NDCs. For each consideration we share experience from REDD+ implementation and how this could be relevant to the broader suite of NBS. The seven considerations identified are:

1. The unique characteristics of the land-use sector,
2. The evolving UNFCCC context,
3. Political sensitivities,
4. In-country coordination,
5. Finance,
6. Social and environmental safeguards,
7. Measurement, Reporting and Verification (MRV) and monitoring.

Although they need not be considered as a hierarchy of considerations, the seven considerations are presented in the order above as a cascade. We start by framing the issues of the land-use sector itself (key consideration 1) as an overarching and crosscutting consideration that has a direct impact on the other six. This is followed by exploring the relevant challenges in the international context of the UNFCCC (key consideration 2). The next four considerations presented are focused at a country level, starting with countries positioning, depending on their national circumstances, in the current international landscape for this specific sector (key consideration 3). Countries may consider how to best coordinate nationally to update and implement their NDCs (key consideration 4), finance them (domestic and/or international finance – key consideration 5) as well as implementing them while respecting social and environmental safeguards (key consideration 6). Last, but certainly not least, countries are also faced with issues of MRV and monitoring of implementation progress of NBS in the NDC (key consideration 7).

2. KEY CONSIDERATION 1 — UNIQUE CHARACTERISTICS OF THE LAND-USE SECTOR

The key characteristic that sets apart the land-use sector form the other IPCC sectors, in terms of GHG accounting, is the fact that the sector is not only an emission source, but can also sequester CO_2 (i.e., removals of CO_2, storing carbon in the above- and belowground biomass, dead organic matter as well as soils). This feature makes measurement, reporting and accounting of emissions and removals from sources and sinks distinct, both in terms of its relevance for mitigation policies as well as in terms of monitoring. For developing countries, this complexity has come to light through the experience of REDD+ readiness and implementation, as even some of the countries engaged in the REDD+ process lack country-specific data to account and report on emissions other than those related to aboveground biomass in the forest sector. Hence, this will also be important to consider for NBS in NDCs.

The land-use sector, within which NBS are implemented, is also highly dynamic, influenced by weather patterns, demand for commodities and already occurring climate change. Due to the dynamic nature, the GHG emission reductions/removals resulting from mitigation action in this sector tend to be characterized by a higher level of uncertainty. This is another unique challenge for the sector - the data uncertainty and the large variability for carbon stocks and carbon stock changes in certain carbon pools such as soils. Small changes in large carbon stocks (e.g. in soils) are difficult to measure and the dynamic nature of complex biological processes involved makes it challenging to estimate transfers of carbon between different pools. Average uncertainty ranges reported by the European Community -15 countries that are associated with estimates of the level of emissions and removals from LULUCF are relatively high (32%) e.g., compared to emissions from fossil fuel combustion (1%)[20]. In line with this, we observe that it is remains particularly challenging for developing countries to reduce uncertainties associated with data to account and report on emissions and removals related to REDD+.

Many countries, both developed and developing countries, therefore, have gaps in the reported emissions and removals in the land-use sector in their GHG inventories.

Several developing countries, for example, have not yet estimated emissions and removals from cropland management or grassland management, but only reported such emissions and removals for forest management (where uncertainty estimates often remain high). Countries with gaps in the land-use sector in the GHG inventory face high uncertainties as they have no information on trends of GHG emissions and removals for other land-use categories apart from forest management as a basis for the development of their NDCs[21]. In terms of REDD+, developing countries are either penalized or unable to access results-based funding if uncertainty estimates related to emissions and removals from the forest sector do not fall within specific ranges. For example, requirements related to uncertainties to access payments for emissions reductions under the 'Architecture for REDD+ Standards – The REDD+ Environmental Excellency Standard' (ART-TREES), are high (below 15% at 90% confidence level)[22]. Likewise, for countries to access results-based payments for REDD+ under the GCF, no information on uncertainties or uncertainties >50% lead to a fail where a FREL has been submitted from 2019 onwards (i.e. the country is unable to access results-based payments under the GCF)[23].

Including NBS in NDCs will need to consider the complexities of the land-use sector raised above.

Furthermore, there are two particular risks, the risk of reversals and the risk of emission displacement which are also unique to the land-use sector and are briefly discussed below.

2.1 RISK OF REVERSALS

A challenge broadly considered unique to the land-use sector is the risk of reversals, meaning the emission of previously stored carbon, which negates some, or all, of the benefits from sequestration that has occurred in previous years[24]. Reversals may be intentional, such as illegal logging, or unintentional, caused by natural disturbances such as storms or wildfires.

While the IPCC guidance provides methodological approaches to manage this issue[25], for example in the supplementary guidance for the Kyoto Protocol[26], it was not entirely clear, at the time of countries submitting their first NDCs, how this would be dealt with in the NDC context. Although this guidance is now clearer with the Katowice Climate Package[27], this remains a challenging area for countries to monitor, report and account for in terms of REDD+ and NBS (see section 3.1 for more information on relevant LULUCF/AFOLU accounting issues).

2.2 RISK OF EMISSIONS DISPLACEMENT

Emissions displacement, or the shifting of emissions outside of the area of accounting and reporting, is another risk associated with the land-use sector. Tools or mechanisms to manage risks of leakage are available (see section 8 on MRV and monitoring). These require robust institutions and governance for their successful implementation. A comprehensive and robust national MRV system can address such risks, but this is not without challenges (see section 8), particularly when we move beyond forest-related emissions and removals. While there are mechanisms to mitigate risks of reversal and displacement, as well as to address when reversals/displacement occurs, these risks may still hinder specific, quantified commitments to the sector, in the NDC itself. However, accounting emissions and removals at the national level and centralising and aligning data across scales (local, jurisdictional and national) helps to mitigate this risk.

In the case of REDD+, this issue is an important consideration when dealing with sub-national/jurisdictional and project implementation, as emission displacement can easily occur. Although national MRV and Forest Monitoring Systems have progressed significantly to monitor such displacements (see section 8), few REDD+ national MRV and Forest Monitoring Systems are effectively operational to do so as only a few of these systems are built in a way to simultaneously integrate measurements and monitoring (for example fire events). This is another important consideration when integrating NBS in NDCs.

3. KEY CONSIDERATION 2 — EVOLVING UNFCCC CONTEXT

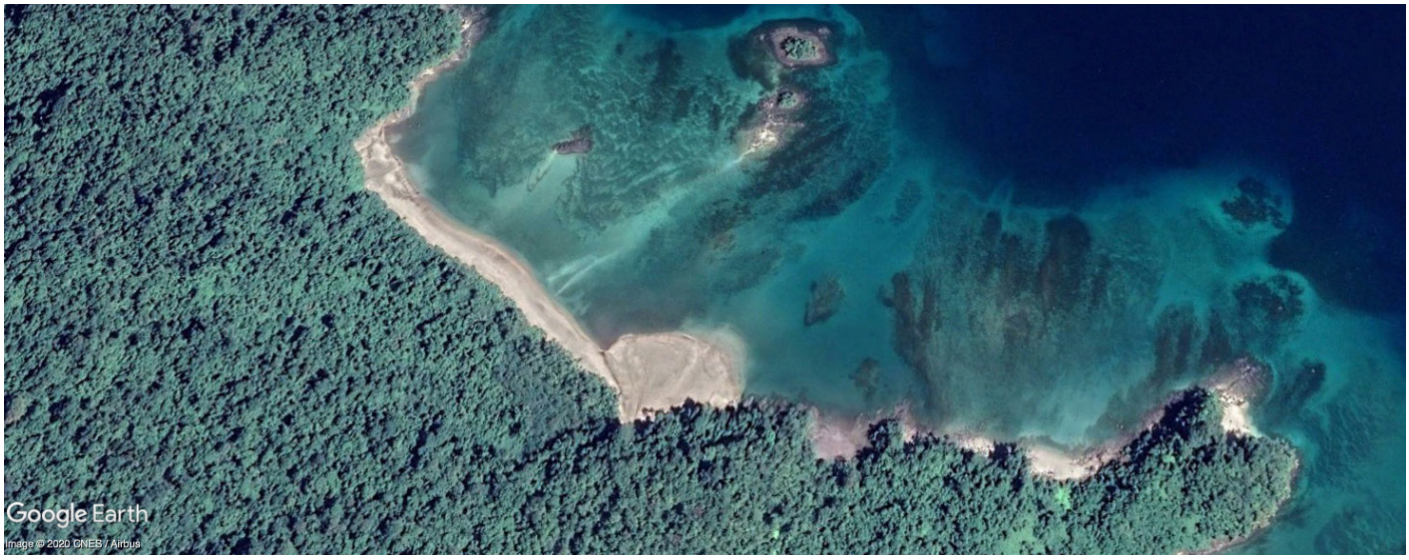
There are two aspects in the UNFCCC context that are particularly relevant for the inclusion of NBS in NDCs: LULUCF accounting and Article 6 of the Paris Agreement. These are discussed below.

3.1 LULUCF/AFOLU ACCOUNTING

LULUCF is referenced in 83% of countries' INDCs and is second only to the energy sector[28]. Nonetheless, in developing the INDCs and NDCs, all Parties faced challenges related to decisions on how to include the land-use sector in their mitigation targets. Parties had to make certain assumptions related to accounting elements such as reference levels, the type of activities included, definitions used or monitoring methodologies which they apply when they determined their first NDC, in advance of the additional clarity that later emerged during the 24th Conference of the Parties (COP) in Katowice in 2018. At the time of the preparation of the INDCs, it was not yet apparent if there would be LULUCF/AFOLU accounting "rules" and/or guidance and what these would look like. This uncertainty around accounting implications may have played a role in terms of Parties' commitment to ambition in the sector.

As an illustration, in the case of REDD+ specifically, at the time of preparation of the INDCs, which have been converted to the initial NDCs for the most part, there was uncertainty regarding how REDD+ forest reference levels would/should interact with NDCs, which are often expressed against economy-wide business-as-usual baselines. The Katowice Climate Package, the rulebook of the Paris agreement, includes Decision 18/CMA.1 (Modalities, Procedures and Guidelines for the Transparency Framework) and Annex II of Decision 4/CMA.1 which covers NDC Information and Accounting[29] (see Box 3). This Annex sets out further guidance on this topic, including accounting for GHG emissions and removals, ensuring methodological consistency (e.g. on baselines) and inclusion of categories of emissions. The guidance focuses, however, on information to be provided, but there is no specificity in terms of "rules," or methodological approaches that much be applied, beyond IPCC consistency.

Although there is now guidance under the Katowice Climate Package on accounting for NDCs, which can guide the inclusion of NBS, the integration of NBS in terms of accounting will need to address similar challenges as already encountered for REDD+ (see section 8 on MRV and monitoring for more information). Key aspects of inclusion of REDD+ into national AFOLU/LULUCF accounting systems include: developing technical methods to collect data and implement these, quality of data collected, consistency with national GHG inventory and working across sectors (specifically forest and agriculture). It is therefore crucial that NBS designed to be integrated in NDCs build upon systems, methods and lessons learned from integrating REDD+ into national AFOLU/LULUCF accounting systems.

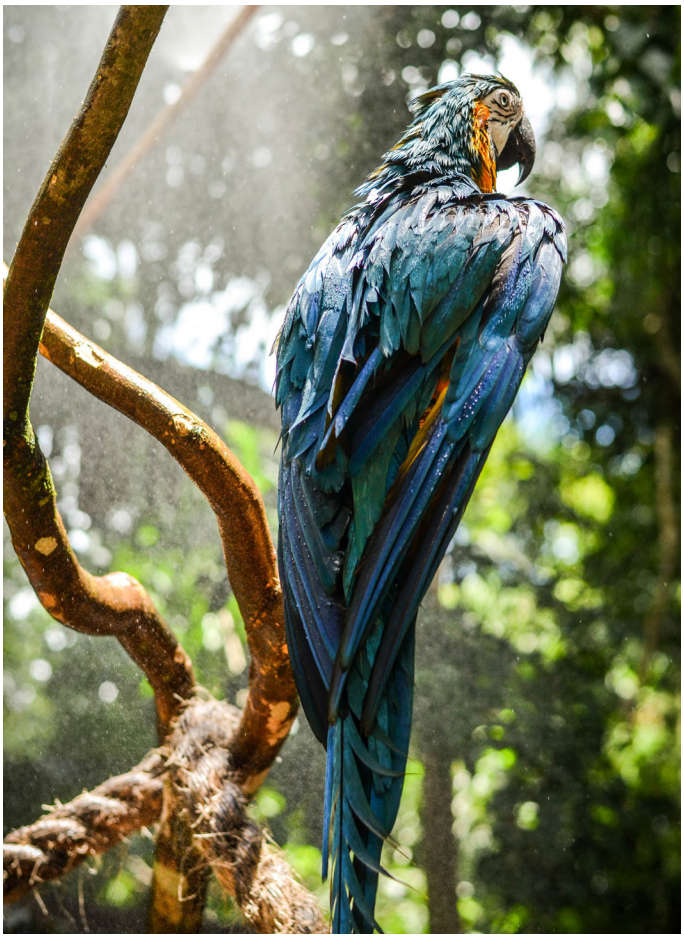


Box 3. Accounting for Parties' NDCs – key points from the Katowice Climate Package to keep in mind when considering NBS in NDCs

1. Accounting for anthropogenic emissions and removals in accordance with methodologies and common metrics assessed by the IPCC and adopted by the COP during the meeting of the Paris Agreement.
2. Ensuring methodological consistency, including on baselines, between the communication and implementation of NDCs.
3. Striving to include all categories of anthropogenic emissions or removals in the NDC and, once a source, sink or activity is included, continuing to include it.
4. Providing an explanation of why any categories of anthropogenic emissions or removals are excluded.
5. If decision to address emissions and subsequent removals from natural disturbances on managed lands, providing detailed information on the approach used and how it is consistent with relevant IPCC guidance, as appropriate, or indicate the relevant section of the national greenhouse gas inventory report containing that information.
6. When accounting for emissions and removals form harvested wood products, providing detailed information on which IPCC approach has been used to estimate.
7. If addressing the effects of age-class structure in forests, providing detailed information on the approach used and how it is consistent with relevant IPCC guidance.

3.2 ARTICLE 6 OF THE PARIS AGREEMENT

Article 6 of the Paris Agreement presents new opportunities for cooperation between Parties for the fulfilment of global climate change mitigation objectives. The rules that will guide the implementation of Article 6, however, are still being negotiated under the UNFCCC. It is the only major outstanding issue from the Katowice Climate Package. Article 6 rules and procedures will need to be harmonized with the related elements already agreed in Katowice, particularly the transparency framework (specifically, paragraph 77d of the modalities, procedures and guidelines of the transparency framework[30]).

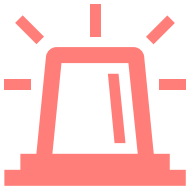


At the most recent negotiations on Article 6, during the 25th Conference of the Parties in Madrid in December 2019, Parties extensively debated various issues associated with Internationally Transferred Mitigation Outcomes (ITMOs – Article 6.2)[31] as well as the Sustainable Development Mechanism (Article 6.4)[32]. Unfortunately, Parties were unable to find a way forward. Unresolved issues include the definition of ITMOs, accounting rules to avoid double-counting, carry-over of Kyoto Protocol carbon units and projects, linkages between Articles 6.2 and 6.4 and NDC types, including scope and timelines and overall mitigation in global emissions.

There are discussions around distinguishing between ITMOs and mitigation outcomes that are used for purposes other than NDC fulfilment or international transfers. Parties held diverging views on ITMOs and Article 6.4 activities and the scope of NDCs. Regarding single-year/multi-year accounting, some parties expressed preferences for real-time accounting, while others wanted harmonization with Biennial Transparency Reports (BTRs).

Options that countries are considering for REDD+ under Article 6 are also relevant for NBS and how they are embedded in a countries' NDC. Streck et al. (2017)[33] provide some examples of options under Article 6 of the Paris Agreement that are also relevant for the consideration of NBS in NDCs, such as: the use of Article 6 to involve private and public entities in REDD+ implementation, generate emissions reductions under Article 6.4 for specific activities nested into REDD+. These are just examples of unresolved issues within this negotiating track that lead to uncertainty for countries as they are considering the role of NBS in enhanced NDCs. It is important to consider that Article 6.2 is expected to be flexible regarding scope (meaning that there is a role for NBS), while Article 6.4 is expected to have more "top-down" rules which may or may not include AFOLU or categories within the sector as eligible. So, pilots under Article 6.2 will be able to move ahead without "top-down" rules, while not the case for Article 6.4. Whether and how mitigation achieved through NBS would be captured under Article 6 has an impact on what a country will be able to achieve domestically versus reductions it might consider transferring, which would be accounted towards another Party's NDC.

4. KEY CONSIDERATION 3 — POLITICAL SENSITIVITIES



As there remains uncertainty regarding the evolving UNFCCC context (see section 3), combined with the unique characteristic of the land-use sector (see section 2), questions around finance (see section 6) as well as considerations related to in-country coordination (see section 5), social and environmental safeguards (see section 7) and MRV and monitoring (see section 8), countries may strategically choose not to commit to specific sectoral targets in their NDCs, even if these could be set separately in NDC implementation and/or specific sectoral plans.

Countries may seek to maintain flexibility in their NDC while committing to a higher-level economy-wide or multisector target. This allows countries the flexibility to subsequently decide how to reach that higher-level target but without setting the sector-specific targets in the NDC itself. This becomes particularly relevant if a country is considering engaging in Article 6 international transfers.

An opportunity for those countries where this applies is to focus on the implementation and investment planning for the NDC, versus the NDC content itself. Developing such implementation strategies can be considered a different means of enhancing the NDC, even if it does not find its way into the NDC itself. This can provide a pathway for more ambitious emission reduction targets for the sector, without the political risks when it comes to the content of the NDC.

Country approaches to REDD+ National Strategies/ Action Plans can provide useful insights in this context. Some countries may have higher-level overall REDD+ national strategies that are supplemented by more detailed REDD+ investment plans which provide more details on how the national REDD+ objectives can be reached, sometimes also including jurisdictional implementation and investment plans. Box 4 provides an example of the approach the Government of Papua New Guinea (PNG) has taken in developing its INDC/NDC in 2016, its National REDD+ Strategy (NRS) in 2017 and subsequently its National REDD+ Finance and Investment Plan (RFIP).

A similar approach may be considered for countries seeking to maintain flexibility in relation to NBS in their NDC while identifying solutions, finance, institutional arrangements etc. through specific NDC implementation and/or sectoral plans.

Box 4. Papua New Guinea's National REDD+ Strategy, National REDD+ Finance and Investment Plan (RFIP) and NDC

Papua New Guinea (PNG) in its first NDC, submitted as its INDC[34] in March 2016, stated that the country's primary mitigation effort lies in reducing emissions from land-use change and forestry. It stated that it can contribute to addressing the global mitigation gap by reducing deforestation and promoting forest conservation and sustainable management of its forests. The main forestry effort will be coordinated through the existing REDD+ initiative. PNG signalled that further international financial support will be required for effective national scale REDD+ implementation. PNG also highlights that due to the uncertainty in forestry emissions (see section 2), waste emission and agricultural emissions, the numbers reported in their NDC document do not include these sectors.

In 2017 PNG completed and communicated its National REDD+ Strategy[35] for 2017-2027 and communicated it to the UNFCCC in April 2018. The NRS was endorsed by the Government of PNG on 5th of May 2017, decision number 126/2017.

PNGs Climate Change and Development Authority (CCDA) is currently working to complete the REDD+ Finance and Investment Plan (RFIP) so that it can effectively address the needs and gaps identified in the National REDD+ Strategy. Key sectoral retreats were held with Forestry, Lands, Environment and Agriculture sectors (see section 5 on need of in-country coordination). This has enabled work on the costing of sector-based action plans and identification of potential financial options to implement the National REDD+ Strategy. The development of the RFIP focused on:

- Mapping specific actions needed to undertake transition from 'business as usual' to a new sustainable development pathway,
- Identifying finance and investment needs,
- Supporting coordination across government, donors and the private sector to ensure sufficient investment, and,
- Addressing mechanisms for financial management and cost-sharing, monitoring and safeguards.

PNG intends to increase ambition and enhance transparency in the revision of its NDC by targeting the forestry sector. It is utilizing an Inter-Agency Technical Working Committee, led by CCDA, consisting of senior decision makers, supported by technical advisors to conduct informed discussions on proposed forest and land-use change targets as well as the required actions to achieve them. Building on the assessments conducted during the forest sector target setting process in the RFIP, PNG will also develop a REDD+ implementation roadmap to complement NDC implementation.

5. KEY CONSIDERATION 4 — IN COUNTRY COORDINATION

A key consideration, especially for developing countries, is in-country coordination of data collection and reporting that are relevant to NBS. While not specific to NBS, countries face coordination challenges in general when it comes to data collection, sharing and reporting to the UNFCCC. Different ministries or directorates within ministries may be responsible for collecting and reporting data at the national and international level, for different ecosystems, pools, etc. (i.e., forests versus soils or wetlands) and may have overlapping mandates.

Experience in REDD+ has shown that in countries that have engaged in the REDD+ process, closer coordination and data exchange between various ministries (e.g. ministries of environment, agriculture, finance,planning,etc.) or directorates within ministries (e.g. directorate of forests, biodiversity, water, tourism) can be challenging at times.

This leads to difficulties at the institutional and implementation level but especially at the MRV and monitoring levels which lie at the very foundation of being able to measure and assess emission reductions. Some countries have tried to overcome such institutional hurdles by establishing inter-ministerial REDD+ bodies at the institutional level (see Box 5). Anchoring a National REDD+ Committee at the highest-level of decision-making in a country, such as the case in Côte d'Ivoire, where it is chaired by the Prime-Minister or her/his representative and presided over by the Minister for Environment and Sustainable Development (Box 5), can contribute to fostering the success of REDD+ at the political and implementation levels. Such an approach can also result in bolstering technical data exchanges as well as country ownership and understanding of the REDD+ process and opportunities.

Box 5. Example of the National REDD+ Committee in Côte d'Ivoire

Institutional arrangements for REDD+ in Côte d'Ivoire were established through a presidential Decree No. 2012-1049 of 24 October 2012 which set up the National REDD+ Commission. These arrangements provided for three organs within the Commission to analyse, advice and provide guidance for the implementation of REDD+ in the country. The first is a National REDD+ Committee (CN-REDD+) in charge of oversight of the REDD+ process, the second is an inter-ministerial technical committee (CTI REDD+) in charge of cross-sectoral coordination and the third is the Permanent Executive Secretariat REDD+ (SEP-REDD+), responsible for the day-to-day implementation of the REDD+ national process. There are regional committees that feed into these organs.

The National REDD+ Committee is at the highest-level of decision-making as designated through Order No. 0114/MINSEDD/CAB of 19 July 2017. It is chaired by the Prime-Minister or her/his representative and presided over by the Minister for Environment and Sustainable Development. The Committee is made up of presidential advisors for environment and forests and representatives of the ministries responsible for forests, economy, planning and development, agriculture, infrastructure, decentralization, mines and energy.

The National REDD+ Committee validated Côte d'Ivoire's National REDD+ Strategy before it was adopted by the country's Council of Ministers and discussed the National REDD+ Investment Framework for the operationalization of the National REDD+ Strategy.

The institutional arrangements that Côte d'Ivoire has set up for REDD+ as illustrated above are a great example to create cross-ministerial engagement and involvement of high level, sectoral and regional entities to enable decision making and subsequent implementation.

Most countries that are Parties to the UNFCCC are also Parties to the other Rio Conventions besides the UNFCCC, such as the Convention on Biological Diversity (CBD) and the United Nations Convention to Combat Desertification (UNCCD). All United Nations Member States adopted the 2030 Agenda for Sustainable Development and thereby the 17 Sustainable Development Goals (SDGs). The secretariats of the UNFCCC, the CBD and the UNCCD established a Joint Liaison Group (JLG) in August 2001 in order to enhance coordination among the three conventions. The JLG aims to collect and share information on the work programmes and operations of each convention[36]. Beasly et al.[37] recommend that the NDC be consistent with other relevant national documents, including for example REDD+, National Biodiversity Strategies and Action Plans, National Adaptation Plans, Nationally Appropriate Mitigation Actions, Bonn challenge commitments. Coordinating actions and collating information in a readily usable manner can be a challenging task for developing countries. Countries could reach out to the JLG to enhance national coordination for collecting data and reporting to the Rio Conventions. Coordinated monitoring and reporting by countries to the three Rio Conventions while also seeking synergies with the Voluntary National Reviews (VNRs) on the SDGs, presented to the UN High-level Political Forum (HLPF), could provide invaluable information for the implementation and monitoring of emissions reductions of NBS in NDCs and vice versa.

Building on the experience of REDD+, countries pursuing the inclusion of NBS in their NDCs may consider establishing an Inter-ministerial Committee on NBS for NDCs or integrating one in existing committees. The objective of such an inter-ministerial Committee (or integration thereof) would be to coordinate data collection, streamline reporting and monitor the effective implementation of NBS in NDCs. This would also allow countries to streamline relevant NBS efforts across the RIO Conventions and toward achievement of the SDGs. Figure 1 below provides a hypothetical illustration of such an inter-ministerial NBS Committee for NDCs.

Figure 1. Illustrative example of possible institutional arrangements to improve coordination on data collection, reporting and monitoring of NBS emission reductions in NDCs building upon existing bodies / inter-ministerial committees or either creating new ones. A hypothetical NBS for NDCs inter-ministerial Committee could, for example, be comprised of representatives from the various relevant ministries (including those active in the three Rio Conventions and the SDGs) depending on the national context. Countries could thereby better streamline relevant NBS efforts across the three RIO Conventions (UNFCCC, UNCCD and the CBD) and on the SDGs, as illustrated.

6. KEY CONSIDERATION 5 — FINANCE

Finance related to climate action and NDCs and specifically to NBS and REDD+ is a critical topic. Here we focus on two issues that we believe are relevant with respect to NBS and NDCs: conditional components of NDCs and accessing finance through the Green Climate Fund (GCF).

6.1 CONDITIONAL COMPONENTS OF NDCS

The concept of the conditional components of an NDC is an issue on which there is limited clarity. Many developing countries included this concept of conditional contributions in their NDCs, yet uncertainty remains on how this translates into implementation. The level of finance to support achievement of current, conditional NDC targets has not been delivered[38]. A number of countries have expressed that what they did include in the first NDCs, in terms of targets for the LULUCF or forest sector, specifically, is already extremely ambitious[39]. The focus in these countries is, therefore, on accessing the finance needed to support the existing targets. Those countries in this case are not necessarily in a position to consider enhanced ambition for this sector.

In the case of REDD+, there are questions around, for example, how a country might associate results of REDD+ programmes to a conditional versus unconditional component of an NDC. REDD+ is conditional on international support, including results-based finance, but it has also been pointed out that there are domestic efforts related to REDD+ that perhaps should be captured as unconditional[40]. Some argue that it is unlikely that countries will move quickly from what is formulated in their NDCs into REDD+ implementation until there is more clarity on how to finance REDD+ and clarity on how to deal with, for example, agricultural commodities such as oil palm, soy, and cattle ranching as drivers of deforestation[41]. Such complex interactions are also likely to influence the successful integration of NBS in NDCs: how to finance NBS, conditional versus unconditional components, tackling drivers from, for example, the agricultural sector that will have a direct impact on the implementation success of NBS.

6.2 LINKING REDD+ FINANCE AND NBS THROUGH THE GREEN CLIMATE FUND

The GCF[42] is the main multilateral source of funding for climate adaptation and mitigation in developing countries, including REDD+. It was established at the UN's sixteenth session of the Conference of the Parties (COP)[43] as an operating entity of the Financial Mechanism of the UNFCCC under Article 11. UNFCCC decision 9/CP.19 encouraged the GCF to play a key role in collectively channelling adequate and predictable REDD+ Results-Based Payments (RBPs) in a fair and balanced manner, taking into account different policy approaches, while working with a view to increasing the number of countries that are in a position to obtain and receive payments. The GCF operationalized its pilot program on REDD+ RBPs in late 2017, having launched a Request for Proposals (RFP) and terms of reference[44], for a total amount of USD 500 million.

Countries engaging in the REDD+ process have been able to access GCF funds either for the implementation of REDD+ (phase 2) or to access RBPs (phase 3). As of December 2020, eight countries (Colombia, Indonesia, Paraguay, Chile, Ecuador, Brazil, Argentina and Costa Rica) have had REDD+ results approved by the GCF, totalling approximately USD 497 million[45].

Although under the GCF, access to RBPs is specific to REDD+, the 'Forests and Land Use' GCF results area is not. This may be of interest to countries seeking finance to implement NDCs and incorporate NBS by considering the wider environmental, social and economic co-benefits, including gender-sensitive development impact of the key mitigation activity submitted in a project proposal to the GCF under the Forests and Land Use results area. Box 6 provides an example of how Ecuador accessed GCF financing for REDD+ implementation[46] and considered wider benefits that are relevant to NBS such as water regulation and biodiversity.

It also provides an insight on how Ecuador integrated GCF and the World Bank's Global Environment Facility funding to implement PROAmazonía and how this was integrated into Ecuador's NDC.

Box 6. Accessing GCF funds for REDD+ results and integration into a country's NDC PROAmazonía in Ecuador – Integrated Program for Forest Conservation and Sustainable Production

Deforestation levels in Ecuador amounted to 109,000 hectares per year between 2000 and 2009, with over 99% of deforested land being transformed into agricultural areas. Ecuador's REDD+ Action Plan addressed the drivers of this deforestation, with the aim of achieving net zero deforestation by 2020.

In July 2019, Ecuador became the second country to receive financial resources from the GCF for having successfully reduced greenhouse gas emissions from deforestation in the past. The GCF's investment will co-finance Ecuador's Action Plan for the next six years. The RBP project is organized around four main components: 1) Institutional policies and management for REDD+; 2) Transition to Sustainable Productive Systems; 3) Sustainable Forest Management, Conservation and Restoration; and 4) Operational management of the National REDD+ Action Plan (including capacity building, monitoring of forest degradation, implementation of the Environmental and Social Management Plan and the Consultation Plan, and strengthening the implementation of REDD+ in indigenous territories).

Targeted investment will control agricultural expansion into forest areas, whilst agricultural and livestock production practices will be implemented to reduce deforestation. Land-use zoning plans will be aligned with national climate change-related targets, and measures will be implemented to support restoration, conservation and sustainable production in vulnerable watersheds. The project will also ensure that financial instruments are aligned with the objectives of the REDD+ Action Plan, by orienting public credit lines towards sustainable agricultural production practices, promoting tax incentives for REDD-supportive activities, and strengthening purchasing policies for deforestation-free commodities, their certification and traceability.

The GCF project also considers wider environmental, social and economic co-benefits, including gender-sensitive development impact. It will directly contribute to create an enabling environment to sustainable development by achieving systemic change at the local, national and hopefully international levels, and by including social, economic and environmental co-benefits into the proposed paradigm shift, such as protection of forests, of biodiversity, of the rights and indigenous peoples and local communities, including their ancestral and cultural heritage sites, of watersheds, etc.

This GCF project is being implemented through PROAmazonía, Ecuador's Integrated Program for Forest Conservation and Sustainable Production. PROAmazonía, supported with funds from the GCF as well as the GEF, is a keystone in Ecuador's NDC, as explained below.

Ecuador submitted its INDC, in 2015. The INDC recognized the impact that activities in the forestry sector and appropriate management of protected areas have on climate change and stated plans on improving the work in both fronts and establishing objectives and concrete goals. However, the role of REDD+ as part of meeting Ecuador's NDC progressed in 2018, in the NDC[47]. The NDC covers the period 2020-2025, indicates that 25.35% of GHG emissions comes from the LULUCF sector, and that reducing emissions in this sector will contribute substantially to mitigating climate change, while generating additional social and environmental benefits. The NDC raises two mitigation scenarios: i) one derived from national efforts (unconditional); and, ii) another scenario that could be achieved with international (conditional) support.

The potential for reducing greenhouse gas emissions for aggregate analysis is established in comparison to the trend scenario and for the LULUCF sector, compared to the reference level of forest emissions from deforestation (2000-2008). The LULUCF action plan of the NDC is the national REDD Action Plan, with its specific targets:

- Reduction in gross emissions by at least 20% by 2025 compared to FREL 2000-2008[48],
- Reforestation goal of 300,000 hectares,
- Maintain climate regulation services (carbon) and others such as water regulation and associated biodiversity.

The reference to the REDD+ Action Plan as the strategy to reduce deforestation in the entire country, reinforces the idea that this REDD+ AP is the jurisdictional strategy which, in practice, articulates all the interventions to be implemented in the country and by all the other sub-national jurisdictions. PROAmazonía is explicitly referenced as the key programme supporting its implementation. Given this as the foundation for the LULUCF component of Ecuador's NDC, in other words, that it is essentially the REDD+ Action Plan, it follows that this component of the NDC is therefore based on several years of participative process and feasibility studies (REDD readiness). This strong foundation is unique when compared to the other sectors in the NDC of Ecuador.

With the support of PROAmazonía, the NDC implementation plans for LULUCF and Agriculture sectors are also being developed. PROAmazonía is therefore playing a major role not only in the content of the NDC, or the stated ambition, but also driving the momentum for implementing the NDC on the ground.

At the time of writing, the GCF REDD+ RBP pilot resources are coming to an end (with currently USD 360.7 million out of USD 500 million having been awarded).

It is uncertain whether there will be a subsequent phase of the pilot and if additional conditionalities will be applied. A lack of access to the GCF REDD+ RBP resources causes a significant risk to NDC implementation.

7. KEY CONSIDERATION 6 — SOCIAL AND ENVIRONMENTAL SAFEGUARDS

The implementation of any NBS will need to promote and support social and environmental safeguards, as stressed by several publications[49]. The realization of REDD+ has included the development of social and environmental safeguards, better known as the 'Cancun Safeguards'[50]. The increased global attention and proliferation of safeguard approaches and materials has been beneficial for a wide range of stakeholders, such as: countries implementing REDD+, multilaterals, bilaterals, non-governmental organisations (NGOs) and consortia. It has raised awareness of the critical importance of biodiversity, equity, livelihoods, rights, governance, gender and participation dimensions of REDD+[51]. Although social and environmental safeguards are not an NDC requirement, they can be considered as a co-benefit. Much can be learned from the development and implementation of REDD+ related safeguards to build on to provide information on social and environmental co-benefits in NDCs.

The emphasis on the full and effective participation in REDD+ contributes to several relevant positive outcomes. Examples of these are increased dialogue between governments and stakeholders; the standardisation of Indigenous Peoples (IP)/Civil Society Organizations (CSOs) representatives on national and global decision-making bodies; more and improved opportunities for neutral spaces to discuss historically contested and complex issues such as land rights through Free Prior and Informed Consent (FPIC); the proliferation of national guidelines and guidance on FPIC, grievance mechanisms, stakeholder engagement; and the rise of funding mechanisms managed by dedicated IP/CSOs[52].

On the other hand, support and guidance to REDD+ countries have largely been driven by the multilateral programmes of the FCPF (Readiness and Carbon Funds) and the UN-REDD Programme, which in turn are driven by their respective institutions and delivery partners [the World Bank, FAO, Inter-American Development Bank (IDB), United Nations Development Programme (UNDP), and United Nations Environment Programme (UNEP)]. Institutional differences are thus reflected in guidance on content and requirements, e.g., whether or not countries should follow a human rights–based approach; whether to follow free, prior, and informed consent or consultation; whether a functional grievance mechanism, benefit sharing plan, and established title to emission reductions should be a requirement or not; and the degree of emphasis on do no harm versus do good[53]. These institutional differences in approaches can be confusing for countries to implement.

In terms of concrete examples of the application of the Cancun Safeguards, countries that have submitted a summary of information on safeguards to the UNFCCC as of December 2020 are Argentina, Brazil, Cambodia, Chile, Colombia, Costa Rica, Côte d'Ivoire, Ecuador, Ghana, Indonesia, Malaysia, Mexico, Myanmar, Paraguay, Peru, Viet Nam and Zambia[54]. Examples of alignment with the Cancun Safeguards for REDD+ RBP proposals approved by the GCF can be found in the GCF funding proposals (section C.1) which are available online[55].

Although this is often not recognised in the literature, REDD+ is a relevant climate mitigation example of a cross-cutting climate mitigation action that, when implemented properly, respects social and environmental safeguards, FPIC, reforestation/afforestation with native species, avoids damaging of biodiverse ecosystems and provides key benefits for local communities.

While there is certainly space for improvements in the implementation of REDD+ safeguard frameworks, the REDD+ safeguards discourse has benefited from a dynamic and diverse set of actors who have been committed to these issues since the conception of REDD+ and the vast amount of work already undertaken by countries in the framework of REDD+ should inform NBS in general and especially the implementation of NBS in the context of NDCs.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In order to enhance the mitigation component of the NDC, the underlying monitoring systems to track progress must be considered. These need to be bolstered by the appropriate governance structures to support a reasonable level of MRV as well as monitoring, in order to deploy NBS at scale.

There has, however, been uneven development of GHG reporting and accounting capacity for some LULUCF/AFOLU categories. The primary reason for this is that MRV and monitoring systems are generally more developed for forests than for agricultural or wetland NCS. For example, measurement and monitoring of soil organic carbon or "blue carbon" are difficult and have higher associated costs[56] which can hinder progress on and investment in these mitigation options unless carefully planned in advance (practically and financially).

As noted in section 3.1, REDD+ readiness efforts have provided the technical support and finance to have substantially improved data and NFMS for MRV and monitoring for the LULUCF/AFOLU sector, however it does remain complex. Even within REDD+ countries, the capacity for quantifying forest-related mitigation is not universally available, but REDD+ has broadly provided technical support, as well as financial incentives through RBP access, that have not yet been prevalent for broader LULUCF/AFOLU categories (with limited exceptions such as the World Bank BioCarbon Fund Initiative for Sustainable Landscapes)[57]. There are three important considerations related to REDD+ MRV and NFMS that could also be considered important for NBS. The first relates to the suitability of technical methods to collect data according to a country's national circumstances and then implementing those methods. This is particularly challenging for the collection of field data (e.g. forest inventories) and remote sensing data to measure land-use changes (although the latter has much improved over time, see further below). The second is the quantity and quality of the data collected as well as the uncertainty levels (see section 2) related to the data. For example, several developing countries may be undertaking their first forest or natural resources inventory and may only have a limited number of trained staff to undertake the data collection, compile it and check its quality before it is included in the greenhouse gas inventory. Lastly, consistency of the data collected for REDD+ with the national GHG inventory (specifically for forests and agriculture) has also been a challenge for countries engaged in the REDD+ process, often related to methodological complexities of developing and improving the GHG inventory combined with a lack of communication between responsible Ministries and/or departments (see section 5 on in-country coordination). Nonetheless, the progress made in data improvement for MRV and monitoring financed by REDD+ plays an important role in strengthening the MRV of NDC.

Moving beyond forests, the capacity and development of MRV and monitoring systems is not as far along. Moreover, improving GHG data quality and availability and reducing uncertainty in the estimates requires time. For some LULUCF/AFOLU categories, time and financial support would be required for countries to include them. Therefore, including a broader suite of NBS options in NDCs would need to go hand-in-hand with financial and technical support required to improve MRV and monitoring across the LULUCF/AFOLU sectors.

From a REDD+ perspective, designing a NFMS and MRV system creates significant opportunities for integration with broader land-use monitoring systems for GHG inventory purposes. Indeed, some countries such as Suriname (see Box 7 on GONINI) are developing and implementing their NFMS and MRV systems for REDD+ to allow for wider land-monitoring. In the case of REDD+ implementation, the challenge of securing long-term funding for MRV and NFMS should not be underestimated given increasing pressure to show cost-effectiveness[58]. Therefore, integration of data in multipurpose data platforms (one data platform policy) could be considered as a way to seek cost reduction, both for REDD+ implementation but also when considering the integration of NBS in NDCs. The System for Earth Observations, Data Access, Processing & Analysis for Land Monitoring (SEPAL)[59] platform as well as the Open Foris Collect Earth[60] software designed by FAO Forestry are good examples of such platforms[61]. The REDDcompass[62] of the GFOI and the Methods and Guidance document[63] consist of concrete tools with which countries are guided to

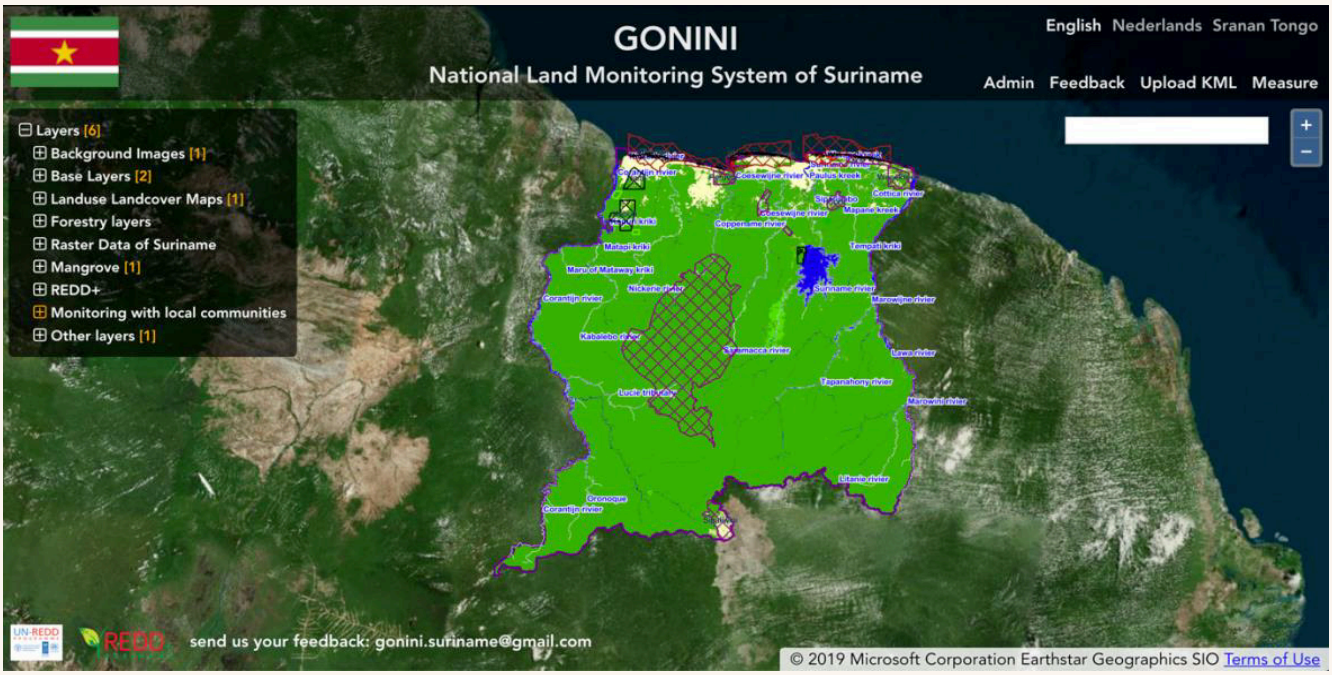
set up their autonomous national systems. If MRV monitoring costs are shared between sectors and viewed through an NBS lens, an integrated monitoring system could have multiple benefits for non-REDD+ land-use management[64]. If the monitoring costs associated with co-benefits in other sectors such as optimized land management, improved fire management, agricultural monitoring, and monitoring other environmental values such as biodiversity are included, overall monitoring costs are likely to be lower than separate monitoring for each. Leveraging existing data collection platforms to establish systems to support other national and international reporting opportunities to countries in the longer term should be considered (this also relates to challenge 4 on in-country coordination).

In seeking to include and scale up NBS in NDCs, it will be important for countries to further build upon existing NFMS and MRV systems and take the aforementioned challenges of financial sustainability (see also challenge 5 on finance) and integrated monitoring between sectors into consideration.

Box 7. Suriname's National Forest Monitoring System

Since December 2016, Suriname launched its National Land Monitoring System through a geoportal called GONINI[65]. This includes broader land-use monitoring as well as land-cover maps and information about mangroves and protected areas. Suriname's National Forest Monitoring System[66] (NFMS) is integrated into GONINI and consists of six components:

a. Satellite Land Monitoring System (SLMS),
b. Near Real Time monitoring (NRTM),
c. Sustainable Forestry Information System (SFISS),
d. Involving communities in forest monitoring (CBM),
e. National Forest Inventory (NFI) and
f. Reporting.



Several publications on NBS and NDCs have provided useful, general steps or checklists for governments to take in terms of actions when assessing how to include and/or scale up NBS in their NDCs[67]. Building on these, we propose that countries already engaged in the REDD+ process use the key considerations identified in this Information Note as a foundation to do a concrete evaluation of their REDD+ implementation experiences in order to draw direct links for inclusion or enhancement of NBS in their NDCs.

Such an evaluation of national REDD+ experience, as a practical means to scale up NBS in NDCs, is presented below (Figure 2). Besides the first and the last step, the steps in between need not necessarily be taken in the presented sequence. This evaluation could be built into existing broader NBS pathways or analyses[68].

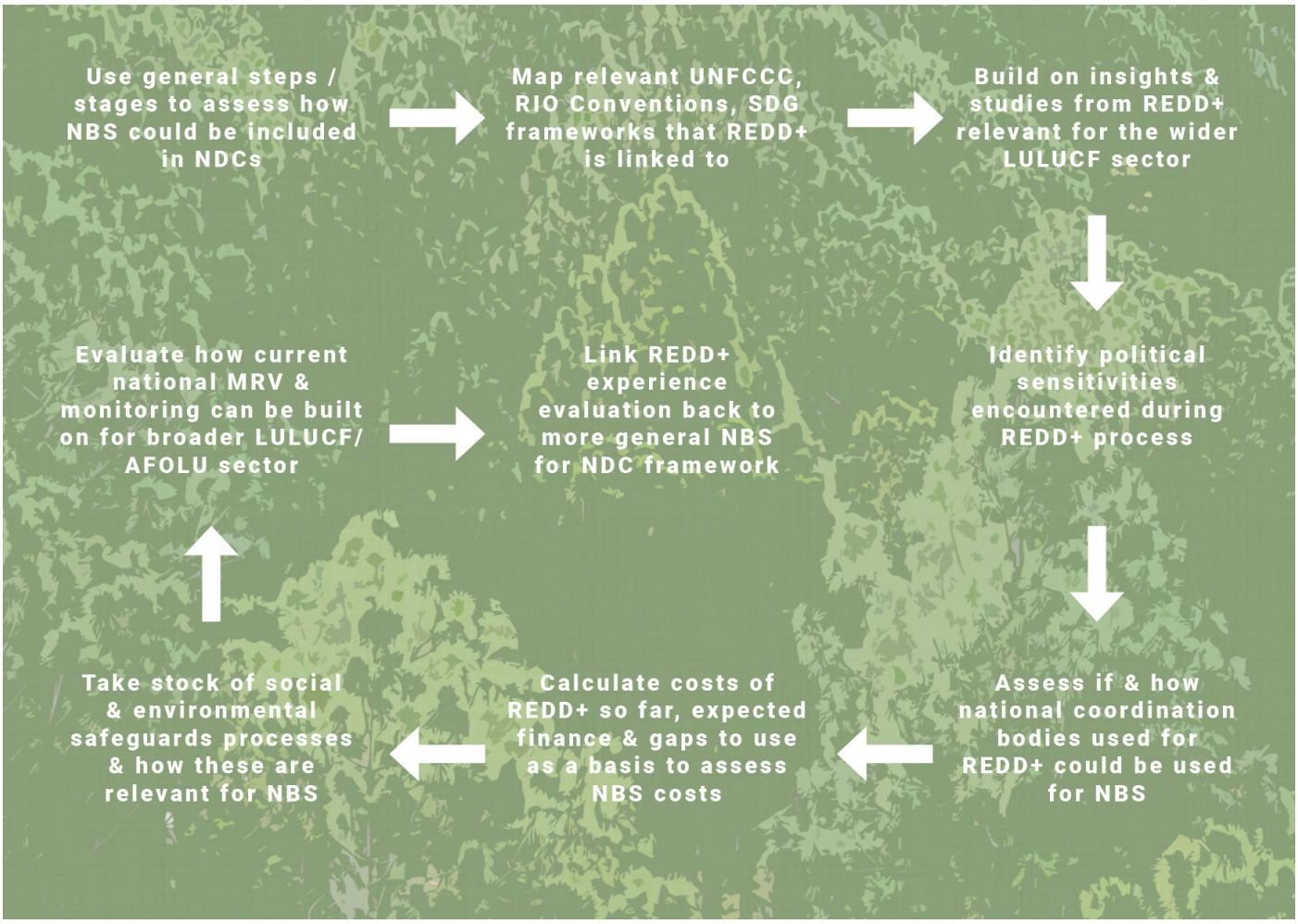


Figure 2. National REDD+ experience evaluation as a practical means to assess how to scale up NBS in NDCs.

This Information Note presents seven key considerations based on over 10 years of REDD+ implementation, summarised in Figure 3.

Looking ahead, there is no doubt that NBS play a critical provide a cost-effective solution for climate mitigation, adaptation and slowing of biodiversity loss[69]. However, to reach this cost-effective mitigation potential, the design of NBS in NDCs needs to be not only ambitious but also implementable through legal, technical and institutional frameworks. This means that well-defined roles and responsibilities for implementation need to exist, as well as political and public acceptability of implementation needs and consequences[70]. Policy makers and policy advisors should consider REDD+ design and implementation experience when evaluating how to offer enhancements through NBS in NDCs.

The insights provided from REDD+ implementation are particularly relevant for NBS in NDCs but have not been a primary focus in other reports and literature on the subject of NBS until now. This Information Note may therefore be viewed as complementary to the important body of thought-leadership that already exists on NBS.

Furthermore, a key component of successful NBS implementation through NDCs will be for countries to develop strong national inter-ministerial coordination and design them in such a way that they actively contribute to the implementation of the SDGs as well as to the objectives of the UNCCD and CBD.

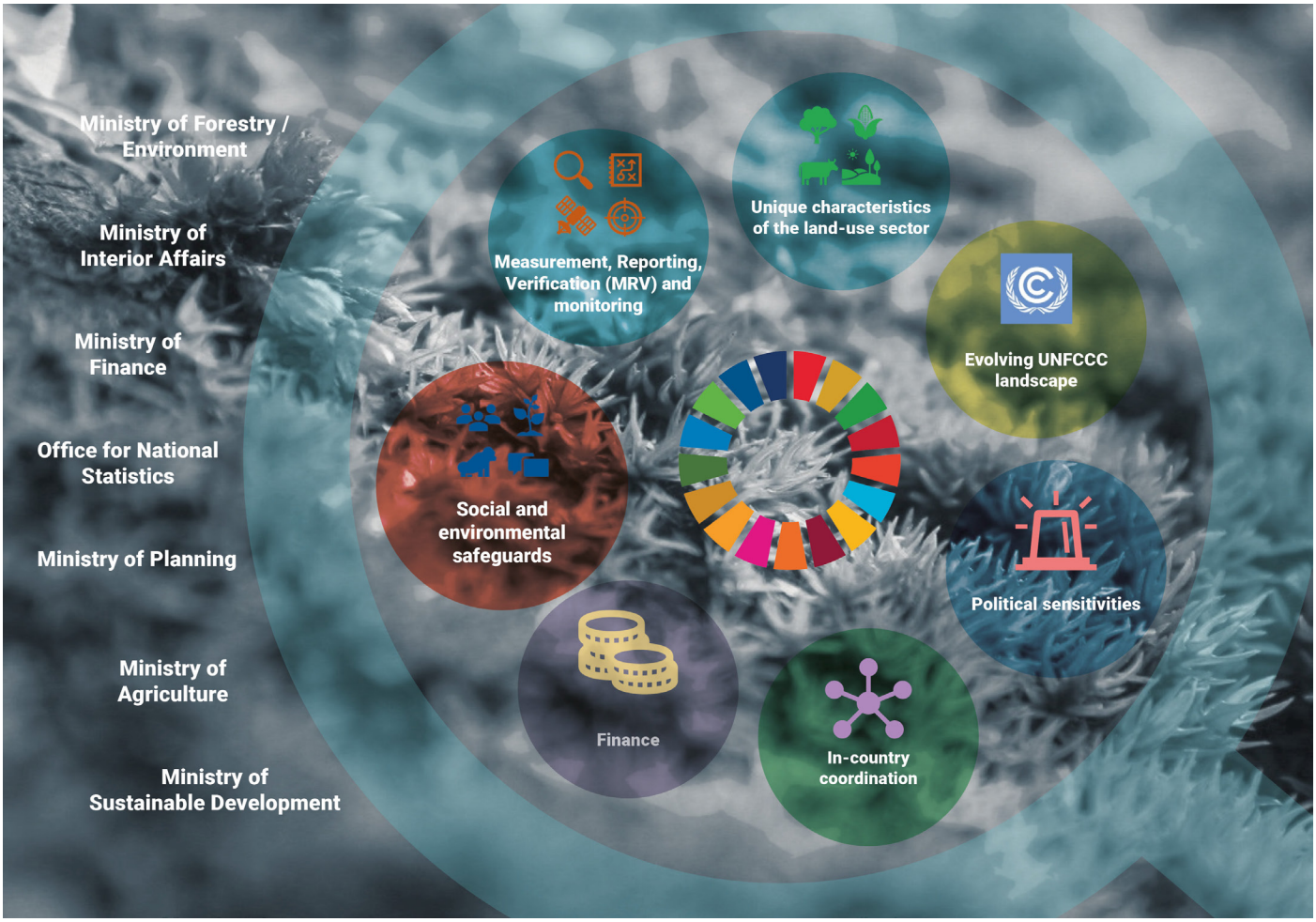


Figure 3. Seven key considerations assessed through a REDD+ lens. It is crucial that NBS for NDCs work toward the implementation of the SDGs (and other RIO Conventions) and strengthen national inter-ministerial coordination.

Though this Information Note does address certain challenges and barriers in the context of the considerations presented, it should not be interpreted as promoting inaction on enhancing NBS in the NDCs. To the contrary, it is a call to acknowledge these challenges and areas of uncertainty so that they can be overcome. There is no doubt that NBS are a crucial piece of the positive and holistic climate action that we must take collectively.

Incorporating the types of considerations and lessons learned from REDD+ implementation highlighted in the Information Note into capacity-building, technical guidance on and initiatives related to NBS in the NDCs can contribute to unleashing and realizing the full potential of nature toward our global climate goals.

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https://www.greenclimate.fund/document/terms-reference-pilot-programme-redd-results-based-payments

25 See for example the concept of "managed land" and "Managed Land Proxy" in IPCC 2013. Good Practice Guidance for Land Use, Land-Use Change and Forestry, Penman, J., et al. (eds.). Published: IPCC, Switzerland.
https://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf_files/GPG_LULUCF_FULL.pdf
"Managed land: Land where human interventions and practices have been applied to perform production, ecological or social functions. All land definitions and classifications should be specified at the national level, described in a transparent manner, and be applied consistently over time. Therefore, what is not defined as 'managed land' by a country should be classified as unmanaged."
"Managed Land Proxy: For the AFOLU Sector, anthropogenic greenhouse gas emissions and removals by sinks are defined as all those occurring on 'managed land'. This approach, i.e., the use of managed land as a proxy for anthropogenic effects, was adopted in the Good Practice Guidance for Land Use, Land-Use Change and Forestry (2003) and that use is maintained in the 2019 Refinement."

26 See for example IPCC 2014. 2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol, Hiraishi, T., et al. (eds). Published: IPCC, Switzerland. https://www.ipcc-nggip.iges.or.jp/public/kpsg/

27 See note 29 Annex II of Decision 4/CMA.1 of the Katowice Climate Package, paragraph 1e "Parties that decide to address emissions and subsequent removals from natural disturbances on managed lands provide detailed information on the approach used and how it is consistent with relevant IPCC guidance, as appropriate, or indicate the relevant section of the national greenhouse gas inventory report containing that information".

28 See note 29 Annex II of Decision 4/CMA.1 of the Katowice Climate Package, paragraph 1e "Parties that decide to address emissions and subsequent removals from natural disturbances on managed lands provide detailed information on the approach used and how it is consistent with relevant IPCC guidance, as appropriate, or indicate the relevant section of the national greenhouse gas inventory report containing that information".

29 Annex II of Decision 4/CMA.1 of the Katowice Climate Package.
https://unfccc.int/sites/default/files/resource/cma2018_03a01E.pdf

30 See Annex of UNFCCC Decision 18/CMA.1 Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement, paragraph 77.
https://unfccc.int/sites/default/files/resource/CMA2018_03a02E.pdf

31 Article 6.2. Parties shall, where engaging on a voluntary basis in cooperative approaches that involve the use of internationally transferred mitigation outcomes towards nationally determined contributions, promote sustainable development and ensure environmental integrity and transparency, including in governance, and shall apply robust accounting to ensure, inter alia, the avoidance of double counting, consistent with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to this Agreement.

32 Article 6.4. A mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development is hereby established under the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to this Agreement for use by Parties on a voluntary basis. It shall be supervised by a body designated by the Conference of the Parties serving as the meeting of the Parties to this Agreement, and shall aim: (a) To promote the mitigation of greenhouse gas emissions while fostering sustainable development; (b) To incentivize and facilitate participation in the mitigation of greenhouse gas emissions by public and private entities authorized by a Party; (c) To contribute to the reduction of emission levels in the host Party, which will benefit from mitigation activities resulting in emission reductions that can

also be used by another Party to fulfil its nationally determined contribution; and (d) To deliver an overall mitigation in global emissions.

33 Streck et al. (2017) Options for enhancing REDD+ collaboration in the context of Article 6 of the Paris Agreement. https://www.climatefocus.com/sites/default/files/REDDOptionsfinalreport.pdf

34 PNG INDC. https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Papua%20New%20Guinea%20First/PNG_INDC%20to%20the%20UNFCCC.pdf

35 PNG NRS. https://redd.unfccc.int/uploads/4838_1_papua_new_guinea_national_redd_2B_strategy.pdf

36 See https://www.unccd.int/convention/about-convention/unccd-cbd-and-unfccc-joint-liaison-group

37 See note 6.

38 United Nations Development programme. 2019. Pathway for increasing Nature-Based Solutions in NDCs: A Seven-Step Approach for Enhancing Nationally Determined Contributions through Nature-Based Solutions. New York, USA: UNDP. https://www.ndcs.undp.org/content/dam/LECB/docs/pubs-tools-facts/Pathway_for_Increasing_Nature-Based_Solutions_in_NDCs.pdf

39 Ibid.

40 Brana-Varela J, Lee D. 2016. Early Reflections on the Implications of the Paris Agreement for REDD+. Washington, DC.: For. Trends. https://merid.org/~/media/Files/Projects/ImplicationsofParis/20160527%20-%20The%20PA%20and%20REDD%20-%20copy%20edited%20and%20cleaned.pdf

41 Hein J, Guarin A, Frommé E, Pauw P. 2018. Deforestation and the Paris climate agreement: An assessment of REDD + in the national climate action plans. For. Policy Econ. 90:7–11. https://www.sciencedirect.com/science/article/pii/S1389934117305373

42 GCF - https://www.greenclimate.fund/home

43 United Nations Framework Convention on Climate Change (UNFCCC). 2010. Decision 1/CP.16. The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention. Bonn, Ger.: UNFCCC. https://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf

44 Green Climate Fund (GCF). 2017. Terms of reference for the pilot programme for REDD+ results-based payments. Songdo, South Korea: GCF. https://www.greenclimate.fund/documents/20182/1203466/Terms_of_reference_for_the_pilot_programme_for_REDD__results-based_payments.pdf/e26651fc-e216-c8b0-55a1-8eea16a90f39

45 See https://www.greenclimate.fund/redd#p_p_id_56_INSTANCE_FGgkymA8DoSl_

46 Ecuador GCF project FP019: Reducing deforestation in Ecuador by investments to support sustainable agricultural production and conservation of forests. https://www.greenclimate.fund/projects/fp019?inheritRedirect=true&redirect=%2Fwhat-we-do%2Fprojects-programmes%3Fp_p_id%3D101_INSTANCE_Hreg2cAkDEHL%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3D_118_INSTANCE_4ZRnUzRWpEqO__column-2%26p_p_col_pos%3D1%26p_p_col_count%3D2%26_101_INSTANCE_Hreg2cAkDEHL_delta%3D30%26_101_INSTANCE_Hreg2cAkDEHL_keywords%3D%26_101_INSTANCE_Hreg2cAkDEHL_advancedSearch%3Dfalse%26_101_INSTANCE_Hreg2cAkDEHL_andOperator%3Dtrue%26p_r_p_564233524_resetCur%3Dfalse%26_101_INSTANCE_Hreg2cAkDEHL_cur%3D2

47 See the link below for more information on Ecuador's NDC: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Ecuador%20First/Primera%20NDC%20Ecuador.pdf

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The Initiative is designed in a way that allows flexibility to support countries to improve the data on LULUCF but also brings in other categories over time during the Emissions Reductions Payment Agreement Phases if quality criteria are not met at the outset. See:
https://www.biocarbonfund-isfl.org/sites/biocf/files/documents/ISFL%20ER%20Reqs%20-%20GHG%20reporting%20and%20accounting_final.pdf

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59 See https://sepal.io/

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65 GONINI – National Land Monitoring System of Suriname - https://www.gonini.org/

66 Suriname's National Forest Monitoring System:
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67 See notes 1, 6, 16, 17.

68 See notes 1 and 2.

69 See notes 1 and 2.

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