

Reducing Emissions from Deforestation and Forest Degradation (REDD+) in Vanuatu

Strategy options for the national REDD+ strategy



Key points

- Vanuatu's transition to a climate resilient green economy urgently requires measures to protect and enhance forest landscapes.
- Food and income security in rural households can be significantly increased by adopting the various forms of agroforestry promoted through REDD+.
- REDD+ contributes to climate mitigation by reducing greenhouse gas emissions and sequestering carbon in trees.
- More important for the context of Vanuatu, investments in REDD+ support climate adaptation, such as disaster risk reduction and watershed management.

Audience

This policy brief has been prepared for decision-makers, organizations and individuals with an interest in addressing the current problem of deforestation and forest degradation in Vanuatu

REDD+: opportunity for Vanuatu to have sustainable economic growth that integrates forest

REDD+¹ in Vanuatu aims to support socially equitable development in a way that places forests and agroforestry systems at the centre of the rural economy. Forests and trees are important in Vanuatu not only because they provide food and income security for rural landowners but also because they reduce the increasing risks posed by climate change.

REDD+ aims to support climate mitigation through two main strategies: i) by avoiding the greenhouse gas emissions caused by deforestation and forest degradation; and ii) by sequestering carbon in planted trees. However, when viewed through a global climate change mitigation lens, the forest carbon stocks from Pacific Island States (excluding PNG) form an insignificant component of global forest carbon stocks. On the other hand, when viewed through a climate change adaptation lens, the protection and enhancement of forested landscapes represents a significant component of a national climate change resilience effort for a Small Island Developing State like Vanuatu. The benefit of REDD+ in Vanuatu (both locally and nationally) can be most vividly understood when seen as a core component of a national climate change adaptation strategy, financed through, inter alia a climate change mitigation pathway. Local communities and the nation as a whole would benefit substantially from investments in protecting and enhancing forest landscapes. These forests are capable of bestowing climate resilience to an island chain uniquely vulnerable to extreme weather events such as tropical cyclones.

The Department of Forest is currently preparing a national REDD+ strategy. In order to inform that national REDD+ strategy with information from the Provinces, a nation-wide study was conducted in 2017 to identify and prioritize the most promising REDD+ activities that not only mitigate climate change but also provide an important mechanism for climate change adaptation. The study included stakeholder engagement at the national level in Port Vila as well as field work in the following islands: Erromango, Santo, Malekula, Tanna, Efate. This policy brief summarizes the main findings of this study and presents the most promising options for implementing REDD+ in Vanuatu.

¹ REDD+ stands for countries' efforts to reduce emissions from deforestation and forest degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks. For more information, see : www.forestcarbonpartnership.org/what-redd

Priority REDD+ strategy options

A REDD+ strategy option refers to the precise activity or intervention (sometimes referred to as policy or measure) that could form part of Vanuatu's future REDD+ strategy. This could be one or multiple of the eligible REDD+ activities: 1) Reducing emissions from deforestation; 2) Reducing emissions from forest degradation; 3) Conserving forest carbon stocks; 4) Sustainable management of forests; 5) Enhancement of forest carbon stocks. REDD+ strategy options are generally comprised of a "package" of harmonized measures. This may include policy-level adjustments such as land use planning or extension services, as well as land-based investments, such as tree planting or agriculture applications that ultimately result in climate mitigation.

Vanuatu's future REDD+ strategy can pursue REDD+ activities by utilising a number of different options that correspond to the two types of land tenure prevalent in Vanuatu: customary tenure and on leased customary land. A large proportion of the commercially valuable customary land (over 10 per cent) is now leased. This means that all significant REDD+ activities will take place on land or forests held under customary tenure arrangements, although some of this land may be subject to leases. Therefore, three general types of REDD+ strategy options were identified:

- 1) **On leased land**, use climate funding to acquire existing expired and/or degraded agricultural leases.
- 2) **On customary land**, apply for climate funding to develop activity-based strategies identified at the Province or island level.
- 3) **On customary land**, conduct area-based large-scale conservation through a number of possible arrangements, including:
 - a) registration as a Community Conservation Area,
 - b) creation/strengthening of new or existing legal mechanisms for broad scale conservation, or
 - c) creating a lease.

For the first option, the Government would acquire degraded agriculture leases to transform these unused areas to productive and restored forest landscapes. Following acquisition, the national government would then sub-lease smaller parcels of land to local landowner groups or other affected community groups, such as internal migrants. These sub-leases would allocate rights to use the land for gardening through sustainable methods such as agroforestry systems that integrate the planting of priority tree species in gardens. The ability to implement REDD+ in these areas has a number of advantages given that

this would involve the acquisition of existing leases and the eventual placement of land back under Indigenous control once leases expire. The other practical advantage of this strategy is that it avoids the necessary yet detailed negotiations with custom landowners over the use of the customary land for a REDD+ project, because the land has already been leased.

For the second option, this REDD+ strategy option entails improved delivery of extension services to smallholder farmers to support effective uptake of agroforestry. Agroforestry systems are mainly comprised of mixed-species plantings involving timber, fruit or nut trees intercropped with root crops and other food crops. This REDD+ intervention entails promoting priority species² to small-scale farmers in existing subsistence gardens or on customary land. The exact species and mechanism through which agroforestry is promoted depends on the local island context, as the product demand, distance to market and prevailing agro-ecological conditions dictate the type of species planted, and corresponding planting conditions. Extension services for agroforestry are likely to involve a variety of arrangements of public and private players. In some cases, smallholders may enter into contracts with buyers (e.g. sandalwood), whereby the private sector provides planting material and training for tree maintenance. In other cases, the Department of Forestry (DOF) would provide seedlings and extension services.

For the third option, Vanuatu's current protected area network would be expanded by reinforcing existing or creating new conservation areas through various legal options. To ensure this REDD+ strategy option generates sufficient support at the local level, it is important to involve local ni-Vanuatu in the management and generation of benefits from these protected areas. The type of conservation activities that would be implemented can be considered active conservation such that forests are not set aside, becoming off-limits from human use, but rather efforts would be made to render these forests productive, so that sustainable management can generate sustainable income flows to local communities. This suggests a range of options, including eco-tourism, extraction of non-timber forest products and firewood based on sustainable management plans. REDD+ payments could also be provided in the interim to cover the opportunity costs of local communities that are transitioning to more sustainable land and forest management practices. Following Free, Prior and Informed Consent (FPIC) safeguards, any decision on how to use forest resources must be made by custom landowner groups. Given forests are located on customary tenure, the role of the government through the DOF is to provide guidance and support to customary owners in planning the use and development of their forest resource.

² *Terminalia catappa*, *Canarium indicum*, Whitewood (*Endospermum medullosum*), Mahagony and Sandalwood.

Potential Economic and carbon benefits of REDD+

The costs and benefits of a number of REDD+ land use options were estimated to better understand the potential economic and carbon implications of different REDD+ strategy options. This helped gain a better understanding of which strategy options can achieve net emission reductions in the most effective, efficient and socially equitable manner. The results are preliminary,³ based on a data collected over the course of two

months, and the analysis requires further refinement based on island-specific circumstances. Nonetheless, these preliminary results can help the Government of Vanuatu to prioritize which REDD+ activities should be included in the future national REDD+ strategy. The key performance indicators of four priority REDD+ strategy options are shown below:

Key Performance Indicators - summary of potential benefits generated through REDD+

	Timber reforestation with initial gardening	Improved Agroforestry (Canarium)	Improved Agroforestry (Cocoa)	Nut and timber reforestation with initial kava
Net Present Value (20 years, 10% discount rate)	USD 3,460	USD 20,140	USD 7,360	USD 22,280
Investment needed (undiscounted)	USD 8,890	USD 25,200	USD 47,430	USD 9,640
Employment Generation (Full-time job equivalent)	0.21	0.79	0.49	0.3
Carbon stock value in tCO ₂ e/ha (above- and belowground carbon pool)	269	185	185	269

Source: Department of Forest. Analytical Studies on REDD+ in Vanuatu, 2017.

The results show that all REDD+ strategy options have the potential to store significantly more carbon per hectare than business as usual. In general, the REDD+ strategy options have a higher potential profitability (calculated in net present value) and often lower investment costs than the drivers they address. The only exception is unsustainable subsistence agriculture, which can be very profitable depending on the local circumstances. In most cases, the high profitability and low investment costs of REDD+ as compared to business as usual implies that REDD+ in Vanuatu may not need to cover opportunity costs for farmers, but should rather focus on promoting and assisting land users in adopting REDD+ through extension service provision.

Timber reforestation with initial gardening requires relatively low investments at the farm level, but can generate a high level of carbon stock. However, timber reforestation with initial gardening shows lower profitability compared to other REDD+ strategy options. This is mainly due to the fact that timber reforestation with initial gardening only grows timber species while nut and timber reforestation with initial kava includes not only timber species but has a 50% agroforestry component with canarium nut. This means that from an economic perspective, a reforestation project is more attractive when trees are planted that have non-timber forest products.

Improved Agroforestry with canarium is an economically viable strategy option to encourage more sustainable agriculture practices for smallholders. Improved agroforestry (canarium) offers significant food security benefits, as food crops such as plantain can be grown in this system. This strategy option may result in lower carbon benefits as compared to timber reforestation with initial gardening. However, its profitability is much higher in the long term, and can provide an important source of sustainable income for smallholder farmers. Improved agroforestry (canarium) is most labor intensive, which may be a disincentive. Therefore, extension service may need to focus on efficient management and value chain improvements to make this strategy option successful.

Improved agroforestry with cocoa requires the most up-front investments, and may be less economically attractive as compared to other agroforestry systems, such as those introducing canarium nut. However, improved agroforestry with cocoa is less labor intensive and can thus cover a larger area with the same amount of manpower as compared to agroforestry with canarium.

³Full report available from DOF for details on modelling approach and assumptions.

Nut and timber reforestation with initial kava has the highest potential profitability (calculated in net present value) of all REDD+ strategy options. Also, nut and timber reforestation with initial kava offers one of the highest carbon stock values and requires low investments. Nut and timber reforestation with initial kava has a relatively low labor intensity, requiring 0.3 full-time job equivalents per hectare.

The analysis shows that more sustainable land use systems such as agroforestry are economically more attractive than business as usual (e.g. coconut and cattle and kava) in the long term. This implies that REDD+ can greatly increase rural prosperity by informing and assisting farmers in adopting more sustainable, low-carbon and economically beneficial land uses. The REDD+ strategy options now need to be further developed and refined to provide rural land users with proven and tested sustainable business models.

Recommendations and next steps

REDD+ strategy options have been designed to not only generate carbon benefits in the form of emission reductions or removals (carbon sequestration through tree growth), but also for the ability to generate significant “co-benefits” in the form of income and food security, community resilience and ability to adapt to climate change. This is important because increasing vulnerability of the forest cover from climate related natural hazards such as cyclone and fire also need to be considered given the recently seen deforestation caused by Tropical Cyclone Pam in 2015. Vanuatu has the opportunity to use its national REDD+ strategy as a driver for investment in sustainable rural economic development. The safeguards discipline required in REDD+ financing systems also present an opportunity for Vanuatu to roll out a rural development program that delivers an innovative approach to climate change adaptation.

Managing forests more sustainably at a national scale presents many opportunities to enhance human wellbeing in Vanuatu. However, the short-term monetary interests of rural land users searching for economic development, income, and food security are increasingly causing land users to opt for less sustainable forest and land management. In this context, REDD+ can provide the financial incentive and governance infrastructure required to catalyse the transition to more sustainable forest and land management. It is important that REDD+ strategies are designed as business models that can deliver improved income security and income diversification as compared

to the business as usual scenario. Channelling REDD+ investments to forest-friendly land use systems and value chains can ensure the sustainability of REDD+ activities in the long term.

This study has shown that agroforestry systems provide the most promising approach to implementing REDD+. Vanuatu's diverse agroforestry systems have been integral to the traditional culture of the ni-Vanuatu people. A number of improved agroforestry systems have been identified for generating significant benefits to land users as well as the global community. These benefits include climate mitigation, increased community resilience, improved financial returns for local land users, and income and food security.

In terms of next steps, it is important that REDD+ in Vanuatu prioritizes the design and implementation of demonstration activities. Piloting the REDD+ strategy options identified is a critical activity that should be carried out as soon as possible to ensure that these demonstration activities can inform the development of the national REDD+ strategy with key lessons from the ground. This is also important to ensure that local stakeholders maintain their interest in REDD+. Especially given the significant amount of REDD+ Readiness finance being used for stakeholder consultation and awareness raising across the Provinces, it is crucial that these stakeholders begin very soon to see concrete REDD+ activities to better understand the type of benefits that REDD+ can deliver to their communities.