



## INFO BRIEF

# Natural Resources and Sustainable Forest Management

### INTRODUCTION

The 2015 Study on the Drivers of Deforestation and Forest Degradation in Cross River State (CRS) found that the State had lost 39,907 hectares of forest between 2000 and 2007, which is an annual rate of 5,701 hectares per year or 0.67%. This annual percentage loss increased to 2.95% for the period 2007 to 2014, when 167,382 hectares was lost at a rate of 23,911 hectares per year.

Forest loss can be attributed to subsistence agriculture, commercial agriculture, infrastructure development, energy and fuel wood extraction, oil and gas exploration and mining and quarrying. The indirect drivers of deforestation and forest degradation in Cross River State are the drive for economic development, policy and institutional factors, demographic variables, and urbanization.

The government of the CRS is engaged in a process of developing a 30-year growth and development strategy. Two thematic areas whose analysis will underpin the 30-year Growth and Development Strategy are on environment and the green economy. The government has invited the REDD+ strategy team to contribute to the strategy development, thereby ensuring that a global best practice is observed – that of embedding sustainable use and conservation of environment and carbon pools in long-term development strategy with the highest level of recognition.

This assessment identified eight Sustainable Forest Management (SFM) related initiatives that have relevance to the proposed REDD+ strategy: National Parks, forest reserves, community based natural resources management (including participatory forest management, community based ecosystems approach to

fisheries management and community based mangroves management), agroforestry, Forested Landscape Restoration (FLR) and the Bonn Challenge, Certification of forest products and tree crops (palm oil, cocoa, bananas timber), Energy related Initiatives (Energy Efficient Woodstoves for Schools, Sustainable Fuelwood Management in Nigeria, Nigerian Alliance for Clean Cookstoves), and Mining and quarrying initiatives (Green mining, Africa Mining Vision and Nigeria Extractive Industries Transparency International).

The REDD+ potential of the eight case studies was assessed using multiple methods. This started with a general description of the initiative, including the management practices; followed by an assessment of the compatibility of the initiative with the composite indicators of sustainable forest management (SFM), good practice (GP), REDD+ criteria and technical feasibility. Consequently, a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis was undertaken to identify opportunities and strengths, success elements, possible gaps and challenges, weaknesses and threats related to the potential contribution of the initiative to the proposed REDD+ strategy. This Issue Brief provides a series of recommendations that were generated from the foregoing analysis.

## RECOMMENDATIONS

### NATIONAL PARKS

The national parks estate provides an immediate opportunity for piloting REDD+. National Parks (NP) already contain huge amounts of carbon and contribute to biodiversity and enhancement of ecosystems services to the environment and communities around them. Economic beneficiation can however only happen in the buffer zones. Although there are challenges with funding, the Cross River National Park has a good management structure in place and can maintain basic park controls such as fire management and park boundary maintenance. The senior managers are fully aware of the REDD+ strategy process and are eager to participate in its implementation. However, the management effectiveness of the CRS National Park (NP) is currently hampered by shortage of financial resources, which leads to shortage of qualified technical capacity. Following the example set for the Forest Commission, it is necessary to identify innovative sources of funds (such as Trusts) to reduce financial/resources uncertainty for the CRS Protected Area (PA) management, and to secure the carbon stocks in the protected areas. There is also a need to assess the current management effectiveness for the CRS NP management and the Forestry Commission to obtain a realistic estimation of what resources are required to be effective in PA management, the supervision of conservation and sustainable use of forest resources respectively within a REDD+ implementation context. Hence, it is important to assess and increase capacities to enforce national park regulations, conduct outreach activities and monitor activities occurring within the NP boundary. It will be necessary to:

- ✚ Facilitate the gazettelement of the proposed protected areas boundary;
- ✚ Improve the capacity of national park staff -This involves training on regulations, management systems, general administration, outreach approaches and methods, patrolling and carbon project development.
- ✚ Establish check points - Additional check points could be added along any other roads that provide access to the park;
- ✚ Patrolling - Patrol posts throughout the national park should be constructed and manned by staff with the legal right to make arrests. Frequent patrolling covering the full extent of the NP to check for illegal activities (logging, hunting, etc.) should be conducted;
- ✚ Enforcement - Any illegal activities ascertained by the check points or patrols should be taken through legal proceedings to serve as a deterrent for future illegal activities.

- ✚ Community outreach -The national park staff should be active in making the rules and regulations known to all villages surrounding the park.

To enhance replication of the use of national parks as part of REDD+ in Nigeria, it is recommended to expedite the upgrading of the ten proposed national parks. The areas proposed should be quickly constituted as National Parks with a view to incorporating Private Public Partnership (PPP) as they provide great opportunities for piloting REDD+ in Nigeria, with the recognition that national parks contribute to the non-financial objectives of REDD+ especially with biodiversity conservation, carbon protection, and improved delivery of ecosystems services to the surrounding communities.

### INCREASED BENEFITS TO COMMUNITIES

For the REDD+ strategy to succeed, there is need to increase benefits to communities, including sustainable harvest of timber and Non-Timber Forest Products (NTFPs) from buffer areas. Lessons on community participation in the management of forest resources have shown that in many places, communities have often borne the opportunity cost of protected areas without receiving adequate benefits associated with neighbouring protected areas. Where this is the case, communities have limited incentives or vested interests in the protection of the biological resources in those protected areas. The CRS national park has a program to support sustainable harvesting in the buffer zones and development of social amenities for surrounding communities, but it is not being implemented because of the moratorium on timber harvesting and lack of financial resources respectively. The REDD+ program should assist with raising funds for the implementation of the social amenities, the program should strengthen the implementation of social amenities such as classroom blocks, health centres, road and water and electricity infrastructure to the border communities. Benefits to individuals such as employment, skills acquisition and financial empowerment should be given priority by the park administration in the implementation of its support zone development projects.

However, to enhance community benefits without risk to carbon sequestration, there is need to conduct participatory land use plans (PLUP) in all villages within 10 km of the national park boundary, in conjunction with or as part of the Forest Landscape Restoration planning exercise. Conducting PLUP in the villages will increase communities' awareness of the buffer zones and the regulations for accessing resources in the buffer zones, identify areas for cash crops, agroforestry, and food crops, ensure that land is distributed more equitably, land titles granted and that proper monitoring of land-use plans is conducted. This will help make certain that land is used more rationally and with a view towards sustainable production. In addition, support should be provided to both villagers and the relevant government bodies responsible for enforcing and monitoring the implementation of

PLUP plans. We note here that the 10km suggested is assumed to be the extent of impact on the forests. However, there is need for assessment of distance the villagers are willing to travel to access the resources in the protected area and its buffer zones. This will inform the geographical extent to which PLUP will need to be implemented.

## AWARENESS RAISING CAMPAIGN

The REDD+ strategy should be accompanied by the implementation of an awareness raising campaign among the border communities to increase their awareness of the existence of the buffer zone and the rules governing access to resources in the zone as well as the importance of both the Protected Area and the buffer zone, in the context of a REDD+ strategy. In this context, there is need to manage the negative view that majority of the communities hold currently – that REDD+ process is the reason the moratorium on timber harvesting was put in place; and that the moratorium has only alienated access to timber products while it has failed to curb deforestation.

## UPSCALE REDD+ ACTIVITIES

The forest estates may provide an immediate opportunity for upscaling the activities of REDD+ once the CRS pilot succeeds. The potential would best be explored in well-managed forest reserves which can maintain basic forest controls through fire management and forest boundaries maintenance. Small reserves under delegated private-public partnership arrangements may be the easiest to start with, as the partnership will allow the country to begin building capacity and gain experience in carbon markets, without becoming bogged down by long-term internal institutional and management issues. The laws governing the protected areas in Nigeria should be updated to reflect the current realities especially in areas where sanctions are being imposed on the defaulters. Finally, it is important to increase awareness of the importance of the Strict Nature Reserve amongst communities to build support for conservation in no-take areas.

## MANGROVE PROTECTION

It is important to focus on the establishment of protected areas for the mangrove ecosystem to contribute to conservation of the mangrove ecosystem and to increase carbon storage and ecosystems services to mangrove dependent communities. In other words, the CRS should speed up the process of establishing protected areas for mangrove forests. It should prepare a legislative base for mangrove-protected areas by passing the Mangrove Parks and Reserve Act as a first step towards mangrove management, conservation and rehabilitation. The REDD+ strategy should assist in mobilizing financial support for conservation and rehabilitation of mangroves ecosystem. It should also pioneer a community based ecosystems approach to fisheries management, with a component on community based mangrove management. This should be accompanied by capacity building for communities and institutions that would be involved in the Community Based Natural Resources Management

(CBNRM), and a formulation of financial mechanisms for Community Based Forest Management (CBFM) (credit facility, incentives etc.) to increase incentives for improved management. This will also include documentation of experiences and lessons in Participatory Forest Management (PFM) and community based ecosystems approach to fisheries management/community based mangrove management.

## ECOTURISM DEVELOPMENT

To increase revenue generation from non-consumptive use of the rich natural resources, the REDD+ implementation strategy should include development of ecotourism as a credible economically viable alternative income generating activity.

## VALUE CHAINS FOR OTHER COMMODITIES

Develop value chains for other NTFPs (mushrooms, bush mangoes, bitter kola, etc.) to increase incomes and reduce pressure on the forest timber products. This should be further supported by the University of Calabar by developing seedlings of important wild fruits (e.g. bush mango) that can be grown on farms as part of agroforestry.

## EVIDENCE-BASED STUDIES

Studies from Asia indicate that oil palm productivity under agroforestry is competitive under certain circumstances. There is need to conduct similar assessments, not only for oil palm, but for other plantation crops, to provide evidence-based advice on which set of circumstances make the use of agroforestry in plantation cropping competitive. In addition, the REDD+ strategy should intensify innovative and novel strategies for carbon capture, such as on-farm trees. For example, carbon calculations for agricultural lands (e.g. Cocoa farm) and soil fertility enhancing tree species are an important part of the national Measuring Report and Verification (MRV) system.

Moreover, the REDD+ strategy should include an in-depth analysis of the Federal Government's mining plans for the CRS for the 20-30 years, assess the likelihood synergies with, and/or threats to the forests and carbon under the CRS REDD+ strategy and identify/negotiate measures needed to avoid negative impacts on the forests and carbon under the strategy.

## AGRICULTURAL AND MINING ACTIVITIES

The soils in the rainforest are inherently nutrition poor therefore a few years of cultivation exhaust the soil leading to poor yields. There is a need to increase productivity of the land sustainably to curb the tendency of encroachment into forest areas, especially because the growing population and the transition to cash crops can only accelerate this process if unchecked. To counter this trend and ensure that current land allocations are sufficient to meet future agricultural needs, it is necessary to improve and sustainably maintain crop yields. A variety of techniques and approaches can be adopted, as listed below. This list is not exhaustive and other approaches may also prove effective.

- ✚ No-till agriculture -This ensures that crop residues remain on the fields therefore preventing soil erosion and improving the organic content of the soil. There is need to assess which areas are suitable for this practice,

during the formulation of the participatory land use plans (PLUP).

- ✚ Biochar- Crop and other organic residues can be combusted anaerobically to produce biochar. Biochar is a stable material that when ploughed back into soils increases fertility, improves soil structure and helps to retain moisture. This activity also has the potential to store large amounts of carbon and therefore offers the possibility of generating additional emission reductions.
- ✚ Crop rotation- Promoting a sequence of crop cycles that return nutrients to the soil will help improve soil productivity. For example, growing legumes immediately after a crop harvesting will help return much needed nitrogen to the soil.
- ✚ Soil and water conservation measures- To limit topsoil erosion in upland areas, a variety of techniques including terracing, planting grass or bamboo strips and installing fences should be considered. These will limit the impact of rain erosion and therefore the loss of soil and soil nutrients. Mulching can also be considered to prevent erosion and retain moisture in the soil.
- ✚ Promote agro-forestry- Planting mixed agricultural systems with high value tree species such as fruit trees, oil palm, bananas, plantains, cocoa, bush mangoes, bitter kola, etc. are all possible methods to improve productivity per hectare of land.

In the same time, the REDD+ strategy implementation should include provision for capacity building for the advancement of adoption of improved mining practices in CRS and Nigeria, to ensure that the inevitable expansion of the mining industry does not negatively impact the forests and carbon in the country (as well as the compliance of the mining with Nigerian Extractive Industries Transparency Initiative (NEITI) and Africa Mining Vision (AMV) other provisions). Part of the implementation should include the commission of an analysis of literature available and lessons generated on transitioning mining industries into green mining and in line with Extractives Industries Transparency Initiative (EITI) and AMV principles, especially as part of REDD+ implementation.

### REDD+ TEAM' ADVISING AND FACILITING ROLE

It is recommended that the REDD+ facilitate the government and other stakeholders to adopt the Forest Landscape Restoration (FLR) approach as the basis for identifying areas for the different methods of restoration and conservation of forests and carbon pools. They can do this by linking the CRS government to institutions leading the roll-out of the Bonn Initiative such as International Union for Conservation of Nature. FLR is eligible for Global Environment Facility (GEF) funding, so the Government can partner with a GEF Implementing Agency to develop a project aimed at rolling out FLR in the CRS.

Similarly, it is recommended that the REDD+ Team use the opportunity of the formulation of 30-year Growth and

Development Strategy spearheaded by the government to embed sustainable commercialization of agriculture in the CRS in the highest level of development policy and program, including certification systems. It is also recommended that the REDD+ strategy engage the tree crop farmers to facilitate them to join certification schemes for the individual crops. This will enhance productivity at a lower cost to the farmers.

The REDD+ should join forces with all the initiatives on streamlining policies, capacities, and value chains for the advancement of uptake of cleaner cook stoves in the CRS. It should work closely with the current government initiative of developing a 30-year Growth and Development Strategy to ensure that the weaknesses outlined by the Nigeria Alliance of Clean Cook stoves (NACC) inform the narrative on energy and infrastructure section of the 30-year Growth and Development Strategy, and that concrete measures to address them are embedded in the strategy.

### CLOSER COLLABORATION WITH UNDP

The REDD+ strategy needs to coordinate very closely with the UNDP-GEF project on Sustainable Fuelwood Management in Nigeria to ensure that the project supports relevant REDD+ strategies in its implementation and that experiences from both are shared to increase synergies.