



Nesting: Reconciling REDD+ at Multiple Scales

An Asia-Pacific Perspective

May 2019

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1. INTRODUCTION

Forests can play a major role in meeting the goals of the Paris Climate Agreement. The land sector as a whole can contribute over 30 per cent¹ of the **mitigation** needed to achieve global climate targets, particularly through activities that reduce emissions from deforestation and forest degradation, promote sustainable management of forests, and conserve or enhance forest carbon stocks (**REDD+**).

However, achieving large-scale emissions reductions in the forest sector is **challenging**. Unlike, for example, a power plant emitting greenhouse gases (GHGs) from fossil fuels, **emissions from forests are spread across the landscape** and driven by **multiple actors**.

Actions contributing to REDD+ objectives can be implemented at different scales. Programmes or initiatives that are implemented across a whole country, or across an entire subnational jurisdiction (such as a state or province), have the potential to be **transformational** – by reforming broad governance, landscape management and government policies – but are also dependent on resources to engage local actors. **Local actions** through REDD+ projects **can be highly successful** and move faster than national-level developments, but they usually cover a smaller area and may be hampered by the lack of a policy framework. Both jurisdictional and project approaches have the ability to **access and integrate a range of financial streams** – which often differ – and should therefore be considered when structuring a REDD+ project or programme.

National REDD+ programmes and local REDD+ project-related efforts could thus be **mutually beneficial**. However, since they tend to follow different guidelines or requirements, particularly regarding how “results” are measured, it is necessary to use coordinated approaches and to **reconcile** measurement systems.

Countries in the **Asia-Pacific** region and beyond are preparing to report on the **results of implementing their REDD+ strategies**, and some are seeking **results-based payments** at the subnational or national level. In doing so, they need to take stock of relevant initiatives to avoid what is referred to as “double payment”, whereby emissions reductions are paid for twice. If countries are selling emissions reductions internationally, they may need to consider how they will avoid “double counting” under the Paris Agreement² and how such sales fit into their vision for achieving their nationally determined contribution (NDC), which is their **commitment to the global climate change agenda**.

This policy brief examines the **key issues** that countries face in making sure **REDD+ efforts at various scales** contribute to the same goal – supporting sustainable development, while reducing overall emissions (or increasing removals) from forests to mitigate climate change. As nesting is still a **nascent concept**, lessons from its early experiences are not yet widespread. The objective of this paper is to share some real-world examples from the Asia-Pacific region to inspire other countries developing their REDD+ efforts to best reconcile local actions across the landscape that can contribute to national mitigation.

2. KEY QUESTIONS

Q1 – What is REDD+ nesting and why does it matter?

There are as many drivers of deforestation and forest degradation that lead to forest emissions as there are ways to mitigate them. In a given area, various actors – from local communities to private companies – may all be engaged in actions that reduce emissions, from sustainable agricultural intensification to reforestation and forest restoration plans. At the same time, the national government may implement land-tenure reform. All these actions contribute to reducing emissions resulting from deforestation and forest degradation.

This is why achieving **large-scale mitigation in the land sector requires collective action at different levels**. In practice, this means that governments engaged in REDD+ must not only enact policy reforms, but also find ways to incentivize local actions, so that they can contribute to national mitigation goals.

“Nesting” looks at how governments can incentivize local, smaller-scale activities and integrate them with larger national (or subnational) programmes to achieve their NDC and support low-carbon development.

REDD+ nesting can be especially critical where responsibility for, and the impacts of, land management are decentralized. Nesting is also needed when countries apply for results-based finance at both the national and subnational levels, or if there are active REDD+ projects within the country’s borders.

Before governments started to get involved in REDD+ implementation, various forest carbon projects had already been established to generate and sell emissions reductions on the voluntary carbon market, mostly to companies that wished to offset their carbon footprint. However, since the adoption of the Paris Agreement, countries now need to be particularly aware of and adequately address how

1 This estimate is constrained by cost (< US\$ 100/ton) in a 2 degree centigrade scenario up to 2030, meaning it assumes some level of fossil fuel reduction. Reference: Bronson W. Griscom et al., “Natural climate solutions,” *PNAS* (2017). www.pnas.org/cgi/doi/10.1073/pnas.1710465114

2 The Paris Agreement states under Article 6 that Parties shall avoid double counting, consistent with guidance adopted by the COP.

carbon sales affect their overall country-level mitigation. This provides the perfect opportunity for reflecting on the relevance of nesting and future development pathways.

“Local projects were established before the country developed its forest reference level and monitoring strategy. This means we must work with the private sector actors and non-governmental organizations that lead those projects, so they can contribute to – and benefit from – national REDD+ efforts.” **Chivin Leng, Forest Reference Level/ Measurement, Reporting and Verification Coordinator, Cambodia**

“For us, nesting is a way of bringing together all key stakeholders to implement REDD+, by recognizing their efforts to mitigate emissions from forests.” **Mohan Prasad Poudel, Undersecretary of REDD+ Implementation Centre, Ministry of Forests and Environment, Nepal**

“We are participating in the Forest Carbon Partnership Facility (FCPF) Carbon Fund, but we also want to access results-based payments from the Green Climate Fund. We have recognized that it is important to integrate subnational and national reference level actions.” **Thủy Nguyễn Thu, Deputy Director of the National Steering Committee Office for the Target Programme on Sustainable Forest Development and REDD+ Implementation, Viet Nam**

Box 1. Country participation in REDD+ in the Asia-Pacific region and globally

Countries intending to participate in payment schemes for REDD+ need to ensure that the same results are not counted and paid for more than once at the project, subnational and national level.

By June 2018, 11 countries in the Asia-Pacific region had submitted a **forest reference (emission) level** (FREL/FRL) to the United Nations Framework Convention on Climate Change (UNFCCC) (Figure 1), constituting roughly one third of the 34 countries to do so worldwide. Reference levels are a benchmark for assessing a country’s performance in REDD+ implementation and are one of the prerequisites to access result-based payments from the **Green Climate Fund**.

In parallel, several countries are also participating in **results-based payment** pilots for REDD+ at the subnational level. In the Asia-Pacific region, five governments have submitted Emission reduction programmes to the FCPF Carbon Fund as of June 2018, while Indonesia has also submitted a programme to the BioCarbon Fund Initiative for Sustainable Forest Landscapes.

Other elements that countries in the region are working on include **safeguards** – a set of social and environmental principles that need to be respected when implementing the National REDD+ Strategy and also documented alongside results. Malaysia, for example, submitted its summary of information on safeguards to the UNFCCC in 2017, and Hindu Kush Himalayan countries such as Bhutan, India, Myanmar and Nepal have begun developing theirs.

Implications of the Paris Agreement

The landmark global climate deal known as the Paris Agreement, reached in 2015, requests each country to outline its post-2020 efforts to reduce national emissions: a set of climate actions known as NDCs. By June 2018, nearly all countries pursuing REDD+ had submitted NDCs that include forest-sector actions (FAO, 2018).

The fact that the Paris Agreement requires all countries to contribute to global mitigation changes the outlook for developing countries and also changes their **ability to sell emissions reductions internationally for offsetting**. Countries contemplating participation in international transfers of emissions reductions will have to consider how their NDC targets can be met.

As explained in Q3, countries may use “extra” emissions reductions (i.e. those beyond reductions used to meet an unconditional NDC target) — or the finance obtained from selling them — to incentivize local actions that contribute to national mitigation goals.

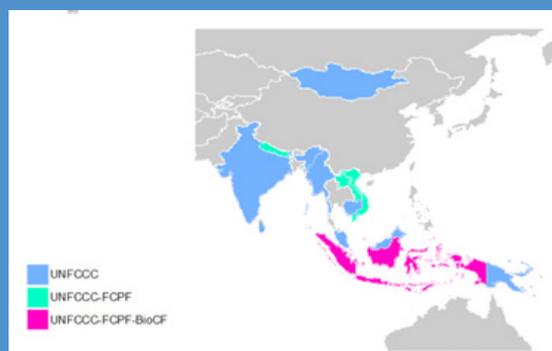


Figure 1. Emission reduction programmes in the Asia-Pacific region that have submitted reference levels to the UNFCCC, the Carbon Fund, and/or the BioCarbon Fund Initiative for Sustainable Forest Landscapes (BioCF) - (Source: FAO, 2018)

Q2 – What are the benefits of REDD+ nesting?

Reconciling REDD+ activities at the project, subnational and national level requires a concerted effort, but this may come with even greater benefits. If well-designed, a nested system can contribute to national mitigation targets in various — and critical — ways.

Nesting of local-scale activities can attract private investment for REDD+ projects, provide lessons that can be replicated on a larger scale, and combine the impact of multiple mitigation activities being implemented by different stakeholders across the landscape, which is of particular importance where the government lacks resources to roll out REDD+ at scale.

Nesting allows countries to involve diverse actors, from local governments and indigenous peoples to agri-businesses, in achieving their national mitigation objectives. Private sector actors, for example, can simultaneously act as

project funders and implementers, helping to extend the reach of REDD+ activities, while companies operating agricultural supply chains can be incentivized to shift towards deforestation-free practices. Local-scale activities can also gather data on methods of addressing drivers of deforestation and forest degradation and can test approaches to providing alternative livelihoods, building materials and energy sources to local communities.

“Nesting connects REDD+ activities and actors on the ground with those at the national level, ensures equitable benefit-sharing from emissions reductions, and enhances the effectiveness and sustainability of national mitigation efforts.” **Mohan Prasad Poudel, Undersecretary of REDD+ Implementation Centre, Ministry of Forests and Environment, Nepal**

“Nesting can be a way of ensuring consistency between projects participating in voluntary carbon markets, NDC, FRL, and national REDD+ efforts.” **Chivin Leng, Forest Reference Level/Measurement, Reporting and Verification Coordinator, Cambodia**

“It is of utmost importance to incentivize forest stewards and the actors that make land-use decisions on the ground. REDD+ efforts will not be successful without the commitment of local stakeholders.” **Khamsene Ounekham, Director of REDD+ Office, Department of Forestry, Ministry of Agriculture and Forestry, Lao PDR**

Box 2. Reasons for nesting – Lao People's Democratic Republic

Lao People's Democratic Republic (Lao PDR) is one of the countries planning to start REDD+ implementation at the subnational, rather than national, level. This is one of the reasons to consider nesting – to make sure smaller-scale activities will fit into the national system over time.

Following its acceptance into the FCPF Carbon Fund in June 2018, Lao PDR aims to roll out a REDD+ programme covering one third of its national territory. According to Khamsene Ounekham, Director of the REDD+ Office, Department of Forestry, Ministry of Agriculture and Forestry of Lao PDR, “The mitigation programme is being developed in parallel with the National REDD+ Strategy, so they are both aligned.”

A second reason for Lao PDR to embrace nesting is decentralization, since provincial, district-level and even local governments hold significant authority over land management. Ounekham believes that: “To effectively reduce emissions from forests, we must provide adequate incentives to the actors making land-use decisions at various levels.”

Regarding other motivations for the country to integrate small-scale REDD+ activities into larger-scale programmes, Ounekham mentions the possibility of reducing the cost of mitigation efforts, generating finance for mitigation activities and tracking the impact of policies on domestic emissions reductions.

Q3 – How can countries approach the design of a nested system?

The design of a nested system depends on a number of factors: a country's regulations and land-tenure system (which determines who owns and manages land and at what scale), its fiscal structure (which may either incentivize or dissuade local REDD+ activities) and the government's capacity to finance and implement REDD+ programmes across its territory. While there is **no one-size-fits-all model of REDD+ nesting**, a 2018 World Bank report ([Approaches to REDD+ Nesting: Lessons Learned from Country Experiences](#)) suggests **four basic decisions** to consider in its design (See Box 3).

The World Bank report shares early lessons from countries pioneering nested approaches including Australia, Brazil, Democratic Republic of Congo, Guatemala, Guyana and Zambia. It explores four high-level “typologies” that countries may consider when developing a nested system and summarizes three key technical challenges that countries face when implementing REDD+ nesting: alignment of measurement systems, reference levels and double counting.

Box 3. Four basic decisions to consider (taken from the 2018 World Bank report on REDD+ Nesting)

According to this World Bank report, the four fundamental decisions for countries to consider when designing a nested approach are as follows:

1. Decide whether it is more effective to provide local actors with **up-front funding (ex ante finance)**, so they are encouraged to generate future reductions, or with **rewards for past results (ex post rewards)** — that is, for the emissions reductions they have already generated.
2. If a country chooses to reward local actors for past results (*ex post rewards*), it needs to also decide whether it should **allocate finance** or some of its **excess emission reduction units**. A country can either allocate these extra units to local actors responsible for emissions reductions, or it can sell them and share the financial benefits with stakeholders.
3. A country then needs to decide **how benefits should be allocated** among those responsible for emissions reductions, since efforts to mitigate climate change often involve both national policy implementation and local-scale activities. The difficulty lies in determining **how much of the emissions reductions are due to local activities** (for example, changes in fuelwood use), **compared to policy changes** such as the clarification of land rights and improved enforcement of laws. Despite this challenge, governments and actors on the ground can negotiate how best to share benefits from emissions reductions.
4. In some cases, **projects may be allowed to generate emissions reductions separately**, instead of as part of a top-down allocation system. If a country allows projects to **sell emissions reductions internationally**, it may have to subtract them from its NDC accounting, depending on the conditions under which the emissions reductions are sold.

Alternatively, projects can be **integrated into a national system** financed by the government, for example, through budget allocation, domestic trading or a carbon tax. In this case, the emissions reductions generated by projects can contribute to the country's mitigation commitments.

Countries designing a nested system need to reflect on where and how they expect mitigation to occur: *Who are the actors implementing REDD+ on the ground? What efforts are they making to reduce emissions? How can they best be rewarded?* Whatever the model, countries need to build systems that involve all key stakeholders and ensure their buy-in before moving into implementation.

“We are exploring how projects can partake in benefit-sharing. As a first step, we are requesting that they assess whether the activity data and emission factors they used to build their FRL are consistent with those used at the national level.” **Chivin Leng, Forest Reference Level/ Measurement, Reporting and Verification Coordinator, Cambodia**

“Indonesia has a National REDD+ Strategy, which will be implemented by the provinces, and will also submit forest reference levels (for some provinces) to the FCPF Carbon Fund and the BioCarbon Fund Initiative for Sustainable Forest Landscapes. In this context, we are discussing how to avoid double counting of emissions reductions and how to align REDD+ efforts at different scales.” **Budiharto, Deputy Director of Inventory of Land-based Greenhouse Gases, Ministry of Environment and Forestry, Indonesia**

Q4 – What are the challenges of nesting?

Countries building a nested system may face common challenges, some of them specific to nesting, and others more broadly related to REDD+ implementation. Firstly, integrating efforts to mitigate climate change involves **political decisions on benefit-sharing**.

Secondly, nesting may pose **technical challenges**, such as the potential for **measurement mismatch**. Countries may encounter difficulties when data used to develop reference levels and measure results are different at the national, subnational and project scales – which is often the case.

Smaller-scale initiatives tend to use more refined data – although they may also use remote sensing – while national programmes often rely on coarser data. Activities, carbon pools and gases may also differ between the project and the national level (Pearson et al, 2016).

It is important to note that methodologies used to establish benchmarks for REDD+ performance may also vary, as initiatives at the national level often use historical averages to calculate their forest reference levels, while projects tend to use business-as-usual projections to construct their baselines.

Addressing measurement mismatches should also be considered. Double counting is a risk that emerges when projects and larger-scale programmes are accounting simultaneously.

“Assessing deforestation is straightforward, but assessing degradation is more challenging. Remote sensing, for example, might show a closed canopy cover, but not badly damaged undergrowth.” **Mohan Prasad Poudel, Undersecretary of REDD+ Implementation Centre, Ministry of Forests and Environment, Nepal**

“One challenge is striking a balance between incentivizing carbon projects and achieving the country’s NDC.” **Chivin Leng, Forest Reference Level/Measurement, Reporting and Verification Coordinator, Cambodia**

“Most of the drivers of deforestation and forest degradation are outside the forest sector, notably agricultural expansion and infrastructure development. Hence, a challenge of mitigating emissions from forests is ensuring coordination between the different sectors.” **Khamsene Ounekham, Director of REDD+ Office, Department of Forestry, Ministry of Agriculture and Forestry, Lao PDR**

Box 4. Addressing technical challenges – Nepal case study

Nepal has submitted forest reference levels to the UNFCCC and the FCPF Carbon Fund, which is piloting results-based payments for REDD+ activities at the subnational level.

The Himalayan country is now facing a particular challenge: the technical assessment teams of both the UNFCCC and the FCPF Carbon Fund have noted that the reference levels that Nepal has submitted are not consistent in terms of their data sources and the methods used to assess degradation. In response, Nepal plans to use additional data and information to revise the national forest reference level and ensure consistency.

Further technical issues may arise if the country hosts local REDD+ projects in the future. Mohan Poudel, Undersecretary of REDD+ Implementation Centre at the Ministry of Forests and Environment in Nepal, considers that “projects should be consistent with the national forest reference level and with NDCs. This consistency is important to ensure coherent reporting [of emissions reductions], reduce the complexity of measurement, reporting and verification efforts, and bring down its costs.”

Box 5. Integrating projects into the National REDD+ Strategy – Cambodia case study

Cambodia has submitted a forest reference level to the UNFCCC and is considering the possibility of applying for results-based payments schemes. In the meantime, it is also hosting three REDD+ projects at various stages of implementation. “As a country, we are not at a standstill until the Government receives finance from schemes such as the Green Climate Fund,” says Chivin Leng, Forest Reference Level/Measurement, Reporting and Verification Coordinator in Cambodia. “We are engaging bilateral mechanisms and carbon markets, instead.”

Leng is referring to the Southern Cardamom Mountains project with the conservationist group Wildlife Alliance, spanning nearly 500,000 ha; the Keo Seima Protection Forest initiative with the Wildlife Conservation Society, spanning 292,690 ha, which sold its first emissions reductions to the Walt Disney Company in 2016; and the Prey Lang Forest project with the United States-based non-profit organization Conservation International Foundation and the Japanese general trading company Mitsui & Co., Ltd.

The projects had established their baselines before the country submitted its forest reference level to the UNFCCC, and Cambodia is currently exploring how best to align REDD+ baselines and measurement, reporting and verification systems at various levels to ensure emissions reductions are not double counted. To this end, the Government is sharing national data with smaller-scale initiatives to identify any data mismatches.

It is worth noting that Mitsui has publicly announced its plans to register the Prey Lang Forest project with the Joint Crediting Mechanism (JCM), a scheme promoted by the Japanese Government to mitigate climate change.

Cambodia is one of 17 countries to have signed the JCM partnership agreement with the Japanese authorities, meaning it can benefit from technologies and services for low-carbon development and distribute the generated emissions reductions among project members.

Box 6. Reconciling mitigation efforts at the subnational and national level – Indonesia case study

In Indonesia, authority on forest management and responsibility for REDD+ implementation lie at the province level, so the country is working to ensure that efforts at the subnational level contribute to national mitigation goals and to the country's eligibility for results-based payments. This is a form of nesting.

Establishing reference levels is one of the key issues that Indonesia is addressing as part of the process. "Some provinces have previously developed reference levels using their own methodologies, so our technical experts enter into talks with subnational counterparts to understand the approach they used and why," explains Wawan Gunawan, Head of Measurement, Reporting and Verification at the Ministry of Environment and Forestry in Indonesia. "Provinces can keep their own reference level, as long as it is well-justified from a technical perspective."

In other instances, actors at both levels will compromise on a reference level that is neither as high as the one initially calculated by the province nor as low as the one estimated by the Government. "To obtain a win-win solution, we take into account historical emissions, but also current carbon stocks in the area," explains Gunawan, highlighting the importance of communication between stakeholders at different levels.

He continues: "Provinces may have different perceptions of the need to align mitigation efforts at multiple scales. Sometimes, for example, they want to grant land concessions to foster economic development, so we must help them understand that they should support national mitigation efforts instead."

Budiharto, the Deputy Director of the Inventory of Land-based Greenhouse Gases at the same ministry, takes a broader view of the issue of land management. For Budiharto, REDD+ is an opportunity to bring together the various sectors that directly or indirectly impact forests. "After all, many drivers of deforestation and forest degradation are outside the forest sector, including infrastructure development, agriculture and poverty."

3. CONCLUSION: REDD+ NESTING AS AN OPPORTUNITY

Ensuring that REDD+ efforts at a lower scale contribute to national mitigation objectives requires a concerted effort, from both a policy and a technical perspective. In many countries, nesting is instrumental to REDD+ implementation.

Beyond its benefits in terms of emissions reductions, REDD+ presents countries with the chance to leverage legal, political and financial opportunities in the land-use sector at an unprecedented scale, and to address broader land-use issues in their territories.

Countries across the Asia-Pacific region are starting to harness these opportunities by thinking strategically about how to get REDD+ implementation off the ground at scale and by understanding how performance at the smaller scale fits into the national system.

There is no one-size-fits-all formula to design and implement REDD+ nesting, because it depends on the national circumstances of each particular country. Ultimately, it is about engaging multiple actors at all levels and across diverse sectors to build more resilient landscapes and livelihoods.

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This Asia-Pacific regional knowledge product was the result of a UN-REDD Programme South-South exchange held in Dehradun, India, in fall 2018.

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