

# Forestry in Nationally Determined Contributions (NDCs)

An Asia-Pacific Perspective

UN-REDD  
PROGRAMME



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# INTRODUCTION

This policy brief provides a summary of an expert discussion forum convened on “Forestry in NDCs of Asia-Pacific countries: 2020 vision”. The forum was held on 17 June 2019 and organised as part of the 2019 Asia-Pacific Forestry Week (APFW) at the Green Climate Fund (GCF) office in Songdo, Republic of Korea.

Eleven regional experts participated in the forum, representing views from multiple countries, as well as from key institutions across the Asia-Pacific region. This policy brief summarises the main discussions held during the consultation, which responded to a set of twelve questions designed to inform stakeholders on the potential role of forestry in achieving NDC goals in the Asia-Pacific region after 2020.

The views expressed herein do not necessarily reflect the views of FAO, the UN-REDD Programme, or other participating institutions, and should be instead considered as the personal perspectives of the participating experts.

The Food and Agriculture Organization of the United Nations (FAO), on behalf of the UN-REDD Programme, and its partners held similar “Post-COP” forums annually between 2010 and 2016, to assess the outcomes of climate negotiations and their potential implications for the forestry sector across the Asia-Pacific region. The 2019 forum, which was the first forum held since 2016, focuses on the current efforts of countries across the region to revise and update their Nationally Determined Contributions (NDCs), as the primary means to achieve the goals outlined in the Paris Agreement. The 2019 forum was organised by FAO on behalf of the UN-REDD Programme, GCF, Asian Forest Cooperation Organization (AFoCO), the Center for International Forestry Research (CIFOR), the Center for People and Forests (RECOFTC) and GIZ. This summary publication is supported through the UN-REDD Programme.

# LIST OF EXPERTS:

The following experts participated in the forum on 17th June 2019 in Songdo.

## **Cambodia**

### **Mr. Chhun Delux**

Deputy Director of Forest Industry and International Cooperation Department

#### **Organization**

Forestry Administration, Ministry of Agriculture, Forestry & Fishery

## **People's Republic of China (PRC)**

### **Mr. Xia Chaozong**

Division Director, Academy of Inventory and Planning

#### **Organization**

National Forestry and Grassland Administration

## **Indonesia**

### **Ms. Haruni Krisnawati**

Coordinator of the International Tropical Peatlands Center

#### **Organization**

Ministry of Environment and Forestry

## **Indonesia**

### **Mr. Rizaldi Boer**

Executive Director,  
Centre for Climate Risk and Opportunity Management

#### **Organization**

Bogor Agricultural University

## **Republic of Korea**

### **Mr. Raehyun Kim**

Senior Scientist, Global Forestry

#### **Organization**

National Institute of Forest Science (NIFoS)

## **Myanmar**

### **Mr. Thaung Naing Oo**

Director, Forest Research Institute, Forest Department

#### **Organization**

Ministry of Natural Resource and Environment Conservation

## **Viet Nam**

### **Mr. Vu Tan Phung**

Deputy Director, Science, Post-graduate Training and International Cooperation Department

#### **Organization**

Vietnam Academy of Forest Sciences (VAFS)

## **Ms. Kalpana Giri**

Senior Program Officer

#### **Organization**

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## **Mr. Marc Dumas-Johansen**

Senior Forest and Land Use Specialist

#### **Organization**

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## **Ms. Moira Moeliono**

Senior Policy Analyst

#### **Organization**

Center for International Forestry Research (CIFOR)

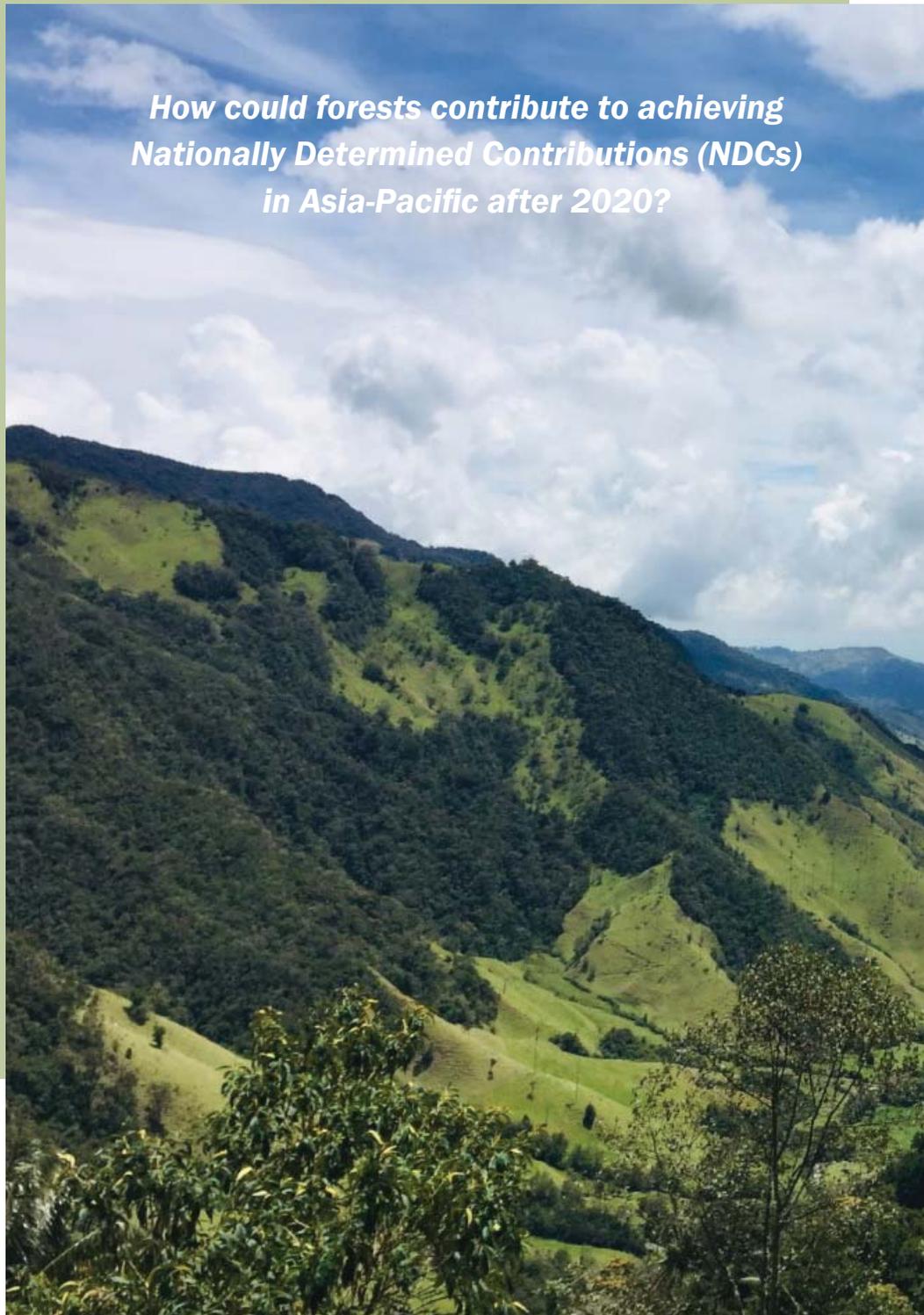
## **Mr. Vincent Gitz**

Director, CGIAR Research Program on Forests, Trees and Agroforestry (FTA)

#### **Organization**

Center for International Forestry Research (CIFOR)

*How could forests contribute to achieving  
Nationally Determined Contributions (NDCs)  
in Asia-Pacific after 2020?*



# TWELVE KEY QUESTIONS:

- 1 The forestry sector is represented in more than 80% of NDCs in Asia-Pacific. What information was used to develop these commitments, and how was it compiled?
- 2 Forestry and climate change mitigation: Is the level of ambition achievable and realistic with or without external resources?
- 3 Forestry and climate change adaptation: Is the level of ambition achievable and realistic with or without external resources?
- 4 With increasing availability of high quality information and data, what opportunities exist for better reflection of forests' contribution in NDCs?
- 5 At COP 24, parties decided to move from Biennial Update Reports (BURs) to Biennial Transparency Reports (BTRs). What are the implications for reporting on forests?
- 6 Noting that most NDCs have not specified accounting approaches for land use, how could countries move towards a common approach?
- 7 What are the implications of the Enhanced Transparency Framework (ETF) for the forestry sector and what can be learned from MRV and M&E experience to date?
- 8 Maximising forests' potential as a carbon sink: What will this require in terms of policies, regulations, rights, and coordination between forestry and other sectors?
- 9 What key technical and institutional capacity building needs for forestry sector stakeholders are required to fulfil NDC commitments?
- 10 What are the challenges to raising domestic investments to achieve forestry goals in NDCs, and how can they be overcome?
- 11 How can international public and private investments be effectively targeted towards forestry actions under NDCs? How can multilateral funds help?
- 12 How can countries use climate finance and market mechanisms for forestry and land use to implement their NDCs?

# 1

## The forestry sector is represented in more than 80% of NDCs in Asia-Pacific. What information was used to develop these commitments, and how was it compiled?

Most information on emissions from the forestry sector comes from data on deforestation, forest management (including reforestation and restoration), and other land use changes. Reducing deforestation now forms a key part of NDC emission reduction targets in several countries in the region.

To compile necessary information for the forestry sector and analyse the impacts of projected emissions and removals by 2030, most countries assigned national technical teams from various sectors. These teams used Business as Usual (BAU) scenarios, and cost-benefit analyses to evaluate the cost and efficiency of different mitigation options, referencing the guidelines of the United Nations Inter-governmental Panel on Climate Change (IPCC).

To define the mitigation options and their contributions to national development goals, countries have drawn on national climate strategies, green growth policies, national REDD+ strategies and action programmes, and other relevant policy and legislative frameworks. Countries have also utilised projections with and without international support for both planned and unplanned deforestation under BAU scenarios. Some of this information has been included in the Forest Reference Emission Level and/or Forest Reference Level (FREL/FRL) data, aligned with NDC goals. Their projections utilised the best available national data on growth rates and emission factors. However, these projections also depended on several assumptions for timber production and forest regeneration.

Among mitigation options identified in Asia, the forestry sector is prominent in NDC strategies for achieving conditional targets, since it often provides a favourable return on investment compared to other sectors. Viet Nam, for instance, agreed to reduce net emissions by 8% using national resources, and indicated potential for 25% reductions with external financial assistance. Viet Nam's priority for these conditional targets is the Land Use, Land-Use Change, and Forestry (LULUCF) sector, and the information necessary to assess the costs and impacts of potential actions in Viet Nam is already available. Agriculture also has significant potential for mitigation, but at a greater cost per unit of emission reduction.

Least Developed Countries (LDCs), such as Myanmar, have a comparatively difficult task to reach conclusions on targets. Most of them had limited national information for Greenhouse Gas (GHG) inventory when the process of developing Intended Nationally Determined Contributions (INDCs) began, before the Paris Agreement was finalised in 2015. As a result, the INDC targets were largely process-oriented. For example, Myanmar used the 1995 national forest policy target of 30% of the country's area allocated as Reserved Forests and Protected Public Forests, but did not have sufficient information to convert this policy statement into absolute targets. The NDC revision process, currently ongoing, will aim to address this.

Despite the available information in the forestry sector, it remains difficult to fully and accurately quantify the contributions of Sustainable Forest Management (SFM) to national targets in the NDCs of countries in Asia-Pacific. It is easy to overestimate these contributions. Moreover, estimating assumed effects of future policy impacts against FRELs/FRLs can lead to errors. Carrying out uncertainty assessments for GHG inventories may become more important as the international community, and potential investors, demand confidence in contributions towards the NDC targets. The best way to address this is to perform a sensitivity analysis, to see how estimates change in response to different scenarios, and with varying magnitude changes in underlying political and economic conditions.

**“Establishing a quality control system to ensure data consistency and reliability is key.”**

*Vu Tan Phuong  
Vietnam Academy of Forest Sciences*



# 2

## **Forestry and climate change mitigation: Is the level of ambition achievable and realistic with or without external resources?**

### ***The level of ambition for the forestry sector often neglects realities on the ground.***

Most NDC mitigation targets contain political commitments rather than a pure reflection of technical analysis. In many countries, there is a mismatch between political commitment and practical reality. To be realistic, targets must take into account whether a country has put into place the institutional mechanisms and reforms necessary to achieve them as part of the NDC. Unfortunately, most NDC analyses to date have focused on data, but not on the costs or the implications for the people and institutions responsible for realising the commitments. This issue is becoming more prominent in the forestry sector as countries transition from designing and planning REDD+ strategies to implementing these strategies on the ground.

For example, in Indonesia, there is a strong national-level commitment to the NDC mitigation targets, but it is unclear whether this is also reflected at sub-national level. While a presidential decree mandated spatial planning tools and models for integrating these targets, they have not been properly utilised at sub-national level due to limited local capacity.

Furthermore, it is also important to recognise the dichotomy between mitigation objectives and adaptation components of forestry targets in the NDCs. Few countries consider the synergies between adaptation and mitigation in forestry. However, countries must address challenges in managing productivity and food security issues at the same time as meeting REDD+ goals. NDC mitigation objectives should pay more attention to these processes, and to do so, they should encourage collaboration between academia and decision-makers on translating complex models into simple and comprehensive formats.

### ***Increasing access to external resources (domestic and international) is necessary to meet the NDC targets.***

Both conditional and unconditional targets in the forestry sector may be dependent on external resources. Even though forest-based emission reductions may be more cost-effective than other sectors, no developing countries in the region currently have allocated domestic public resources sufficient to finance all forest-related NDC interventions. For example, in Indonesia and Malaysia, forestry is one of the largest economic sectors. Yet they allocate only a small fraction of national development budget to forestry. With this in mind, each country should strive to ensure that their unconditional targets are based on sound financial calculations which can be reflected in national budgets. On the other hand, conditional targets are more flexible because they are aspirational and often linked to broader development goals.

To mobilise domestic funds, national stakeholders must recognise that the responsibility for financing the forestry sector extends beyond the government. Forest enterprises need to be encouraged or incentivised to invest in NDC objectives. Commercial banks need to be motivated to invest in forest-based climate change mitigation. Companies involved in land-intensive commodities such as rubber and oil palm must be incentivised to engage in ambitious interventions such as zero-deforestation commitments across the region.

Countries can leverage international support to catalyse domestic investments. To do so, they must first develop the technical tools and policy measures that will facilitate implementation of the NDCs. For example, the United States Agency for International Development (USAID) provided initial funding for crafting the Payment for Forest Ecosystem Services (PFES) scheme in Viet Nam, which has contributed to an enhanced flow of domestic investments to the forestry sector. Viet Nam is now preparing a pilot policy on payment for carbon sequestration as an extension of the PFES scheme.

Multilateral funds have a critical role in incentivising the paradigm shifts that are necessary for the forestry sector to contribute to climate change mitigation goals. However, countries in Asia-Pacific with the greatest need for such funds often face substantial challenges to access them, through pre-conditions such as completion of the Warsaw Framework elements for the GCF's REDD+ Results-Based Payments (RBPs) window. The recent development of the GCF's REDD+ Simplified Approval Process (SAP) can help LDCs to meet these requirements. Furthermore, countries are increasingly required to demonstrate tangible results in terms of GHG emission reductions, including information on uncertainty. Although obtaining such data can be technically challenging, more countries in the region are opting to include information on uncertainty in their FREL/FRLs. This can help improve investor confidence and hence enhance access to international financing for NDCs.



# 3

## Forestry and climate change adaptation: Is the level of ambition achievable and realistic with or without external resources?

Adaptation objectives are prominent in the NDCs and assigned greater importance by most countries than mitigation objectives. However, the NDC adaptation objectives do not often specify forest-related targets. Instead, the role of forests is usually encapsulated within that of wider landscapes. Consequently, instead of dividing funding across sectors, it may be useful to combine adaptation targets under National Adaptation Plans (NAPs) with those mitigation targets which are explicitly forest-related, such as areas under Sustainable Forest Management (SFM). This approach helps integrate the financial resources available for these sectors and can drive the implementation of NDCs. It also has the added benefit of tracking the effectiveness of mitigation and adaptation actions simultaneously.

Countries in the Asia-Pacific region are starting to adopt this approach. The Indonesian government, for example, has identified food security and ecosystem services as key factors for adaptation in their NDC. Although the country is yet to develop a clear path for adaptation, it has introduced a mandatory spatial planning process to align these priority adaptation targets with other NDC goals. Many national and international organisations are currently working to build capacity towards this effort.

Further external support is needed to better understand the role of forests in climate change adaptation. Greater attention should be paid to how risk factors such as forest fire, pests, and changes in species distribution may impact the vulnerability of forests and forest-dependent people. There is also an increasing need for research that assesses adaptation impacts of SFM and identifies suitable tools and approaches for better SFM practices.

Lastly, building understanding of the importance of forests for other sectors is key to mobilising investments from outside the forestry sector. In Viet Nam, forests have a key role in NDC adaptation objectives, and efforts are being made to improve understanding of forests' adaptive capacities to extreme events. In Indonesia, ongoing research on the food and water nexus has the potential to mobilise further investments in the forestry sector. To ensure these efforts are effectively implemented, it is important to develop key indicators and identify relevant data to monitor progress in a multidisciplinary manner.

**“ Build local capacities to help incorporate forestry adaptation targets into development plans.”**

*Rizaldi Boer  
Executive Director  
Centre for Climate Risk and  
Opportunity Management  
at Bogor University (IPB)*

**“ Adaptation actions in the forestry sector are critically under-researched ”**

*Vincent Gitz  
Director  
CGIAR Research Program  
on Forests, Trees and Agroforestry  
at CIFOR*

# 4

## With increasing availability of high quality information and data, what opportunities exist for better reflection of forests' contribution in NDCs?

Several opportunities exist for updating and revising NDCs. First, many countries are making forest-related international commitments that are increasingly aligned with their NDCs. For example, countries in the Asia-Pacific region are developing voluntary reports to the UN Forum on Forests (UNFF) to demonstrate progress towards the UNFF's six global forest goals. These goals were formulated specifically to assist countries in their progress towards the 2030 Sustainable Development Goals (SDGs), and the current cycle of reporting should include evidence of how countries have adjusted their NDCs to make them consistent with these goals. Another example is the involvement of several countries in the region on initiatives related to Forest Law Enforcement, Governance and Trade (FLEGT), which may require the definition of robust targets through revised NDCs.

A second opportunity is to align NDCs with new national legislative and policy processes. This opportunity is particularly strong for LDCs such as Myanmar, which has yet to convert its INDC to an NDC due to the lack of sufficient data and political readiness. Myanmar is using this opportunity not only to revise its NDC, but also to align and incorporate all relevant new policies that the country has ratified since the Paris Agreement. Viet Nam aims to conduct detailed technical analyses on technical feasibility and cost benefits, targeting all sectors covered in the NDC, as part of a future NDC revision process. This process will facilitate the introduction of national emission reduction targets for specific sectors, relevant to the achievement of NDCs, with responsibilities for meeting these targets set out through legal instruments. Evidence-based national policy processes, such as these, can create the enabling environment necessary for the revision and improvement of NDCs.

A third opportunity is to connect the NDC revision process to existing reporting processes such as National Communications (NCs). Myanmar is preparing its second NC and this offers an excellent opportunity to ensure that the quantifiable targets in the NDCs are consistent with the information in the NC. Myanmar has yet to set mitigation targets for the forestry sector, and the NC offers an opportunity to improve the data, revisit GHG inventory methodologies, and align them with the FREL/FRL submitted to the UNFCCC in 2018.

Lastly, linking forestry goals in the NDCs to market-based mechanisms for mobilising climate finance may present opportunities to update NDCs. Article 6 of the Paris Agreement on market mechanisms may facilitate the transition from voluntary markets to compliance markets. To justify investment, international investors, including the private sector, look for realistic and practical forestry sector commitments to be reflected in the NDCs. Moreover, these commitments must be backed by reliable and transparent reporting, and a pool of skilled technicians capable of developing the reports. The process of NDC revision can therefore become an opportunity to build national capacity and self-reliance. If such action is not taken, however, future investment opportunities may be held back.

**“ Building capacity of national technical staff is critical for revising and updating NDCs.”**

*Chhun Delux  
Deputy Director of Forest Industry and  
International Cooperation Department,  
Cambodia Forest Administration*

# Biennial Transparency Report

The Paris Agreement requires parties to submit a Biennial Transparency Report (BTR) that contains a national greenhouse gas inventory and the “information necessary to track progress made in implementing and achieving” their NDCs. According to the Katowice Rulebook, in order to increase the efficiency of activities undertaken as part of the Convention, the new transparency system should replace the existing reports and the current data review systems. The Rulebook requires parties to report progress on the implementation of their NDCs including the following actions:



Describe its NDC in such a way that progress against its targets or goals can be tracked.



Identify quantitative and/or qualitative indicators to track its progress and provide current information for each of these indicators.



Clearly indicate its accounting approach and how it is consistent with its type of NDC.



After the conclusion of its contribution period, provide an assessment of whether it has achieved its NDC.



Provide a structured summary of the information in its BTR



Provide information on its actions, policies and measures, together with estimates, if possible, of the expected and achieved emission reductions.

This required information must be provided in the BTRs, except for LDCs and Small Island Developing States (SIDS), which may submit such information as their capacity allows.

*Source: Explaining the Paris Rulebook, World Resources Institute 2019*

# 5

## At COP 24, parties decided to adjust Biennial Update Reports (BURs) to Biennial Transparency Reports (BTRs). What are the implications for reporting on forests?

Despite the progress made in Measurement, Reporting and Verification (MRV) in the forestry sector over the past decade, transitioning to Biennial Transparency Reports (BTRs) may involve significant technical and financial challenges for Asia-Pacific countries. For many years, National Greenhouse Gas (GHG) Inventory Reports (NIR) and BURs have been key parts of the transparency framework governing information and data on climate change provided by both industrialised and developing countries. At COP17 in 2012, developing countries were requested to submit their first BURs by the end of 2014. However, in Asia, only a few countries, including the Republic of Korea and Viet Nam, managed to submit their BURs within this target date. Some countries required more time to reach national consensus on the data, or to enact institutional reforms to ensure consistency, while others needed to enhance the technical capacity to develop the data itself. For example, China launched a new domestic monitoring system for forest carbon that in turn went through changes in reporting authority and structure. This effort in ensuring system consistency and transparency now puts China in a good position to adapt to the BTR process.

BTRs are now mandatory for all signatories to the Paris Agreement, though LDCs and Small Island Developing States (SIDS) have flexibility in their reporting obligations. BTRs also have a longer list of mandatory technical elements than BURs, termed the Enhanced Transparency Framework (ETF) Modalities, Procedures and Guidelines (MPGs). MPGs include a full national GHG inventory report, a key category analysis, uncertainty assessment and description of indicators necessary to track progress against the NDC objectives. Moreover, rather than using default emission factors (IPCC Tier 1), parties are encouraged to utilise country-specific and regional emission factors (Tier 2 or Tier 3), as well as use the latest IPCC Guidelines. If a party is unable to adopt this approach, it must clearly justify its methodological choice in its BTR.

Another challenge in transparency reporting is ensuring consistency over different reporting periods. It is not unusual for countries to change their approaches to GHG inventory reports, leading to improvements in data generation and accuracy. This may necessitate recalculation of past data, sometimes identifying inconsistencies in previous reports which need to be clearly explained. The two-year BTR reporting cycle will not always be a convenient time scale for generating national-level data. For example, most countries operate a National Forest Inventory (NFI) on a five-year cycle or longer, so it is a challenge to adapt this information to a two-year inventory reporting cycle in a transparent and accurate manner.

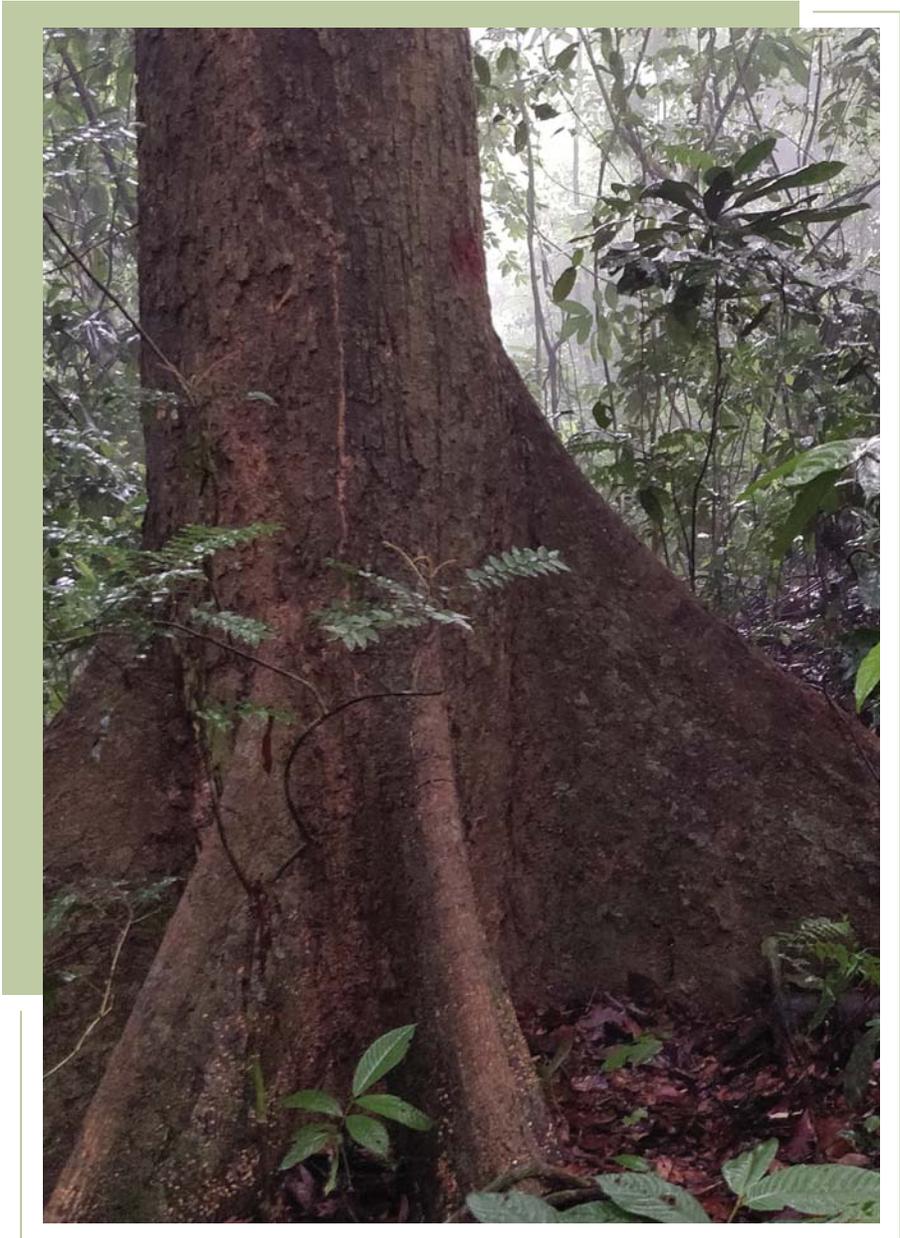
**“ There are limits to transparency. You don’t want to show everything that’s in your kitchen.”**

*Moira Moeliono  
Senior Policy Analyst, CIFOR*

**“ Countries will need very strong financial and technical support for collecting data on land-use change, under the different management regimes.”**

*Xia Chaozong  
Division Director  
China Academy of Inventory  
and Planning*

Lastly, while most significant changes in the transition from BURs to BTRs relate to technical reporting requirements, changes in the terminology itself can matter. The word 'transparency', for instance, has different implications for various audiences, and may have connotations with respect to national sovereignty, human rights, intellectual property rights and corporate law. Transparency of results does not necessarily mean that all source data is open to public scrutiny. Mistrust within and between countries will not disappear by incorporating the word 'transparency' into reporting frameworks.



# 6

## Noting that most NDCs have not specified accounting approaches for land use, how could countries move towards a common approach?

The Katowice Rulebook from COP24 in 2018 has provided a global foundation for GHG accounting through ensuring the use of existing methodologies and guidelines. However, this does not mean that all countries are converging on common approaches for accounting of emissions from land use. Countries need to consider four key factors in order to reach a uniform accounting standard. First, data availability and means to generate quality data are a significant factor for many developing countries. Most countries have access to spatial data necessary to perform GHG accounting for forest and land use change, but other sectors require the use of activity data based on statistics, which is dependent on the transparency of national institutions. To ensure transparency, reviewers need to know where data come from and how they are used to generate estimates.

Second, before moving towards a common approach to LULUCF accounting among countries, there needs to be a common approach within countries. Different national-level processes, whether encouraged through domestic or uncoordinated international assistance, have been the main source of inconsistency. Data such as forest cover is still sometimes developed in parallel by different entities, which use different carbon accounting methodologies and rarely share or compare their results. Therefore, institutional coordination among agriculture, forestry and other land use sectors is key to ensure consistency of emissions calculations at the national level across sectors. Moreover, negotiations among line ministries and local authorities are essential to resolving these issues, and this cannot happen effectively without political buy-in at the highest level. Support from bilateral and multilateral funds may also be useful in assisting countries to ensure internal accounting consistency, but it is up to countries how they define their accounting methods, as long as they can adequately explain and justify their approaches.

Third, the principles of SFM, widely adopted in global forest certification systems, may provide some useful examples towards developing common approaches to GHG accounting. It is important to note, however, that while the principles and criteria of SFM may be reasonably consistent, their related indicators and processes are often country specific. In Indonesia, for example, production forest managers are required to follow national SFM certification standards and report data on Reduced Impact Logging (RIL). But in reality, companies often design their own reporting methods and have different methodologies for implementing RIL. To close this gap, a system change is required in mandatory corporate reporting on logging activities, encouraging comparability of methodologies.

Lastly, while aiming for harmonisation of accounting approaches, it is important to understand how transparency is defined at the national level. The level of transparency is often dependent on the size of the national economy, capacity of its officials and technicians, and the scale of the relevant sectors in the national economy. Context-specific approaches are required when assessing the transparency reports submitted to the UNFCCC to reflect the differences among countries. As experienced with early REDD+ initiatives, despite the efforts to develop international level guidance, data (particularly socio-economic data) is often generated through methods that are unique to each country. In conclusion, it is useful to have guidance at the international level, but UNFCCC reporting should allow for, and encourage, the relevance of national-level circumstances and approaches.

**“ To make harmonised GHG accounting approaches work, the highest level of political support is required.”**

*Thaung Naing Oo  
Director  
Myanmar Forest Research Institute*

# 7

## What are the implications of the Enhanced Transparency Framework (ETF) for the forestry sector and what can be learned from MRV and M&E experience to date?

***To monitor their NDC contributions through the ETF, countries need to improve their capacity on MRV, and facilitate learning exchanges among other sectors and countries.***

Since there was no agreement at COP24 in Katowice for the assessment of technical or institutional elements of NDCs, MRV has become a key focus of countries' efforts to improve them. The ETF under the Paris Agreement obliges countries to go beyond MRV for mitigation actions, and to also monitor and evaluate adaptation actions, given necessary capacity, technical and financial support. However, so far most countries have submitted more quantitative goals for mitigation than for adaptation, and defining such goals is therefore the first task before effective implementation of the ETF for adaptation can begin.

Many countries in the region have gained experience and reporting capacity through REDD+ FREL/FRL development, and Malaysia has already reported emission reduction results to the UNFCCC. This experience could prevent countries from facing similar issues with the IPCC guidelines, and lead to development of MRV systems that can be used for GHG inventories under the NDCs. Other countries can draw on experiences from their neighbours across the region.

With more than 10 years of valuable experience from the forestry sector now available, sharing lessons from developing MRV systems could improve technical collaboration between forestry and other sectors.

Countries should use the time before NDC revisions are finalised to establish these systems. This can help increase their confidence that the revised national targets are both feasible and practical. Such MRV systems can also be integrated into existing NFI or monitoring approaches in order to be more cost-effective. In Viet Nam, the NFI now covers the generation of Activity Data and Emission Factors to support the estimates of emissions and removals within the forestry sector.

***Monitoring adaptation actions of NDCs can be done in an inclusive manner, but further research is needed to develop measurable indicators.***

While the monitoring of mitigation actions is more dependent on select technical expertise, monitoring of adaptation components can involve multiple stakeholders. Much of this work can take the form of stocktaking of impacts, for example on the conditions of forest-dependent and indigenous peoples. National Adaptation Plans (NAPs) provide valuable lessons on disaggregating impacts and diagnosing levels of vulnerability for different stakeholders. These processes can help countries adopt more inclusive approaches for adaptation actions when converting information in the NAPs into concrete actions in the NDCs.

***“To ensure transparency in achieving targets, improve country specific activity data and emission factors.”***

*RaeHyun Kim  
Senior Scientist  
National Institute of Forest Science  
(NIFoS)*

***“Participatory elements of NAP stocktaking are key to achieving inclusive processes in monitoring adaptation actions in the NDCs.”***

*Kalpana Giri  
Senior Program Officer  
RECOFTC*

Although many NAPs and NDCs include Monitoring and Evaluation (M&E) plans for adaptation actions, there are comparatively fewer resources available for implementing M&E tools than for MRV of mitigation actions. First, indicators for measuring progress towards reduced vulnerability or increased resilience are less clear than those used for mitigation targets. For example, two years of consultations on development of key adaptation indicators has not yet yielded a national consensus in Indonesia. This process typically involves multiple sectors and different levels of administration, which takes time. Another challenging task is to link these M&E frameworks to the Sustainable Development Goals (SDGs) and harmonise sectoral approaches. This can be facilitated by a centralised information platform. At regional level, a climate change adaptation information platform established by Japan can offer a means to pool information and share knowledge on monitoring approaches.

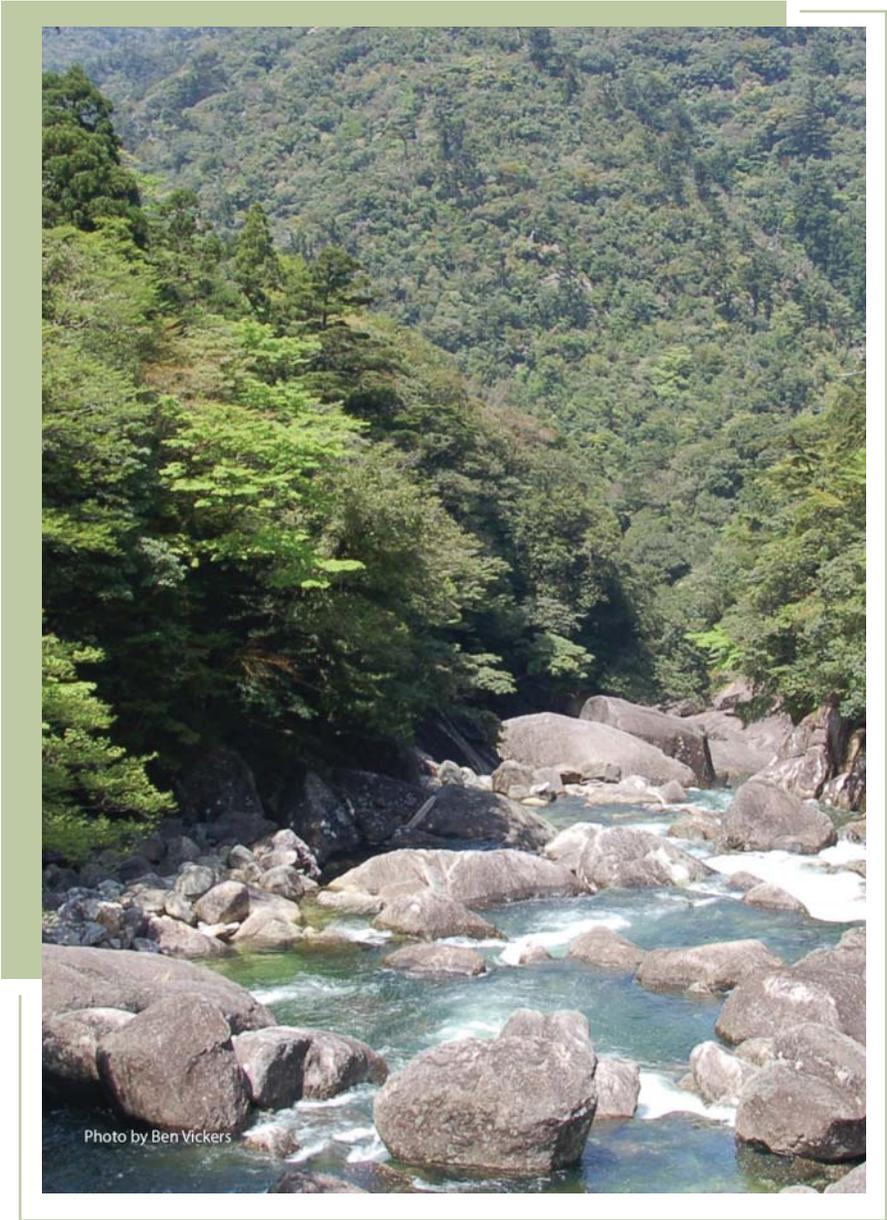


Photo by Ben Vickers

# 8

## Maximising forests' potential as a carbon sink: What will this require in terms of policies, regulations, rights, and coordination between forestry and other sectors?

Countries in the region should take action so that the forestry sector can become a carbon sink rather than a source of emissions. However, many have already placed GHG emission reductions in the centre of national regulatory mechanisms, policies and programmes on land tenure. To reflect this paradigm shift in the role of forestry in NDCs, transformational changes are needed. These changes include facilitating coordinated efforts among multiple sectors, as well as harmonising policies, frameworks and systems across jurisdictions and across different layers of government.

While structural changes may be necessary, it is important to emphasise functions over structures when discussing coordination. Structural priorities have been discussed and incorporated into national processes; however, it is not always clear that such reforms are designed effectively to address underlying problems. More often, these reforms are intended to address the obvious drivers that are relatively easy to control, but not necessarily those that are ultimately responsible for encouraging investment in actions that cause deforestation. Governments should now focus on engaging non-state actors in dialogues about the mutual objectives of coordinated landscape approaches, not only the structures and regulations surrounding them. Myanmar, for example, has been engaged in such multi-stakeholder dialogue through the development of its National REDD+ Strategy.

Meanwhile, investment behaviour in forestry across the Asia-Pacific region is already shifting. In Cambodia, private investors increasingly seek multiple benefits for climate and economic development from forestry initiatives. Across the region, investors prefer initiatives that are clear, concrete, fungible and pose fewer reputational risks. Avoided deforestation initiatives are often seen as complicated and comparatively higher risk. In comparison, initiatives that involve afforestation, reforestation and restoration have tangible products, and clear, transparent approaches to calculate climate change mitigation impacts. Consequently, there is considerable interest from public and private investors from China, the Republic of Korea, and Japan in plantation and restoration projects across South and Southeast Asia. However, such investments must be accompanied by necessary safeguard systems to take account of potential adverse impacts and unintended consequences of forest investments. This is particularly important for countries where multi-sectoral and multi-stakeholder coordination in decision making and planning is relatively weak.

Once the necessary safeguard systems are in place, countries can begin to consider distinguishing private investments from public investments in the actions related to the implementation of forestry objectives under their NDCs. Public investments may focus on provision of subsidies and low-cost financing modalities for smallholders. These incentives must help actors change their behaviour to adopt sustainable agriculture and forestry practices. Actions related to private investments may take the form of reduced impact or zero-deforestation obligations for land-intensive industries such as oil palm and rubber plantations. These obligations should be coupled with guarantees for the respect and protection of land and tenure rights for smallholders and indigenous peoples. Domestic and international banks have an important role to play in advancing these investments through providing loans and financial products for land-based industries.

**“ We often forget that functions are as important as structures. We need to question why the structures that we have in place don't work.”**

*Moira Moeliono  
Senior Policy Analyst  
CIFOR at Bogor University (IPB)*

**“ Countries should strive for strong commitments from all actors, especially non-state actors.”**

*Haruni Krisnawati  
Coordinator of International Tropical  
Peatland Centre in Indonesia*

# 9

## What key technical and institutional capacity building needs for forestry sector stakeholders are required to fulfil NDC commitments?

There are several capacity and institutional needs with respect to both mitigation and adaptation. Reporting approaches must evolve to reflect the learning process that each country and each stakeholder group experiences.

Many countries may decide to specify capacity and financial requirements for meeting their obligations under Article 13 of the Paris Agreement on transparency. Recognising this emerging need, the UNFCCC has created the Capacity Building Initiative for Transparency (CBIT), administered by the Global Environment Facility (GEF). Several Asia-Pacific countries are already implementing CBIT projects, including Cambodia, Mongolia and Papua New Guinea. Furthermore, despite the quantifiable mitigation targets pronounced in the NDCs, many developing countries in the region still have significant capacity gaps in MRV for land-use. For example, if 1996 IPCC guidelines were used in previous submissions, they must be updated to ensure alignment with the 2006 guidelines. The Republic of Korea faced this issue between its third NC in 2011 and its second BUR in 2017.

All parties are required to submit their first BTR no later than December 2024, but the technical capacity required to monitor all sectors biennially is yet to be institutionalised in many countries in the region. For example, generating data on land-use change, and the temporal and spatial resolution required to measure changes in forest degradation and forest growth, are still challenging. Moreover, while there are now accepted methods for measuring uncertainty in data on deforestation, there is still no clear solution on measuring uncertainty for forest degradation. This depends on many factors including the definitions of various types of forests and the spatial resolutions used. Even countries with significant technical capacity on REDD+ FREL/FRLs, such as Indonesia and Viet Nam, have made little progress towards this. To include information on forest degradation or enhancement in BTRs, countries need reliable models to reflect the impacts of SFM, certification, and RIL. This information, in turn, relies on accurate data from forest managers which, in countries like Indonesia, would require contributions from concessionaires and other private sector stakeholders. If countries experience difficulties in collecting this information, as most will, they need to acknowledge this as part of their BTRs.

The new concepts and approaches emerging within the context of NDCs must be grounded in understandable language. Forest-dependent communities, with the assistance of Civil Society Organisations (CSOs), need to look at how REDD+ and adaptation policies and strategies have affected their rights, benefits and practices. They need to understand how to mitigate negative consequences, take advantage of opportunities, and seek appropriate financial and technical support to do so. Communities and CSOs need to be empowered to ask what REDD+ or adaptation policies mean for them and to invest in climate change capacity based on the answers to these questions. Unfortunately, few training packages or guidelines are currently developed this way.

**“ We must put people at the centre of the equation. Are we ready to understand local realities where these actions will be implemented? ”**

*Kalpna Giri  
Senior Program Officer  
RECOFTC*

**“ We should pay more attention to smallholders, improve their management practices and increase their income from forestry activities. ”**

*Xia Chaozong  
Division Director  
China Academy of Inventory and Planning*

Furthermore, capacity development must also take account of significant social transitions and changes in objectives of local communities. For example, the Asia-Pacific region has witnessed rapid urbanisation and a shortage of rural labour in many areas over the last few decades. Whether forests are viewed as a sink or a source of GHG emissions affects the way that other functions of forests are viewed. Some countries may choose to reduce access rights or reverse decentralisation policies as part of their approach to a forest conservation strategy aimed at enhancing the role of forest as carbon sinks. Safeguards and grievance-redress mechanisms are therefore essential tools for forest-dependent people. It is important for climate negotiators and government delegates to be aware of these concerns and processes, and thus find ways to match global aspirations on climate and forestry policies with the needs and realities in local communities.



# 10

## What are the challenges to raising domestic investments to achieve forestry goals in NDCs, and how can they be overcome?

***Channelling funds to the forestry sector would require significant changes in the way that we value our forests, distribute public finance, and work with private finance.***

In some countries in the region, forest agencies and ministries are required to demonstrate a return on investment in order to justify public finance. Cambodia's public finance law focuses on net annual revenues from timber or economic land concessions (ELCs) in the forestry sector. With the recent moratorium on ELCs along with the ban on timber exports in place, channelling public financing has proved difficult. To secure funding, the Forest Administration has increasingly used justifications such as the economic well-being of local communities.

In Indonesia, certain sub-sectors within the forestry sector bring in substantial revenue, so other sectors do not understand the need for external financial support for forestry. Consequently, programmes that require public funding, such as social forestry, often receive limited financial access and local people have to absorb a large proportion of these costs. Depending solely on these financial arguments for justifying public finance is not sustainable, considering the multifaceted nature of the NDC commitments.

There are some challenges for the forestry sector to access domestic public and private funds in the Asia-Pacific region. Firstly, government bureaucracies and financial regulations often hinder the channelling of domestic funds to the forestry sector, partly for the reason outlined above. Regulatory certainty is critical for the private sector to contribute to raising domestic investments, helping minimise exposure to risks and maximise the social capital raised through investments. Moreover, restrictions on investment policies in the forestry sector impede the development of innovative financing initiatives. Policies and legislation need to be transformed to leverage the growing investment opportunities in climate change and NDC implementation. Lastly, there are few mechanisms to demonstrate how returns from forestry investments can be effectively re-invested in the sector. To assure investors that their investments reach a wide range of stakeholders, new domestic and international mechanisms must be devised. Strong independent institutions and mobilising public-private partnerships can facilitate this process.

***Despite these challenges, successful cases of innovative financing exist, and can be scaled up.***

One successful example of channelling domestic investments is the PFES scheme in Viet Nam. PFES has generated USD \$150 million of domestic funds for protected area management every year since its inception, covering about six million hectares of forest. Public financial planning in Viet Nam goes through a five-year cycle and is quite inflexible within these cycles. As such, mechanisms like PFES are vital in order to address any gaps in short-term financing. Viet Nam is also looking to develop GCF projects and domestic carbon markets as a means of bringing additional resources into the forest sector, and of facilitating the allocation of governments' co-financing in forthcoming public finance cycles.

***“ We need to align business opportunities with our goals of increasing forest cover and improving local livelihoods.”***

*Thaung Naing Oo  
Director  
Myanmar Forest Research Institute*

# 11

## How can international public and private investments be effectively targeted towards forestry actions under NDCs? How can multilateral funds help?

*Responding to the changing priorities of multilateral and private funds, countries must render the forestry sector more attractive through setting clear and achievable targets, as well as introducing innovative financing mechanisms.*

Innovative financial approaches are key to channel investments into the forestry sector. Most countries in the region have been relying on traditional financial sources such as royalties, fines, or fees to generate public revenue from the sector. They may also explore carbon offsets, forest bonds, PFES, RBPs and other approaches. Moreover, it is becoming clearer that progress towards NDC implementation cannot rely solely on grants or loans, and public or private investment. Instead, climate change investment should build on the concept of blended finance, by linking explicitly private and public sources to generate transformative and sustainable changes. Combining grants and loans can bring different actors into the process of supporting NDC implementation, such as banks and domestic financial institutions.

Multilateral funds like the GCF can play a key role in supporting countries to develop unconventional financing mechanisms and build necessary capacities to implement them. The GCF can channel investment and technical support for country commitments that have the potential for scaling up and for catalysing innovative finance. To improve national capacities, GCF is in the process of creating sector guidelines, which explore how such approaches can be mobilised in each sector and help define the interventions that can deliver paradigm shifts across sectors. This will help GCF to define its role more distinctly. These initiatives are aimed at improving the effectiveness of REDD+ implementation and investment approaches, as well as to continue support for REDD+ readiness. However, the GCF alone cannot achieve this. Other multilateral and bilateral funds and support mechanisms should complement this effort.

One of the key conditions for international investment from public sources is to create a public good, including through the accumulation of knowledge and experience. REDD+ RBPs should also lead to strengthening national capacities and land tenure policies, while ensuring links between adaptation and mitigation actions. To make RBPs more effective, evidence-based national registries that monitor investments and their impacts can be devised. GCF's pilot programme for REDD+ RBPs therefore is an excellent opportunity to explore how countries can effectively re-invest the proceeds. This is a learning experience for all concerned, and forthcoming diverse examples of how RBPs can be channelled will generate further benefits for the forestry sector and other sectors.

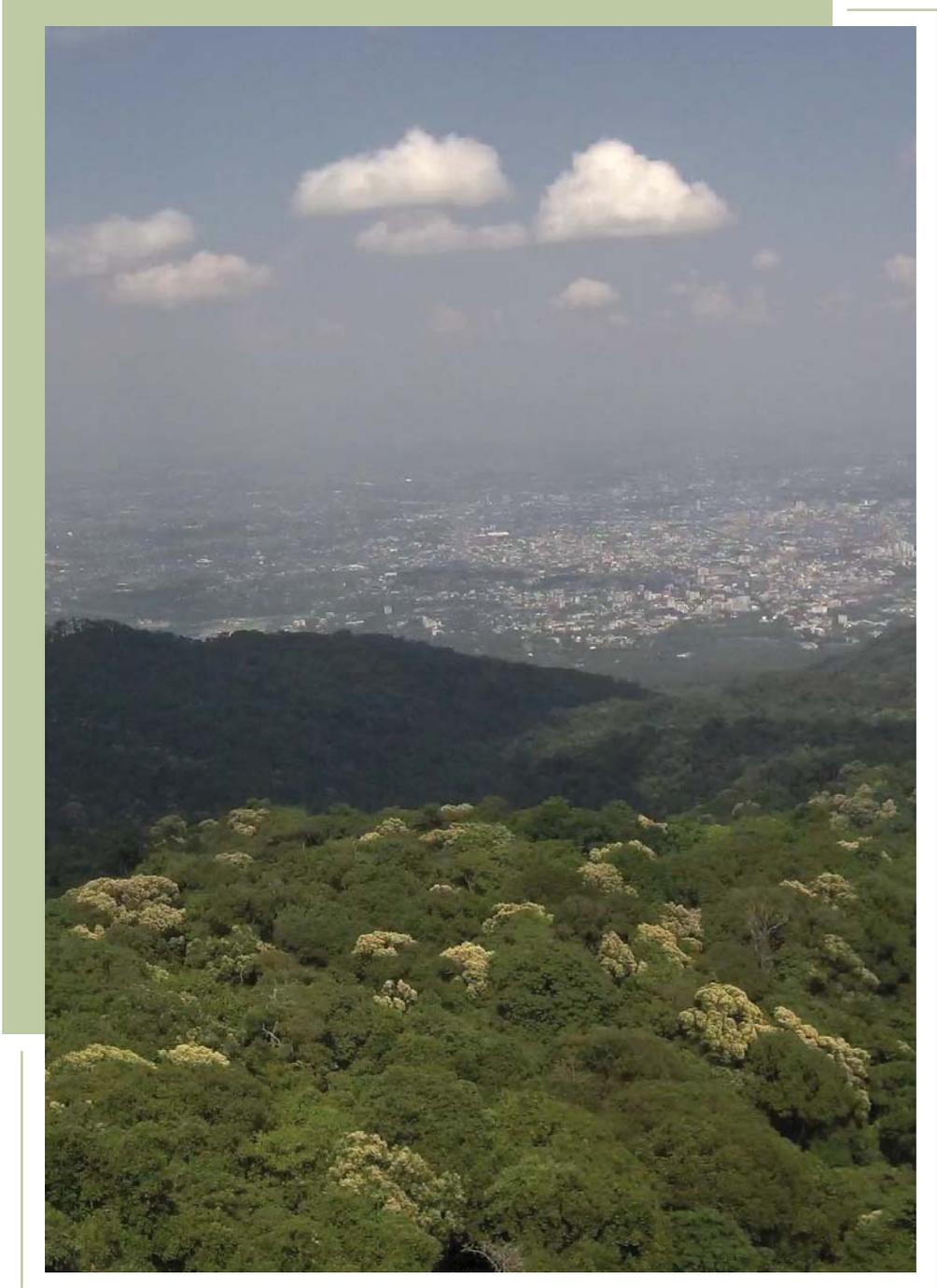
**“ Effective targeting of forest sector investments is dependent on complementarity and coherence in financing approaches.”**

*Marc Dumas-Johansen  
Senior Forest and Land Use Specialist  
GCF*

**“ We need to look at, and learn from, the full range of research results, both positive and negative.”**

*Vincent Gitz  
Director  
CGIAR Research Program on Forests,  
Trees and Agroforestry at CIFOR*

The experience of REDD+ RBPs will also allow countries to share the results and impacts of policies and measures, whether positive or negative. The need for documentation of ineffective or failed projects is becoming more widely appreciated. Most of this information, if it exists, is contained in informal or grey literature, and there is a need to encourage more explicit recording and sharing of such lessons. This is more challenging to do at the policy level, where national governments may not be obliged to admit mistakes, but informal exchanges among technical colleagues can start to open up such discussions.



# 12

## How can countries use climate finance and market mechanisms for forestry and land use to implement their NDCs?

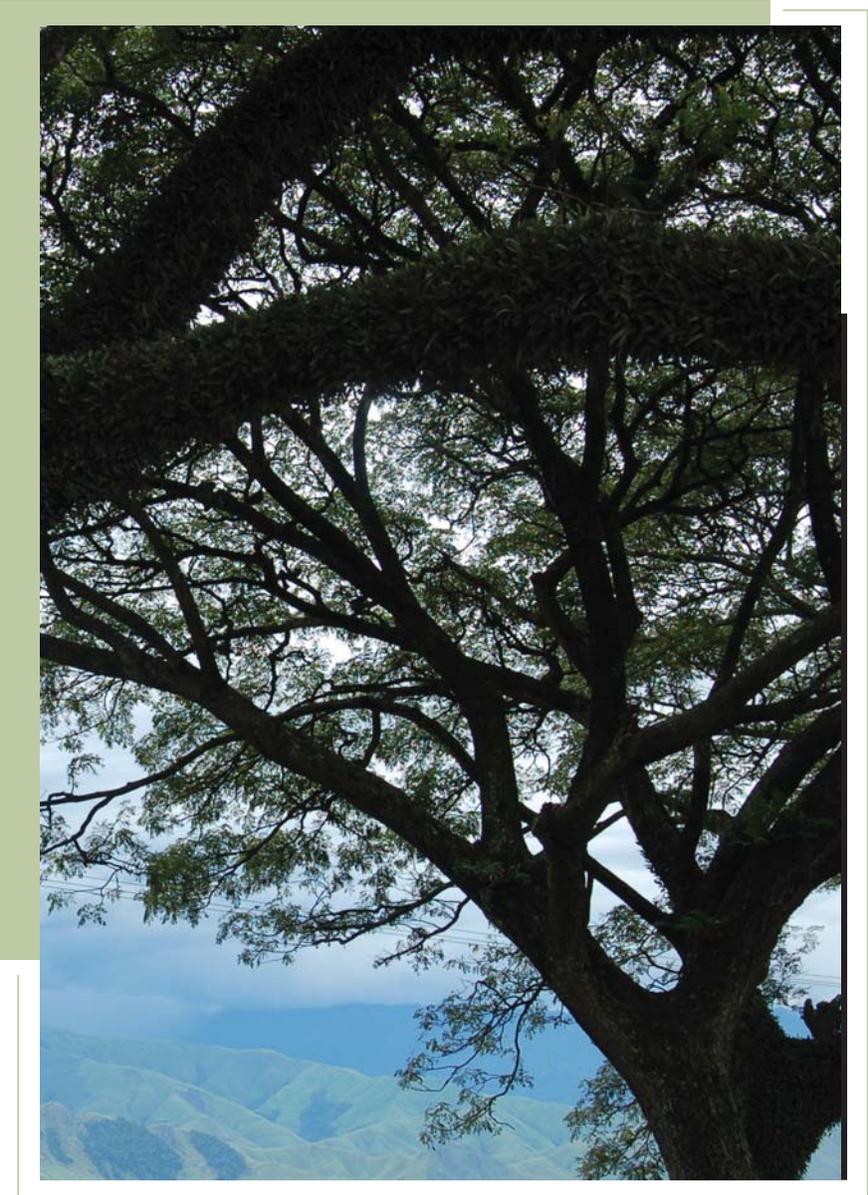
Compliance and voluntary carbon markets can play key roles in meeting funding gaps in NDC implementation. Despite this potential, they may not feature significantly in the NDCs unless there is an international agreement on clear operational rules for these markets and the implications for reporting under the Paris Agreement. With regard to compliance markets, countries are currently negotiating the implementation of Article 6 of the Paris Agreement by developing rules to deal with Internationally Transferred Mitigation Outcomes (ITMOs), the core of a new market-based mechanism. The negotiations on Article 6 will be particularly important for the forestry sector to meet NDC targets.

There is strong pressure from some countries to keep REDD+ completely separate from international compliance markets, and this has slowed the Article 6 negotiations. This may make the use of REDD+ credits more difficult to use in international compliance markets towards the achievement of NDC targets. However, for several countries in the Asia-Pacific region, there is a clear incentive to incorporate emission reductions and removals from the forestry sector into mechanisms for ITMOs. For example, the Republic of Korea has included a commitment in the 2018 revision of the greenhouse gas management roadmap for GHG removals and emission reductions. Out of the country's 38 million-ton emission reduction goal, about 22 million tons can potentially be met through removals from sustainable forest management domestically, but the remaining 16 million tons are expected to be achieved through international offsets.

While these negotiations are underway, several countries in the region have made progress with national systems for carbon offsets. The example of the Emissions Trading Systems (ETS) in Australia and New Zealand have now been followed by the Republic of Korea and China, with Viet Nam now in the process of designing a national system. Korea launched its ETS in 2015 and became the second largest carbon market in the world after the EU ETS, contributing substantially to the national greenhouse gas emissions reduction targets, with the voluntary market playing a more limited role. China plans to implement a national ETS after launching seven pilot carbon-trading programs over the past few years. Under Chinese pilots, villages were encouraged to use afforestation projects for emissions offsetting. The role of forests in compliance markets and the development of more national systems are expected to increase, as the results of negotiations on Article 6, and the rules on ITMOs, become clear.

On the other hand, the recent decline in prominence of the Voluntary Carbon Market (VCM) indicates that such markets do not work without clear decisions and certainty. The decisions on the design elements of the international compliance market under Article 6 may affect VCM mechanisms. Transactions under the VCM have been depressed by uncertainties over the transition from the Clean Development Mechanism (CDM) to a new system under the Paris Agreement. VCM projects in the forestry sector that are currently implemented do not have explicit references to NDC targets. It is expected that investors will increasingly seek to ensure clear links between their contributions and NDCs, so VCM projects may be further pressured.

A remaining challenge is nesting of small-scale or sub-national projects and initiatives within a national accounting system for meeting NDC targets. Though results will be assessed at the national level, many countries, including Cambodia and Indonesia, already have forestry VCM projects within their territories. Such projects have enabled countries to take practical, measurable steps towards external investment in forest-based emission reductions, while the international compliance market is yet to be formalised. Cooperation between countries in the region continues, for example with the Republic of Korea exploring opportunities to meet its NDC targets through small-scale projects in in Cambodia, Myanmar and Lao PDR. For developing countries, this poses two key problems. First, there is the technical matter of resolving national-scale MRV with the more intensive, detailed accounting required for voluntary, small-scale projects. Second, there is the challenge of incorporating these initiatives into the national accounting system, in order to avoid double counting of emission reductions. To make this happen, investor confidence in transparency and the rule of law should be improved and implementing countries must obtain the capacity to resolve these issues.



# ABBREVIATIONS:

AFoCO:	Asian Forest Cooperation Organization	M&E:	Monitoring and Evaluation
BAU:	Business as Usual	MPGs:	Modalities, Procedures and Guidelines
BTR:	Biennial Transparency Report	MRV:	Measurement, Reporting and Verification
BUR:	Biennial Update Report	NAPs:	National Adaptation Plans
CBIT:	Capacity Building Initiative for Transparency	NC:	National Communication
CDM:	Clean Development Mechanism	NDCs:	Nationally Determined Contributions
CIFOR:	Center for International Forestry Research	NIR:	National Greenhouse Gas Inventory Report
COP:	Conference of Parties	PFES:	Payment for Forest Ecosystem Services
CSO:	Civil Society Organisation	RBPs:	Results-Based Payments
ELC:	Economic Land Concession	RECOFTC:	The Center for People and Forests
ETF:	Enhanced Transparency Framework	REDD+:	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
ETS:	Emissions Trading System	RIL:	Reduced Impact Logging
FAO:	Food and Agriculture Organization of the United Nations	SDGs:	Sustainable Development Goals
FLEGT:	Forest Law Enforcement, Governance and Trade	SFM:	Sustainable Forest Management
FREL/FRL:	Forest Reference Emission Level and/or Forest Reference Level	SIDS:	Small Island Developing States
GCF:	Green Climate Fund	TER:	Technical Expert Review
GEF:	Global Environment Facility	UNFCCC:	United Nations Framework Convention on Climate Change
GHG:	Greenhouse Gas	UNFF:	UN Forum on Forests
IAR:	International Assessment and Review	UN-REDD:	UN Collaborative Programme on REDD+
ICA:	International Consultation and Analysis	VCM:	Voluntary Carbon Market
INDC:	Intended Nationally Determined Contributions		
IPCC:	Intergovernmental Panel on Climate Change		
ITMOs:	Internationally Transferred Mitigation Outcomes		
LDCs:	Least Developed Countries		
LULUCF:	Land Use, Land Use Change and Forestry		



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