Establishment of a Reference Level (FRL) for forest land and development of a System for Monitoring, Reporting and Verifying (MRV) carbon emission reductions from forests in FIJI

(04.2017 – 12.2018)

Guidance document on the nesting of sub-national REDD+ MRV and FRL within national REDD+ MRV and FRL

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Drawa Landscape (October, 2017) (Photo: Prem Neupane)

Emalu Landscape, March 2017 (Photo: Prem Neupane)

Acronyms

AD	Activity Data
AFOLU	Agriculture, Forestry and Other Land Use
CFMF	Carbon Fund Methodological Framework
CO_2	Carbon Dioxide
COP	Conference of the Parties to the UNFCCC
DBLCCL	Drawa Block Forest Communities Cooperative Limited
EF	Emission Factor
ER Program	'Reducing Emissions and Enhancing Livelihoods in Fiji' Program
ERPD	Emission Reduction Program Document
ER-PIN	Emission Reductions Program Idea Note
ERs	Emissions and Removals
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FREL	Forest Reference Emission Level
FRL	Forest Reference Level
GHG	Greenhouse Gas
Ha	Hectare
IPCC	Intergovernmental Panel on Climate Change
MoF	Ministry of Forests, Fiji
MRV	Measurement, Reporting and Verification
NDC	Nationally Determined Contribution
NFMS	National Forest Monitoring System
REDD+	Reducing Emissions from Deforestation and Forest Degradation, and the Role of Conservation of Forest Carbon Stocks, Sustainable Management of Forests and Enhancement of Carbon Stocks
SESA	Strategic Environmental and Social Assessment
SWOT	Strengths, Weaknesses, Opportunities and Threats
TLTB	iTaukei Land Trust Board
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VER	Verified Emissions Reduction

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1 Background

Subnational REDD+ refers to larger ecosystems or biomes—within any administrative or jurisdictional unit of a nation—where REDD+ programs are implemented. Subnational REDD+ programs and project-level REDD+ activities are being conducted in many developing countries (Maraseni et al., 2014). These activities/programs play an important role as: (1) about 50–80% of mitigation actions will depend on decisions made at subnational and local levels; (2) the bulk of REDD+ demonstration activities/projects are implemented at local levels; and (3) ultimately, each country needs a national measurement, reporting and verification (MRV) system and forest reference levels (FRLs) (Forest Trends and Climate Focus, 2013). Subnational policies, programs, projects, initiatives and practices can inform these national systems (Forest Trends and Climate Focus, 2013).

As of May 2018, the ID-RECCO database contains 467 REDD+ projects and programs located in 57 countries (Simonet et al., 2018). Out of which, 359 have been identified as active, 67 were completed before 2018 and 41 have not been implemented yet or have not been continued (ibid.). These projects and programs are helpful in developing REDD+ strategies, building the capacity of REDD+ stakeholders and meeting requirements of donors for REDD+ initiative funding (Maraseni et al., 2014; Gibbon et al., 2014).

Reference Levels are an essential component of an international REDD+ incentive framework under the United Nations Framework Convention on Climate Change (UNFCCC) and to participate in the World Bank's Forest Carbon Partnership Facility (FCPF) Carbon Fund. The UNFCCC defined FRL as a benchmark for assessing REDD+ countries' performance in implementing REDD+ activities. According to the Cancun Agreements, developing country Parties aiming to undertake REDD+ activities need to develop forest reference emission levels (FRELs) and/or FRLs (Decision CP.16/1/Add. 1/par. 71). As an interim measure, subnational FRELs and/or FRLs can be developed. As of April 2018, 34 countries had submitted 38 FRELs/FRLs to the UNFCCC for technical assessment, of those, about 18% have submitted subnational FRLs (FAO, 2018). While developing subnational FRLs, countries have followed administrative boundaries or covered certain biomes that have the highest forest cover or highest emission levels. In the end, the UNFCCC requires that these subnational FRLs eventually transition to the national level. However, there is no such a statement mentioned in the UNFCCC decisions yet.

For example, Brazil has developed a subnational FRL for the Amazonia biome with the aim of transitioning to a national FRL by 2020 (Government of Brazil, 2017). Fiji developed a subnational (quasi national) FRL, including its three largest islands—Viti Levu, Vanua Levu and Taveuni—and covering about 90% of Fiji's land-mass and 94% of Fiji's forest area as mapped in 2007. In the end, this will also transit to the national level.

A country could have many REDD+ projects and/or subnational REDD+ programs and these may have separate carbon accounting methods and forest monitoring systems. These subnational and project level activities might be integrated into a national REDD+ approach so that the forest monitoring system does not generate different data using different methods. The process of

integrating and harmonising projects and subnational efforts into a national system is termed "nesting" (Pedroni et al., 2009). This traditional view of nesting focusses on integrating legacy projects. Lee et al., (2018) suggests a broader view of nesting that it looks how actions at smaller scales can best be catalysed to contribute to a larger-scale jurisdictional (national or subnational) performance. Nesting can add complexity in carbon accounting, risk-sharing and institutional arrangements but the advantages outweigh the issue of increased complexity as it: (1) enhances consistency in emissions reduction measurements between different jurisdictions; (2) avoids double counting of emission reductions; (3) promotes environmental integrity by avoiding the risk of domestic "leakage"; (4) promotes fair and equitable distribution of result-based payments; and (5) engages national and sub-national government actors (ACR, 2012;To et al., 2012;Gibbon et al., 2014).

In line with Article 4 of the Paris Agreement (Decisions 1/CP.19 and 1/CP.20), Fiji submitted its Nationally Determined Contribution (NDC) of 30% emissions reduction from 2020 levels by 2030. Of this: (1) 10% reduction is unconditional and will be achieved through implementation of the Green Growth Framework; and (2) 20% reduction is conditional and can only be met with the availability of external funding amounting to US$500 million (Government of Fiji, 2015). The majority of the unconditional target will be met by the development of renewable energy resources, increasing its share in electricity generation to 100% by 2030 from around a 60% share in 2013 (Government of Fiji, 2015). Whilst Fiji's NDC is specific to the energy sector, it is planning to include forest mitigation activities through a REDD+ programme in its revised NDC, but a final decision is yet to be made.

Currently, Fiji has two REDD+ pilot projects (Emalu and Vunivia) and some other REDD+ activities within two other programs: (1) Nakauvadra Community Based Reforestation Project, Ra- supported by FIJI Water Company LLC; and (2) Drawa/Nakau Forest Project, Drawa, Macuata- the Plan Vivo Project (Department of Forestry, 2015; Lalabalavu et al., 2015). The following sub-sections provide some background information about the three REDD+ related projects in Fiji: (1) Emalu REDD+ Pilot, Navosa—the Fiji Government's National REDD+ Pilot Site; (2) Drawa/Nakau Forest Project, and (3) Vunivia REDD+ Pilot Project.

1.1 Emalu REDD+ Pilot, Navosa—the Fiji Government's National REDD+ Pilot Site

Emalu forest is the REDD+ pilot site of the Fiji Government and was selected for the National REDD+ programme in 2012. It is located in the South West of Viti Levu, the largest island in Fiji. It has a land area of 7,347 ha, predominantly covered by pristine forest. The Mataqali Emalu, the second largest Mataqali in Fiji, is the traditional landowner of the Emalu Forest, with >30 registered members, mainly females. Emalu forest is renowned for its biodiversity; it has three types of forests (low land, upland and cloud) and is among the few remaining primary forests in Fiji. It has never been logged but, when the landowners decided to log this forest in 2011, the government became proactive and organised a series of meetings and workshops for the landowners and some other stakeholders. As a result, the June 2012 workshop at the Nadroga/Navosa Provincial Council office in Sigatoka unanimously agreed to establish Emalu land as a REDD+ pilot site (National REDD+ Unit, 2015).

In order to estimate the carbon stock of this forest, a field inventory was conducted by the Fiji Forestry Department and local communities were trained and included as field assistants. Only the

aboveground carbon pools (leaf litter, dead wood and woody biomass) were considered. Major threats to this forest include agricultural clearing for yaqona by non-Mataqali Emalu landowners (living in nearby areas), fires, free roaming livestock and invasive species (National REDD+ Unit, 2015). In order to address agricultural clearing and livelihood management issues, the Emalu REDD+ pilot area also covers about 3,000 ha of grassland in the surrounding area. In this area, with the involvement of local communities, the government is planting fruits and native species with the aim of developing mixed native forests. This grassland is predominantly used for cow and goat farming and therefore the opportunity forgone for farmers as a result of the plantation project is much higher than the potential carbon payment. Therefore, it is doubtful that this intervention will gain sufficient momentum to succeed.

For REDD+, there is a 99-year lease agreement between the iTaukei Land Trust Board (TLTB) and Mataqali Emalu. TLTB is the custodian of iTaukei land and acts on behalf of the Mataqali in relation to the lease. For avoiding logging, the TLTB receives a one-off lease premium of $10/ha and an annual payment of $5/ha from the Fiji Government. The TLTP keeps 15% of this amount to cover their running costs, with the remainder going to Mataqali Emalu. TLTB employs a technical officer to look after forestry, agriculture and land use issues and a legal officer for legal matters of the Mataqalis.

1.2 Drawa/Nakau Forest Project, Drawa— the Plan Vivo Project

The Drawa Project is located in Drawa, Vanua Levu, Fiji. This project started on the 1st of January 2012 with the objectives of avoiding forest degradation by means of the legal protection of the forest. The plan is to achieve this by terminating logging activities and declaring the Project Area a reserve (Lalabalavu et al., 2015). The original project area covered 11 Mataqalis; however, two Mataqalis were interested in logging their forests and withdrew from the agreement.

This project covers a total area of 5,687 ha within the land tenure boundaries of all nine participating Mataqalis. The altitude ranges from 300 m to 700 m asl and average annual rainfall is very high (3500–4500 mm/yr.). Current land use practices include a mixture of logged and primary forest, taro and kava plantations, subsistence gardens and secondary forest. The total area of the project includes the proposed protected area of 4,120 ha under the Drawa Conservation Management Plan. However, only 1,723 ha of this protected area is eligible for carbon credits as it was the only area likely to be logged in the baseline assessment (Lalabalavu et al., 2015).

This project runs under co-operative law. It has formed the Drawa Block Forest Communities Cooperative Ltd (DBLCCL), which is legally the project owner. The TLTB acts on behalf of all nine Mataqalis on the lease. This project runs under a 30-year Conservation Lease program, with the expectation of perpetual renewable. In this case, the lease is between the TLTB and the DBLCCL.

The project follows the Nakau Methodology Framework D2.1 v1.0; Technical Specifications Module (C) 1.1 (IFM-LtPF): Improved Forest Management– Logged to Protected Forest V1.0. Twenty-two Pacific island countries and territories can use this Technical Specifications Module, which follows the guidance of Plan Vivo Standards, 2013 (Weaver, 2014).

The project counts two forest services, carbon and biodiversity, and is expected to generate: (1) net annual carbon credits of 22,764 tCO_2e for rotation 1 (years 1–15) and 13,229 tCO_2e for rotation 2 (years 16–30); and (2) net annual habitat hectares of 1,378 ha for both rotations. However, the Plan Vivo only pays for carbon credits (verified emissions reduction, VER) at a rate of USD10.5/tCO_2e. About 60% of this payment goes to the DBLCCL and 40% to the Project Coordinator (Live and Learn Environmental Education – Fiji) and Program Operator (Nakau Programme Pty Ltd). Part of the 60% allocated for the DBLCCL goes to the TLTB and the rest to the landowners.

Within this project area, there is plenty of land for reforestation activities. If replanted wisely, these would generate multiple carbon, biodiversity and livelihood benefits for the local communities.

1.3 Vunivia REDD+ Pilot Project

The Vunivia REDD+ Pilot Project is located in the district of Dogotuki on Vanua Levu Island and covers an area of 2,703 ha. Forests (mostly indigenous) are owned by two Mataqalis (Namako and Nabunilagi). The forested area was previously under a conservation concession. However, they were unable to pay the landowners and the forests were increasingly at risk of deforestation. Subsequently, they surrendered the lease.

The project comprised: undisturbed forests; disturbed terra firma forests; mangroves forests; fire disturbed savannas; and herbaceous swamps. Most of the members of both Mataqalis live close to the forests and therefore agricultural expansion is the main driver of deforestation. Detailed information on this project is not available. In the project, two key activities are carried out: (1) a carbon inventory; and (2) training on carbon inventory techniques for landowners.

2 Approach of the study

The Warsaw Framework for REDD+ provides a general process and guidance for countries to develop national and subnational level FRLs and forest monitoring systems. However, the integration of subnational and national projects and programs is not articulated. This document serves to Fiji as a guidance document on the nesting of sub-national REDD+ MRV and FRL within national REDD+ MRV and FRL.

The consultant team: (1) reviewed relevant literature/reports, UNFCCC (COP) decisions, IPCC guidelines and several other rules, regulations and technical requirements; (2) reviewed available REDD+ related literature from Fiji, including the institutional and technical specifications of the Drawa Forest Project, a background report of the Emalu and Vunivia Projects, (3) Fiji's REDD+ related country documents (e.g. Fiji REDD+ Policy, ER-PIN and FRL methodology); and (4) organised a series of meetings, from 15–25 October 2017, with key REDD+ stakeholders in Fiji such as the REDD+ Unit, REDD+ Steering Committee, Department of Forests, Live and Learn, Drawa Forest Project landowners and Emalu Mataqali landowners. The team paid visits to grassland and mangrove ecosystems, forest plantations and natural forests, and areas damaged by the typhoon, forest fires and invasive tree species. Several expert consultations were conducted with the REDD+ national and international experts who were directly involved in FRL and NFMS development in Fiji.

We have used particular documents as a guide for this work including: (1) Forest Carbon Partnership Facility (FCPF) Carbon Fund's Methodological Framework (FCPF, 2016); (2) Verified Carbon Standard's (VCS) Jurisdictional and Nested REDD+ Standard (VCS, 2014); (3) REDD+ in Vietnam; Integrating National and Subnational Approaches (To et al., 2012); (4) American Carbon Registry Nested REDD+ Standard (ACR, 2012); (5) Planning Guide: Integrating REDD+ accounting within a nested approach, USAID Lowering Emissions in Asia's Forests (Gibbon et al., 2014); (6) Approaches to REDD+ nesting: lessons learned from country experiences (Lee et al., 2018); and (7) Guidance document: options for nesting REDD+ projects (Pearson et al., 2016). Published and grey literature on sustainable forest management and associated research, and REDD+ related documents and archives (Fiji) were reviewed and used/contextualised, where appropriate.

Most of the standards do not suggest how a country should design its accounting frameworks; instead, they suggest certain criteria that must be met in order to register a nested project on their registries.

We followed Gibbon et al. (2014)[1] to discuss the design of the nested accounting system. For the technical decisions to be made, we adopted Pearson et al.'s (2016)[2] approach. Technical considerations provided by Pearson et al. and lessons learned from country experiences by Lee at al. (2018)[3] are widely contextualized in the Fiji circumstances.

[1] Gibbon, A., Pearson, T., Walker, S., Andrasko, K., 2014. Planning guide: Integrating REDD+ accounting within a nested approach. The USAID Lowering Emissions in Asia's Forests (USAID LEAF) Program.
[2] Pearson, T.R.H., Casarim, F.M., McMurray, A., 2016. Guidance document: Options for nesting REDD+ projects. Commissioned by Fundación Natura Colombia.
[3] Lee, D., Llopis, P., Waterworth, R., Roberts, G., Pearson, T., 2018. Approaches to REDD+: nesting lessons learned from country experiences. Main report (English). Washington, D.C.: World Bank Group.

3 Guidance of designing and rolling out a nested accounting system

As suggested by Gibbon et al. (2014), we have followed a four step process to design and roll out a nested accounting system:

I. an assessment of REDD+ activities/process in Fiji to understand REDD+ scopes and forest monitoring system including policies and measures and MRVs;
II. using information generated in step I to set the scope and objectives of the nested accounting system. This step guides to the types of programs and projects that need to be nested into the system;
III. making major technical decisions (REDD+ scope, project level baselines vs. a jurisdictional FRL, methods used for MRV, allocation for leakages and reversals and crediting and trading project ERRs); and
IV. suggesting the planning process required to progress towards the nested accounting system.

Since this report focuses more on providing guidance for designing and integrating carbon accounting, step III (technical decisions) is the most critical (i.e., s**cope of the ToR of this assignment**). We therefore provide more detail on the technical considerations (step III), with the other steps (I, II and IV) briefly discussed.

3.1 Step I: Assessment of REDD+ activities in Fiji

Key steps and activities required to assess in country REDD+ activities are given in Table 1. There are two major tasks within this step. Firstly, the task includes identifying REDD+ activities and programs in Fiji that could be integrated into a national system. The identified REDD+ activities, programs and policies—to assess emission reductions and receive incentives—could be both ongoing and planned. Secondly, collecting and assessing technical details of REDD+ activities. This includes information about REDD+ activities and scope, national forest monitoring system, forest reference levels, the risk of reversal and leakage, reporting and verification procedures and some other technical matters related to the standards and methods used. After completing this step, we will have a deep understanding of the scopes, activities, pools, and carbon accounting methodologies.

Table 1: Key tasks and activities required to assess in country REDD+ activities (adopted from Gibbon et al., 2014)

Tasks	**Major activities**
Identify REDD+ activities in Fiji that could be integrated	• Identify ongoing REDD+ related programs and projects/initiatives and forest sector nationally appropriate mitigation actions that assess emission reductions and removals and receive incentives • Assess planned REDD+ programs, projects, policies and activities
Collect and assess technical details of REDD+ activities	**(A) REDD+ activity and scope**
	• Scope (activities): 1. types of REDD+ activities being implemented in subnational REDD+ programs and projects in the country; and 2. types of planned activity by the national REDD+ program.

Tasks	Major activities
	• Spatial scope: Spatial boundaries of existing subnational programs and projects, including potential leakage areas • Pools and gases: Pools and gases included in ongoing projects and activities
	(B) National Forest Monitoring System (NFMS)
	• Land cover classification: National forest inventory map and its details; its uses at national, subnational and project levels. If there are no such maps, what other classifications are used at different levels
	• Carbon stock and Emissions Factors (EFs): what methods have been used at different levels and whether they are consistent with UNFCCC/IPCC latest guidance and guidelines
	• Activity Data (AD): Types of AD collected at project/subnational levels, methods of data collection and source of data; frequency of data collection
	• Carbon stock change: are they available and at what level?
	(C) Reference levels/baselines
	• Temporal and special scale, scope, method used, and their expiry dates
	(D) Reversal and leakage
	• How risks of reversal and leakage are addressed?
	(E) Reporting and verification
	• What data are reported from subnational and project levels and to whom? • What verification processes are in place?
	(F) Technical questions
	• Types of standards (VCS, CFMF etc.) followed while designing REDD+ approaches) • Duration of programs/projects
	• Proponents and partners involved in projects/programs • Key stakeholders and beneficiaries

3.2 Step II: Setting the scope and objectives of the integrated carbon accounting system

The scope and objectives of a nested accounting system could be established with the information generated in Step I. This step guides about the types of programs and projects that need to be nested into the system. It involves three sub-steps; the first is defining the activities, pools and areas to be included. Under this sub-step, identifying areas of overlapping and non-overlapping REDD+ carbon accounting is very important. This is not that serious in the area where there is overlapping of REDD+ carbon accounting (same activity, same pools, and gases) in different levels (project, subnational and national); however, this situation is unlikely, thus, this becomes a serious issue. For example, in Fiji, the Emalu REDD+ pilot project has only considered emissions from forest degradation (by avoided logging), as does the Drawa Forest Project, though by the placement of

project area into a reserve (Lalabalavu et al., 2015; National REDD+ Unit, 2015). However, the Fiji FRL for the ER Program considers emissions from deforestation, emissions from forest degradation, and removals from the enhancement of carbon stocks, including removals from afforestation/reforestation and removals from forest plantation management. The sub-national FRL does not include the 'conservation of forest carbon stocks' activity.

This is a simple case and has an easy solution, i.e., the REDD+ project can increase its scope and also include afforestation/reforestation activities, if it is feasible to do so. However, if the condition is reversed (project or subnational level consider both but national government includes only one), it may create problems. In such situations, either the national government should also include the omitted activities or the project/subnational level activities should be allowed to operate in complete independence from the national program (Gibbon et al., 2014). However, this decision must be taken before any reference level is defined.

The second sub-step is the mapping out of technical standards. There are several technical standards that need to be met by a national accounting system in order to seek results-based payments. Particularly, as noted, Fiji needs to follow four decisions which are relevant to the development of forest FRLs:

- Fiji REDD-plus Policy 2011 (adopts a hybrid approach of REDD+ implementation);
- Decision 4/CP.15, about methodological guidance for activities relating to REDD+;
- Decision 1/CP.16, related to the four pillars of REDD+ including FRL/FRELs;
- Decision 12/CP.17, related to COP-guidance for FRL construction; and
- Decision 13/CP.19, related to the technical assessment of submitted FRLs (FAO, 2015, 2017).

If Fiji wishes to access other multilateral or bilateral funds, it also needs to meet the technical requirements set by donors. The government of Fiji has established a legally binding agreement with the Carbon Fund of the Forest Carbon Partnership Facility (FCPF) to sell (transfer) the emission reductions and/or removals (ERRs) generated from the program 'Reducing emissions and enhancing livelihoods in Fiji' – referred as ER Program. The country therefore need to adhere to the terms and conditions of the FCPF's Carbon Fund's Methodological Framework (FCPF, 2016).

The third sub-step is setting the overall objectives for the integrated carbon accounting system. Defining the overarching objectives of integration, through broad consultation with key REDD+ stakeholders, could be a better approach. Such objectives are context-specific but are also broadly guided by fundamental global principles: (1) ensuring environmental safeguards (i.e., following the principle of conservativeness so that chances of underestimation should be higher than overestimation); (2) simplicity rather than complexity in accounting; (3) ensuring social; (4) reducing transaction costs; and (5) achieving economies of scale by harmonising accounting systems at different levels (Pedroni et al., 2009; Gibbon et al., 2014).

Discussions with Mr Ilaitia Leitabu (Spokesperson) and Mr Lemeki Toutou, Headman; Emalu Mataqali; 18 October, 2017; Sigatoka

Sharing a photo-space after meeting with Emalu representatives and a provincial officer; (from left) Mr Ilaitia Leitabu, Mr Eroni Vosa from Provincial Office, Mr Lemeki Toutou, and UHH consultants: Dr Archana Gauli, Dr Prem Neupane and Ass. Prof. Dr Tek Maraseni; 18 October 2017; Provincial Office

3.3 Step III: Designing the nesting approach

3.3.1 Approaches, options and technical issues

Sub-national programs and REDD+ projects may be nested into larger jurisdictional (e.g., national) program in many different ways. Both the political and a technical dimension of nesting needs to be considered when making a decision what approach to adopt. Whatever approach for nesting is finally selected, often has far reaching consequences at either the jurisdictional or project level, or both.

Gibbon et al. (2014) suggests three broad nesting approaches: (1) a subnational/project-led approach in which data from project or subnational levels are compiled to form a national dataset; (2) a flexible national approach in which there are a national forest monitoring system and reference level that integrates program and project level data; and (3) a strong national approach in which there is a national forest monitoring system and FRL which does not integrate program and project level data (Figure 1). In general, with maturity in REDD+, each country is expected to move from an early project/subnational approach to a stronger national approach. However, which approach a country will choose depend on many different factors (e.g. how many different types of REDD+ projects exists, the design of the NFMS, the construction of the FRL).

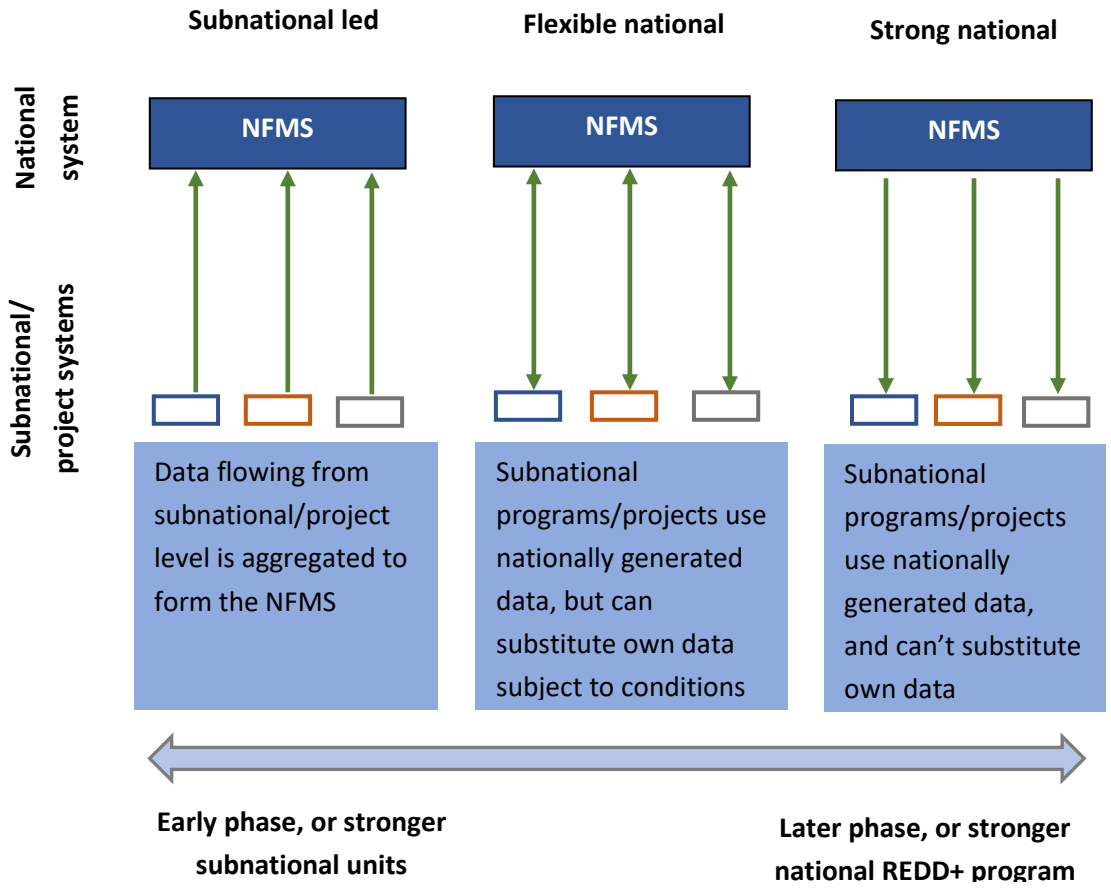

Figure 1: Three alternate approaches to REDD+ national and subnational accounting, using of the NFMS (Gibbon et al., 2014)

Pearson et al. (2016) proposed three options for jurisdictional programs with regard to nesting strategies and nesting plans. The options include (i) jurisdiction-favored, (ii) project-favored, and (iii) Mutually-beneficial. These options correspond to a larger extent to the strong national, subnational/project-led, and the flexible national approaches of the Gibbon et al.'s respectively.

For the nesting of REDD+ programs and projects in Fiji, the following three options will be considered (adopted from Pearson et al., 2016 with modifications):

1. Jurisdiction-favored: policies are dominated by interests of the jurisdiction (e.g., a national entity; Fijian Ministry of Forests). The goal is to maximize the jurisdiction's (e.g., national) proportion of ERRs. In this approach, individual projects may still contribute to ERRs, but the focus lies on the jurisdictional level and the amount of ERRs that can be generated at this level. Hence, even if an individual program or project may produce considerable amounts of ERRs, the jurisdictional approach favors an approach to nesting that maximize ERRs at the jurisdictional, rather than at the individual programs or project level. The jurisdiction-favored approach may discourage private sector participation at the project level.
2. Project-favored: this approach supports and encourages the establishment of sub-national programs and projects (e.g., Drawa Forest Project, Nakauvadra project). ERRs generated at the project level are fully accounted for. In the project-favored approach, the private sector plays a key role in generating financial benefits for ERRs via (direct) investment at the program or project level. However, the project-favored approach may reduce the ERRs the jurisdiction can claim, because ERRs will be attributed directly to the project where the ERRs were generated. Moreover, the project-favored approach introduces risks to the jurisdiction, because of potential project failure, non-permanence or leakage.
3. Mutually-beneficial: this approach may be viewed as a compromise between approaches (1) and (2) above. It encourages project participation while maintaining jurisdictional preeminence. If a jurisdiction wants private investment through programs and projects to be part of REDD+, a mutually-beneficial solution may be considered most beneficial to both, for individual projects as well as at the jurisdictional level. However- although desirable - mutual-beneficial approaches may not always be achievable. In some cases, a choice must be made to either favor a jurisdictional-favored or project-favored approach.

Deciding on a nesting approach is a complex endeavor. There is flexibility which approach may be considered most appropriate for a particular REDD+ activity, carbon pool, or greenhouse gas (GHG). There is no "one-size-fits-all" approach that may be considered most appropriate for any component of REDD+. In the remainder of this section, the three different options will be evaluated for several (technical) aspects of REDD+ accounting. The aspects considered include:

- REDD+ scope (including REDD+ activities, carbon pools and GHG gases);
- Project level baselines vs. a jurisdictional (national) FRL;
- Methods used for MRV;
- Allocation for leakages and reversals; and
- Crediting and trading nested project ERRs.

3.3.2 Incongruent REDD+ Scope (activities, pools, and gas)

It is the rule rather than the exception that REDD+ pilot projects cover activities, carbon pools and GHGs that are different from those covered by the hosting jurisdiction. This holds true particularly for early action projects that have been implemented before any jurisdictional (e.g., national) program has been set up. These incongruences may affect the generation of ERRs at both the jurisdictional as well as the program or project level. Mismatch in scope may be bi-directional and may occur for all or only some elements. For example, projects may include carbon pools (e.g., deadwood) that are not covered by the jurisdiction, or the jurisdiction may include REDD+ activities (e.g., enhancement of forest carbon stocks) that are not covered by a project nested within the jurisdiction.

In order to identify where jurisdictional programs and sub-national projects do not match in terms of activities, gases or pools, it is important that these elements are clearly defined. For example, in the Drawa Forest Project (or Drawa Forest Project), carbon credits are generated by banning conventional logging in Natural Forest which will be achieved by declaring a protection forest. This intervention may either fall under the REDD+ activity reducing emissions from forest degradation (i.e., conventional unsustainable logging is considered as forest degradation in the FRL), or under the activity conservation of carbon stocks. In the latter case, there is a mismatch of activities at the jurisdictional and project level, although logging in natural forest is considered in both cases. If the intervention is linked to the activity reducing emissions from forest degradation there will not be a mismatch. However, for nesting it is important to not only consider what has happened in the past, but also to take into account what is expected for the future. The Drawa project, for example, may be linked to the REDD+ activity reducing emissions from forest degradation (if looking in the past), but is probably better considered under the activity conservation of carbon stocks while looking in the future.

3.3.2.1 Jurisdiction-favored approach

In the jurisdiction-favored approach projects are forced to adopt the jurisdictional scope. Additional scopes covered by a project but not covered by the jurisdiction will be excluded. If elements are covered by the jurisdiction but not by the project, the project may have to include additional elements. By in- and excluding elements at the project level, consistency between the jurisdictional and project level is ensured. In the jurisdiction-favored approach mismatch in scope does not affect elements at the jurisdictional level.

For many projects, the jurisdiction-favored approach may have deleterious effects. This holds particularly true if there are considerable incongruences between projects and the jurisdiction. Projects usually select activities, pools and gases that are deemed most beneficial to the project and if even some of these elements have to be excluded the project may fail. If a jurisdiction-favored approach is selected, projects have to revisit their design and have to decide whether a continuation of the project is feasible. In any case projects would have to adjust their baseline to conform to the scope of the jurisdiction.

The approach also provides a disincentive to private sector investment at the project level. Moreover, whenever projects cover more elements (e.g., activities, pools or gases) than the

jurisdiction, which is frequently the case, the jurisdiction-favored approach reduces the amount of overall achievable ERRs.

Implementation steps (adopted from Pearson et al., 2016)

Jurisdiction	Project
• Meet with stakeholders including projects and clearly present the scope of REDD+ program and the reasons for any exclusions	• Revisit project design to determine the viability of the project after exclusion of elements incongruent with jurisdictional REDD+ program • Decide whether or not to continue with the project after exclusion of incongruent elements • Revise baseline calculations to conform with the scope of the jurisdictional REDD+ program

3.3.2.2 Project-favored approach

In the project-favored approach, the jurisdiction follows the lead of the projects and expands its scope to ensure consistency. This approach has many advantages for sub-national projects, as it would ensure project continuation because projects can retain their original project design. The approach may also foster the development of new projects. For the Drawa Forest Project, for example, the project-favored approach would allow the project to continue as planned.

The project-favored approach puts the additional burden to the jurisdiction since it has to cover more elements. It may happen that this approach is not feasible for the jurisdiction. This is the case whenever activities, pools or gases cannot be effectively monitored at the jurisdictional level or when expanding in scope is highly cost-inefficient for the jurisdiction. Generally, the project-favored approach fosters private sector participation.

Implementation steps (adopted from Pearson et al., 2016)

Jurisdiction	Project
• Meet with project developer(s) to understand additional elements considered in project scope • Define feasibility of inclusion of additional elements from projects into jurisdictional REDD+ program scope, with consideration of	• Meet with jurisdictional REDD+ program personnel and present the additional elements considered in the scope of the REDD+ project. Projects are encouraged to highlight the benefits of including additional elements in the jurisdictional

the costs and benefits • Design jurisdictional REDD+ program with the inclusion of elements suggested by project developers • Attempt to establish a partnership with project developers to share the additional workload and potential costs for inclusion of additional elements • Conduct measurements / modelling / calculations necessary to allow proper accounting of additional elements • Devise an MRV plan that satisfies the requirements necessary for including additional elements. Here jurisdictions can again try to establish work relationships with projects to divide workload and costs.	REDD+ program • Propose a workable partnership with jurisdictional REDD+ program personnel to assist in the inclusion of additional elements • Help jurisdictional REDD+ program in conducting measurements / modelling / calculations as necessary to allow proper accounting of additional elements

3.3.2.3 Mutually-beneficial

The mutually-beneficial approach can be considered a compromise between the jurisdiction- and project-favored approaches. Projects are requested to adopt the jurisdictional scope but are allowed to register additional elements independently as separate project activities.

Although the mutual-beneficial approach ensures completeness at the project level (i.e., all project elements are included), it may, however, not be feasible for all projects and elements as transitional transaction costs are faced by the project. Potential benefits are also highly dependent on where congruences occur. If an additional REDD+ activity is covered by a project (e.g., conservation of carbon stocks of the Drawa Forest Project) that is not included in the jurisdiction, and the implementation of this "stand-alone" activity is highly effective in terms of financial returns, the mutual-beneficial approach represents a feasible option to the project. However, if, for example, an additional carbon pool (e.g., deadwood) is covered by the project, a separate project that only includes this pool is likely to not be practical. Whenever the expected costs of split off activities exceed the expected income from ERRs, projects may simply decide to exclude these activities, pools and/or gases altogether.

Implementation steps (adopted from Pearson et al., 2016)

Jurisdiction	Project
• Meet stakeholders including	• Decide if viable to register elements that are

projects and clearly present the scope of REDD+ program as well as the conditions for the separate registration of activities, pools and gases as separate projects.	incongruent with jurisdictional REDD+ program as separate project activity(ies) • Revise baseline calculations to conform with the scope of the jurisdictional REDD+ program • Where relevant, estimate baseline for elements that are incongruent with jurisdictional REDD+ program • Where relevant, register additional elements as separate project activity(ies) with the voluntary market

In Fiji, there is currently only the Drawa Forest Project that reveals a mismatch in scope between a project and the jurisdictional level. The ERRs generated in Drawa may be linked to the REDD+ activity "conservation of carbon stocks", as mentioned above. This activity is not (yet) covered by Fiji's FRL and potential ER program. Hence, even if incongruences occur, they do not directly affect a potential nesting approach. However, this may change in the future if Fiji expands its scope to also include conservation as a REDD+ activity. Transferring Drawa from a "stand-alone" project to a project that is nested within a national ER program requires solving additional incongruences. In Drawa the forest carbon pool "harvested wood products" (HWP) is included, which is not the case in Fiji's FRL and potential ER program. For the Nakauvadra Community Based Reforestation Project there is at least no mismatch in the scope (i.e., reforestation is covered in Fiji's FRL, the same pools and gases are considered). However, the methods used to develop a project baseline differ from those that are used for the FRL (see next section).

3.3.3 Incongruent baselines employing different approaches, project methods, spatial scales, and/or data sources

Project baselines and jurisdictional (national or sub-national) reference levels are developed differently. There may not only be incongruences in what activities, carbon pools and gases are included, they also differ in e.g., scale, location and how projections are made for the future:

- Reference levels are developed at large scales (e.g., in Fiji's FRL about 90% of the land-mass is covered which amounts to about 1,887,500 ha), while project usually covers small areas (e.g., the Drawa Forest Project covers 1,723 ha only). Differences in spatial extend also have consequences on the choice of methods for MRV.
- In contrast to many other countries, REDD+ projects in Fiji are not necessarily located where there is a high risk of emissions from forests and, hence, a high potential of emission reductions. This holds true at least for Drawa and Nakauvadra, but is different at Emalu.

- Projects usually develop a "business-as-usual" (BAU) scenario. For the development of a BAU, historical data are reviewed and projections are made. The latter sometimes includes the use of models. In Nakauvadra and Drawa, for example, potential ERRs were estimated based on assumptions of what would happen if the projects would not have been implemented. Fiji's FRL is constructed in a different way. Here, historical data are reviewed too, but no "what-if" projections are made. A historical average is an estimate that serves as a predictor for expected future emissions and removals.

Because of differences in why and how projects were set-up, large incongruences can be observed in how project baselines and the FRL are constructed in Fiji. This poses great challenges for the nesting at the jurisdictional level.

3.3.3.1 Jurisdiction-favored approach

In this approach Fiji's FRL would serve as the baseline, and project baselines would be estimated based on their areal contribution. This may have detrimental effects on potential project implementation and no incentive for the private sector to invest in any project would be generated. For example, for Fiji's FRL average emissions from deforestation were estimated at about 868,328 tonnes of CO_2 per annum. If a project is implemented in Fiji at a high deforestation risk area (assuming, for example, a deforestation rate of 3%), the jurisdictional baseline that would be applied to an area of e.g., 1000 ha, would be calculated by 1000/A times 868,328, i.e., 460 $tCO_2e\ yr^{-1}$ (where A = 1,887,500 is the area for which average annual emissions from deforestation were estimated). According to FRL estimates these emissions translate to about 1.5 ha of deforestation per year, which would correspond to an annual deforestation rate of 1.5/1000 = 0.15%. Hence, for the jurisdiction-favored approach there would be almost no emissions that could be reduced via a REDD+ project and there would be no incentive to invest in such a project. The emissions of the hypothetical project site exceed the one what is estimated from the jurisdictional FRL. Under the jurisdiction-favored approach projects may be forced to apply an artificially low baseline that disincentivizes investment.

Implementation steps (adopted from Pearson et al., 2016)

Jurisdiction	Project
• Develop process for assessment of project area and allocation of relevant reference level portion to projects	• Interact with jurisdiction on the development of process • Interact with jurisdiction in an assignment of baseline

3.3.3.2 Project-favored approach

In the project-favored approach the jurisdiction accepts project baselines as it is. This approach may be viewed as very friendly to projects but may affect jurisdictional ERRs in case of partial or total

project failure. Project baselines should only be accepted if they follow certain standards (e.g., VCS). The project-favored approach is also very friendly to private market participation in REDD+.

In Fiji, this approach is currently not the favored option as; projects cover only a tiny fraction of the FRL Reference Area. However, if the area under REDD+ projects increase in the future, the project-favored approach may become viable. However, for the nesting of baselines and reference level, a mutually-beneficial approach is usually preferred and may also be considered the best option for Fiji.

Implementation steps (adopted from Pearson et al., 2016)

Jurisdiction	Project
• Hold consultations with stakeholders on how projects can and should be incorporated • Develop criteria, processes and procedures for incorporation of project data where relevant • Collate project areas and determine proportion of jurisdictional area • Consider risk to recording ERRs and distributing benefits for areas outside of projects • At reference level renewal, incorporate project data (activity data and emission factors) to maximize agreement between project and jurisdictional baselines • Examine buffer withholding to handle elevated risks from project failure and determine the appropriate benefit sharing of projects back to local and national governments	• Consult with jurisdiction on current status and plans • Submit detailed spatial and tabular data on project and project baseline to jurisdiction

3.3.3.3 Mutually-beneficial

In the mutual-beneficial approach projects are allowed to develop their own baseline. In order to foster the agreement and avoid substantial disagreement between project baselines and the jurisdictional reference level, a cap on the absolute difference may be considered. Another option is that projects (re-) calculate their baselines using the same methodology and data that were used for the FRL construction. This would require that there is no mismatch in scope (REDD+ activities, pools and gases) in order to ensure consistency and comparability among project baselines and the FRL. Moreover, if a project includes elements not included in the FRL, there is no (jurisdictional) methodology available that could be applied by the project. The reforestation project at Nakauvadra, for example, would have to use the same estimates of e.g., the annual carbon

increment or root-to-shoot ratios when recalculating the project's baseline. The recalculation of project baselines based on the same data and methods would ensure consistency.

Recalculation of project baselines may not always be feasible (or meaningful). Activity data for Fiji's FRL for afforestation/reforestation, for example, is generated at medium spatial resolution (i.e., Landsat imagery). The uncertainty in the activity data is rather high, and, hence, the data generated for the jurisdiction (i.e., FRL Reference Area) may fail to provide reliable data at the project level. This is likely to be the case if the project area is relatively small (e.g., roughly 1000 ha were planted at Nakauvadra). Data and information at the project level are usually of much higher quality than at the jurisdictional level and the recalculation would add large amounts of uncertainty to project level estimates of basslines.

Implementation steps (adopted from Pearson et al., 2016)

Jurisdiction	Project
• Develop acceptable cap for divergence from Jurisdictional reference level for project baselines. To do so, consider the costs and benefits of encouraging projects versus the risk of divergence • Establish rules and procedures to avoid over the issuance of credits at the jurisdictional level including accurate accounting in a registry system • Collate and provide activity data and emission factors for projects to use • Develop project baseline approval procedures • Receive feedback from projects through time for the development of new data and factors	• Take jurisdictional data and jurisdictional project baseline procedures and requirements and develop project baseline applying cap if relevant • Provide inputs to jurisdiction as it updates data sources and factors

Another approach to nesting baselines and reference levels is to use a so-called "cookie-cut" approach. In this approach, the project baseline is extracted directly from the jurisdiction's spatially-explicit reference level. The approach may be considered if the project boundaries can be clearly demarcated, which is usually the case. Obviously, spatially-explicit data have to be available for the jurisdictional FRL. An advantage to the project would be that costs for setting up the project baseline are reduced, because the necessary data and information are provided by the jurisdictional FRL.

Although the "cookie-cut" approach is often considered the fairest approach, it becomes infeasible if the quality of the spatially-explicit data is poor. Therefore, this approach may currently not be considered feasible for Fiji. Moreover, although spatially-explicit maps are produced to detect e.g., areas of deforestation, the methods used to estimate these areas produce non-spatially-explicit

information. This is the case whenever an accuracy assessment (AA) is conducted on a map. Hence, for the REDD+ activity "reducing emissions from deforestation", the "cookie-cut" approach is not feasible because spatially explicit data are not available. This may not only be the case for the source deforestation but also other sources and/or sinks.

3.3.4 Incongruent measurements with differing data sources, spatial scales, and time periods

Estimates of ERRs are based on (i) a baseline or reference level, and (ii) an estimate of actual emissions and removals. It is common in many countries, including Fiji, that projects developed their own methodological approach to estimate the baseline as well as actual emissions/removals. The methodology developed and adopted usually differs from one project to another and among projects and the MRV system used at the jurisdictional level. Hence, there almost always is a lack of agreement regarding data collection and data analysis procedures. The aim of an effective nesting rule would be to reconcile these disagreements as far as practical.

Differences in methodology approach almost invariably cause that estimated baselines, actual emissions/removals and emission reductions differ depending on the methods applied. Estimates for ERRs for a particular project area produced by the jurisdictional, will, therefore, differ from estimates produced by the project's measurement system.

3.3.4.1 Jurisdiction-favored approach

In the jurisdiction-favored approach, projects would have to accept outputs of a jurisdictional measurement system. This approach becomes only feasible where spatial-explicit high-quality data are available. As aforementioned, these data are currently not available in Fiji but may be available in the future.

An advantage of jurisdiction-favored approach to projects would be, that monitoring is carried out by the jurisdiction and, hence, projects would be able to reduce transaction costs. However, projects may be requested to compensate the jurisdiction for providing the measurement system and the required estimates. The jurisdiction-favored approach may only be meaningful for a project if the jurisdictional MRV system matches in scope with the project.

Large-scale jurisdictional MRV systems are usually not able to produce accurate and precise estimates at the local/project level. If projects are located in areas that differ substantially from the rest of the jurisdiction, there might be large bias introduced in the project level estimate of the jurisdictional measurement system. This may, from a project's perspective, have positive effects, i.e., estimated ERRs are larger than they would be if estimate from a project's measurement system. However, the opposite situation may also occur.

Implementation steps (adopted from Pearson et al., 2016)

Jurisdiction	Project
• Conduct jurisdictional measurements and estimate results	• Request jurisdictional measurement results for the area pertaining to the

• Share results pertaining to projects to project developer(s) • Be available to respond to questions from project developer(s) if any arise • Adjust measurement results if discrepancy(ies) or errors are identified Report jurisdictional final results	project(s) • Verify for potential errors If errors in jurisdictional measurement results are identified, communicate clearly with jurisdictional REDD+ program personnel, and be available to work on correcting and resolving the error • Provide a formal concurrence to jurisdictional measurement results

3.3.4.2 Project-favored approach

In the project-favored approach projects would establish and run their own measurement system and the jurisdiction would have to except the project level measurement outputs. From the project's perspective, the disadvantage of setting up a project measurement system is, that the transaction cost is much higher than if the project would use outputs of the jurisdictional system. An advantage of a project level measurement system over the jurisdictional system is that project level measurement system more likely produces accurate and precise estimates than a jurisdictional system does.

For the Drawa Forest Project, the project-favored approach would be the only feasible approach as the REDD+ activities implemented are not (yet) covered by the jurisdiction. For the Nakauvadra reforestation project measurement outputs the jurisdictional MRV system may be considered to lower transaction costs of the project. However, at Nakauvadra the measurement system generates information that goes beyond most REDD+ projects (e.g., information on the status and development of faunal and floral biodiversity).

For the project-favored approach, jurisdictions should verify outputs produced at the project level. This includes plausibility checks in which e.g., ERRs reported by the project are cross-checked against estimates produced by the jurisdictional measurement system. Verification of projects results incurs additional transaction costs to the jurisdiction.

Implementation steps (adopted from Pearson et al., 2016)

Jurisdiction	Project
• Conduct jurisdictional measurements and estimate results • Request measurement results from projects within time to adjust potential discrepancies	• Conduct project measurements and report result to jurisdiction • Be available for jurisdiction consultation of project results if

that may arise • Verify project-reported measurements and compare with jurisdictional measurement results. This may result in an identification of discrepancies of results reported by projects and by jurisdictions • If discrepancies are identified, meet with project developer(s) to correct discrepancies • Assimilate project measurements into jurisdictional reported measurements Report jurisdictional final results	necessary • In case discrepancies are raised by the jurisdiction, work with jurisdiction to correct discrepancies

3.3.5 Allocation of leakages and reversals

The ERPD suggests that the overall potential risk of domestic leakage is low in Fiji. The risk of natural forest conversion and unsustainable logging is ranked low. Several activities including integrated land use planning at levels, strengthening forest governance, improving forest sector information system, SFM, afforestation/reforestation and promotion of climate smart agriculture are proposed to prevent and minimize domestic leakage. Commodity driven deforestation and low capacity to ensure compliance and enforce regulations related to forest management are the major residual risks for the permanence of the forest carbon. ERPD suggested that 26% of the ERRs will be deposited into the ER Program specific buffer managed by the carbon fund.

Leakage can occur either due to geographical displacement (i.e., from monitored to unmonitored subnational FRLs) or among REDD+ activities (i.e., to an activity not included in the FRL) (FAO, 2017).

3.3.5.1 Jurisdictional -favored

Monitoring project leakage is a very demanding task. For example, if a REDD+ project sets aside a portion of forest area under complete protection (logging ban) without provision of alternatives to the local people, the logging could be moved to adjacent or nearby forests which lie outside the project boundaries. If REDD+ projects stringently focus on reducing deforestation activities, degradation might occur nearby forest to fulfil the demand of subsistence timber. Equally, project failure might impose significant liabilities to the hosting jurisdictional program. Thus, projects need to continue to account for any leakage and retain insurance against reversals. In this context, '***jurisdiction-favored***' option would entail the introduction of a flat/fixed tax or standard leakage and non-permanence deduction percentage to all projects (Pearson et al., 2016). This simple option treats all of the projects within the jurisdiction equally irrespective of their individual efforts to mitigate leakage and to minimize non-permanence. This option thus might discourage the projects to implement stringent measures to prevent leakage and reversals.

3.3.5.2 Project -favored

For the registration under any acceptable international standards, projects must demonstrate adequate leakage and non-permanence mitigating activities, and retain certain percent of ERRs in a buffer account. Thus, projects registered in external GHG programs or standards may prefer '***Project favored***' option in which project leakage or reversal risk is not accounted.

3.3.5.3 Mutually-beneficial

A variable deduction based on the assessment of risks of leakage and non-permanence would encourage projects to design structures and practices to minimize deductions and therefore maximize the benefit to both the jurisdiction and the atmosphere (Pearson et al., 2016). There are methodologies and tools available for such calculation. The deductions can change, as risk for the leakage and non-permanence may change over time. The deductions can be tailored with periodic risk assessments, and adjusted accordingly. Under the '***mutually beneficial***' options, the ER Program and already registered projects develop systems and calculations in partnership to determine such variable and flexible/adjusted deductions.

3.3.6 Crediting and trading nested project emission reductions and/or removals

Fiji (Ministry of Economy) has established a legally binding agreement with the Carbon Fund of the FCPF to transfer the ERRs generated from the ER program. The maximum contract value is 3.6 million ERRs. The early mover projects, for example Drawa Forest Project and Nakauvadra Community Based Reforestation Project, have organized their transactions of verified project ERRs. Since both ER Program and the REDD+ projects inside the accounting area of the ER Program involved in emission trading, double claiming/trading of the same ERRs must be avoided.

3.3.6.1 Jurisdiction-favoured: trading exclusively through jurisdiction

This is more centralized option; a jurisdiction oversees and controls or allocates ERRs. The jurisdiction either rewards ERRs to the sub-national/project activities, or sells the ERRs and allocates funds (result-based payments)[4]. For example, in the present context in Fiji, ER Program either rewards the ERRs to the early movers or allocates payments. Double counting/trading is not an issue in this option. However, ERRs generated by the projects are their intangible assets of the projects. The centralized approach might undermine the legal rights of the registered projects and discourage private investments.

Also due to incongruent REDD+ scope and incongruent baselines/FRL, the jurisdiction-favoured approach is hard to implement in the current context in Fiji. Moreover, a lack of local incentives for SFM could lead to reversals of previously achieved ERRs (Pearson et al., 2016).

3.3.6.2 Project-Favored: Parallel trading of ERRs

Under this option, parallel trading of ERRs operates. The government of Fiji transfers the ERRs generated by the ER Program to the Carbon Fund, and the already registered projects sell their verified ERRs to their buyers in accordance with the pre-determined contractual agreements. The registration of further autonomous projects may be permitted. To establish a nested system with a

[4] Here, we discuss only ex-post rewards, but not ex-ante finance.

large number of stand-alone projects with own MRV and trading ERRs is very demanding task, and the cost of and capacity (institutional, human, technical, equipment and logistics) needed for MRV could be very prohibitive. Fiji is one of the tropical non-Annex I countries with low existing capabilities to implement REDD+ (Herold, 2009; Romijn et al., 2012; Romijn et al., 2015).

3.3.6.3 Mutually-Beneficial: Parallel trading of ERRs for existing projects, but new projects trading exclusively through jurisdiction

A similar pattern of parallel trading, as described above, operates under this option. The government respects the rights and independence of early movers, but takes the regulatory steps not to permit the registration of further autonomous projects with own issuances and trading activities. This implies that future local initiatives contributing to REDD+ (future REDD+ projects) already start as completely nested components of the national or sub-national program.

With the general views discussed above, mutually-beneficial option for the crediting and trading nested project ERRs is more suitable in the current context of Fiji. This approach might enhance the local legitimacy of the REDD+. More importantly, Fiji REDD-Plus Policy 2011 envisaged a 'hybrid' scale approach of REDD+ implementation, enabling both national and sub-national or project-scale activities (Ministry of Primary Industries, 2011). The policy reads that there will be both national and project level engagement with REDD-Plus financing instruments to maximise opportunities and minimise costs. This implies that the government of Fiji encourages private sector participation and is seeking increasing private financing to implement REDD+.

3.4 Step IV: Planning and prioritizing the nesting roll out

There are at least four legacy REDD+ pilot projects in Fiji. In order to nest these pilot projects, as suggested by Gibbon et al. (2014), Fiji could include the following in its nesting plan: (1) a summary of the REDD+ strategy; (2) a summary of the steps taken to design the nesting plan; (3) the technical requirements and standards that REDD+ projects should adhere to; (4) the types of potential technical, financial and capacity development support available from the national to local level; (5) the time periods allowed for the technical requirements to be met; (6) the required procedures during grace periods; and (7) a grievance redressal mechanism.

The nesting plan content should be developed and refined through broader consultation with REDD+ stakeholders. A REDD+ stakeholder workshop could be convened to develop the rollout plan. After in-depth discussions, the workshop would attach weights to each rollout plan using the analytical hierarchy process (Saaty, 2004). Alternatively, they can simply have consensus agreement either on a short-term, medium-term or long-term roll-out plan. Before coming to a consensus, they can conduct a Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis on each roll out plan—using SWOT assistance matrix—by organising a one-day workshop. Participants of this workshop would include representatives of all REDD+ stakeholder groups (**UHH has mapped REDD+ stakeholders in its Deliverable 1- Situational Analysis**). In order to systematise the discussion process, the discussion should start with simple 'SWOT assistance matrices'—key statements of the four SWOT categories. Once any other statements for each of the SWOT categories have been identified, discussed and agreed upon, they should be documented and ranked.

Consultation with the members of Drawa Block Forest Communities Cooperative Ltd, the owner of the Drawa Forest Project, 23 October 2018, Drawa, Vanua Levu (Project office in left-top caption of the photo above)

4 Summary

Fiji REDD-Plus Policy 2011, policy document which sets the framework for the development of REDD-Plus activities in Fiji, guides the country to adopt a 'hybrid' scale approach of REDD+ implementation. The approach combines both a national and sub-national or project approaches. This allows the country for the coexistence of the two approaches in a system where REDD+ credits are generated by projects and governments, thus maximising the potential of both approaches (Angelsen et al., 2008). The policy suggests that there will be both national and project level engagement with REDD-Plus financing instruments to maximise opportunities and minimise costs. With this statement, the policy document envisioned both public and private sector finance for the implementation of REDD+. More importantly, the ERPD estimated financing gap of USD 14.3 million and suggests, the government of Fiji to explore domestic and international financing opportunities to fill the gap. In this context, involvement of the private sector for the REDD+ implementation is crucial.

Moreover, the policy document reads that project-based or sub-national implementation and monitoring will be linked to the national scale forest carbon measuring, reporting, and verification system and to the national reference level to facilitate higher level quality assurance for any project-scale activities (Ministry of Primary Industries, 2011). Thus, the establishment of a nested system of REDD+ implementation is already political guidance provided by the REDD-Plus Policy 2011.

Since the inception of REDD+ in Fiji, the country is in the process of developing capacities. However, capacity gap in MRV and REDD+ implementation has long been identified in Fiji. The capacity gap (**See Deliverable 11 of this consultancy for detail about the capacity gap**) is one of the major hindrances to establish a nested system of REDD+ implementation. In Fiji, there are already a couple of legacy projects exist as early movers. In areas where such projects exist, nesting can become both politically and technically challenging—particularly if projects developed baselines prior to the higher-level jurisdiction (Lee et al., 2018).

Sub-national REDD+ projects may be nested into larger jurisdictional (e.g., national) initiatives in different ways. With respect to technical aspects, a **mutually-beneficial approach** to nesting is **in the most cases** recommended for Fiji. This would also **ensure alignment with the Fiji REDD-Plus Policy 2011**. A jurisdiction-favored approach would have, in most cases, a deleterious effect on private sector investment and should, if possible, be avoided. To foster consistency of activities, pools and gases among projects and the national REDD+ implementation, the mutually-beneficial approach is likely to be the only currently feasible option. The same holds true for the construction of project baselines. In the near future, given that better data become available, it may be possible that projects use methods that were applied for the FRL (or will be applied in the revised FRL) and recalculate their emissions/removals. The project-favored approach is recommended to resolve disagreement among measurement approaches. However, standards may be set by the Ministry of Forests that may include prescriptions regarding, e.g., the choice of biomass models to employ, or default root-to-shoot values that should be used. It will be important that a national entity is responsible to verify outputs of project level measurement systems.

Nesting projects is as much a policy issue as it is a technical one, and thus, careful consideration of shifting costs, risks, and rewards must be undertaken in the design of the framework for nesting before any technical solutions are researched (Lee et al., 2018). **Broader stakeholder consultations are needed to choose the right option**: jurisdiction-favored, project-favored or mutually-beneficial considering different political and financial issues and REDD+ safeguards.

Research suggests that REDD+ stakeholders at multiple levels can best support nesting efforts if they are involved from the early phases so that they own and also adopt the outcomes. This enhances the political and local legitimacy of REDD+ program.

Nesting could be simple and flexible but should maintain its credibility and integrity. If nesting becomes highly complicated; and requires additional and significant capacity development (institutional, human, technical, equipment and logistics), the government may be forced to suspend the existing projects or reject to permit new projects. This could work as a disincentive to the private sector for project development, and accordingly, discourage the most needed private finance in REDD+ and climate change sector.

The **success of nesting heavily relies on the benefit sharing mechanism between the national government and local actors**. In order to be successful, the split of benefits need to be based on the proportional to the cost and forgone benefits of all actors involved.

It is widely claimed that nesting enhances economies of the scale through the common use of MRV (ACR, 2012;To et al., 2012;Gibbon et al., 2014). However, further research is needed to assess whether this holds true for a small archipelago like Fiji. It is likely that nesting may also add costs to a small country such as Fiji, as the project areas/biomes/jurisdictions/strata are too small to be representatively covered by the MRV system. Thus, **a financial feasibility study of the different nesting options** would support the decision making to select a nesting option.

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Training materials targeting landowners

The best way of developing a training manual (and then suggesting training materials) is by conducting a Training Needs Assessment (TNA) which helps to find out the gap between what the landholders should know about REDD+ and what they currently know. The training manual/materials should then aim to address the gap. However, this is beyond the scope of the project. Here, we have developed the following Table of Contents (TOCs) for landowners on the basis of: (1) a review of national and international literature; (2) UNFCCC (COP) decisions and IPCC guidelines; (3) field consultation with the landowners of the Drawa and Emalu REDD+ Projects; and (4) our own research and training experiences in some other REDD+ active countries. Developing a manual and conducting training in line with the developed TOCs may help landholders acquire the knowledge and skills required to take a decision on whether to join a REDD+ project and, if they do, how to meaningfully participate and contribute to productive deliberation. In the end, key sources of training materials are provided.

Table of Contents

1. Basic knowledge of climate change science
2. Climate change projection and its potential impacts at local level
3. What is REDD+ and how it works, and some facts of REDD+
4. Potential sources of REDD+ finance
5. REDD+ policy and project/program development process in Fiji
6. REDD+ stakeholders in Fiji and their roles and responsibilities
7. Rights (land tenure/carbon/other ecosystem services) of Mataqalis/ethnic groups
8. Guiding principle, and national policies, rules and regulation of Free Prior Informed Consent (FPIC)
9. Provision of social and environmental safeguards: Understanding the benefits and risks of REDD+ projects and potential ways of minimising risks and enhancing benefits
10. Drivers of deforestation and forest degradation and their potential solutions at local levels
11. A/R potential at local level (within the jurisdiction of Mataqalis)
12. Tentative costs and forgone benefits of involving with REDD+ project/program
13. Potential non carbon benefits of REDD+ at local levels
14. Benefits sharing mechanism of REDD+ between different actors
15. Assessing whether a Mataqalis is ready for a REDD+ Project
    - Comparison of returns from current land use system and afforestation and reforestation activities, under REDD+ regime (at local level).
    - Comparison of returns from forests with and without REDD+ project (at local level)
16. What is FRLs and how it is linked with carbon payments
17. How FRL is developed in Fiji
    - FCPF methodology
    - Activities, pools and gases considered in FRL
18. Nesting project level REDD+ MRV and FRL within national REDD+ MRV and FRL
19. Process and practice of REDD+ project development, including but not limited to:
    - Developing the Project Idea

- Designing a REDD+ Project
- Project Validation and Registration
- Project Implementation
- Verification

20. Community based carbon measurement and monitoring (why and how?)
    - Identifying and delineating the boundaries
    - Identifying and mapping different forest blocks (strata)
    - Making a pilot inventory to assess variation in each stratum or block
    - Establishing the permanent sample plots
    - Preparation of field measurement
    - Conducting the field measurements in the permanent sample plots
    - Monitoring carbon and verifying data collection
    - Analysing the data and calculation of carbon stock

Key sources of training materials

FRL and nesting related information

- Situational Analysis Report (Submitted by UHH)
- Forest Reference Level, Fiji (Submitted by UHH)
- Methodology development for NFMS and MRV
- NFMS and MRV Establishment (Submitted by UHH)
- Database development and establishments (Standard Operating Procedures) (Submitted by UHH)
- Capacity Development Strategy for MRV (Submitted by UHH)
- Guidance document on the nesting of sub-national REDD+ MRV and FRL within national REDD+ MRV and FRL (Submitted by UHH)

Materials related to REDD+ policy and REDD+ pilot projects in Fiji are available on the FCPF and Fiji REDD Desk websites

https://www.forestcarbonpartnership.org/fiji
https://theredddesk.org/countries/fiji

Basic information on important topics related to REDD+ implementation, including references to relevant COP decisions and non-legal summaries of these, are available on the UNFCCC website

https://redd.unfccc.int/fact-sheets.html

The following training materials can be downloaded from the UN REDD+ website (https://www.globallandscapesforum.org/presentation/un-redd-training-material-redd-available-online/)

- Introduction to REDD+ by Tim Christophersen
- Forests, Carbon Sequestration & Climate Change by Christopher Martius
- REDD+ Safeguards and Safeguard Information Systems by Judith Walcott
- The Economics of REDD+ by Ivo Mulder

- Good Governance by Timothy Boyle

Resources related to community based carbon measurement and monitoring

- ANSAB, FECOFUN, ICIMOD 2010. Forest Carbon Stock Measurement: Guidelines for measuring carbon stocks in community-managed forests. Kathmandu, Nepal
- IGES, 2014. Community-based forest biomass monitoring Action research in PNG, Cambodia, Indonesia, Lao PDR and Vietnam, Institute for Global Environmental Strategies (IGES)

For methods for effective delivery of this training package

- Ministry of Forest and Soil Conservation and UNREDD Programme (2018). Training Manual for Forestry Professionals, Ministry of Forest and Soil Conservation and UNREDD Programme, Kathmandu, Nepal