

Proposal to motivate community conservation of IPAs in the Forest Region Guinea.

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Context

The project will achieve Proof of concept for incentivizing 12 local communities in the buffer zones of three Guinean TIPAs in the Forest Guinea region to protect the natural habitat of conservation value in which they live through a range of local-based solutions.

Mt Béro and Diécké Classified forests (CF) and the southern Simandou mountains (including the Pic de Fon Classified Forest) were designated Tropical Important Plant Areas in 2019 (Couch et al, 2019). Diécké CF is the largest remaining moist lowland forest area in Guinea, it supports a large plant diversity including 29 globally threatened plant species, including many threatened tree species. The forest has experienced logging in the past, but the central part of the forest has remained intact with a closed canopy and open or shrubby undergrowth. Mt Béro has many different habitats including submontane forest on the flanks and submontane grassland at the summit in addition to woodland and wooded grassland. Fourteen threatened plants are found here including two species of rare mass flowering Acanthaceae. The area has undergone significant deforestation since 2009 when there was political unrest. Pic de Fon CF and the southern Simandou mountains is an incredibly diverse area, with over 1,400 documented plant species including more than 40 threatened species and at least 1 Simandou globally endemic species. The area has submontane and lowland forest with large areas of submontane grassland (High altitude lateritic bowal) and the flanks have a mosaic of wooded grassland and woodland with gallery forest in the ravines. Destruction of the lowland forest in this area has been mainly from artisanal gold mining and the infrastructure for the future Rio Tinto iron ore mine. The mining concession has impacted various habitats.

The project will depend on our local NGO and academic partnerships which were strengthened through our Darwin initiative TIPAs project 2016-2019 and several successive grants funded projects since (BID, CEPF, GCBC, Ellis Goodman, JRS Biodiversity Foundation) all focussed on Guinea TIPAs. At the end of the CEPF funded project in June 2021 communities close to Mt Béro and Diécké requested further awareness training efforts and engagement. This was taken on board with funding from the Global Centre on Biodiversity for Climate (GCBC) which continued the community engagement and set up 4 community-based plant nurseries and one plant nursery at Centre Forestière Nzérékoré, growing indigenous threatened tree species and socioeconomic species from wild gathered seed and wildlings, producing plants for habitat restoration and for educational purposes and in future for retail purposes. It will also continue to support the pilot agroforestry project funded by GCBC with two communities near Pic de Fon Classified Forest. The project aims to provide these communities with alternative income streams which require them to conserve the forests they border. To monitor progress of this methodology on local community incomes, a baseline poverty study will be undertaken at the start of the project and again after 2.5 years by in-country partners at University of Sonfonia. Additionally, threats will be recorded in all three TIPAs by field staff to monitor the impacts on the local forest/environment. This methodology was developed as part of the CEPF project in 2021-22. Threats will be registered in the threat register database currently under development as part of the JRS Biodiversity Foundation project “Enhancing data access to transform Guinea’s capacity to identify and protect its threatened plants.”

Project components:

1. Establishment and expansion of community tree nurseries (as above) for habitat restoration and income (Mt Béro, Diécké and Southern Simandou mountains TIPAs). Year 1 will see an expansion in capacity for the current 7 tree nurseries, Year 2 and 3 we will add 2 new nurseries of 3000 plants per year to the target areas. A further two communities will be engaged in a trial of indigenous “Inga parallel species” *Pentaclethra macrophylla* for alley cropping as a model for alternative agricultural system (location to be determined). A plan will be developed in Year 1 for establishing a mechanism to sell plants and set a standard price. We will also encourage independence of the nursery collectives through agreements to reinvest part of their profits each year.
2. To increase the legacy of this project we will incentivise habitat protection in TIPAs by improving livelihoods from wild harvested plant products especially tola (*Beilschmiedia mannii*) which is highly sought after. Research on nutritional value of under-utilised indigenous species (based on a market survey done in 2022) will be supported by Melanie-Jane Howes. We will continue our initiative to propagate this and other useful species for planting in buffer zones (component 1). A preliminary value chain analysis of tola will be carried out by Natural Resources Institute (Uni Greenwich). Awareness training with communities and the wider population will continue with the introduction of more large information boards along major routes around the TIPAs. Communities will also be engaged with the use of improved cookstoves to reduce pressure on wood resources and increase the time for women to do other activities. Components 1 and 2 will also incorporate market gardening other revenue generating activities for the local communities since there is a delay between planting and harvesting and this will incentivise communities to persevere with the programme. Ten local schools around TIPAs will be engaged in environmental education and tree planting.
3. It is essential to continue building capacity for conservation with local partners. We will continue training local partners and stakeholders in vegetation survey techniques following a successful course delivered in 2022. A book of the threatened plants of Guinea will be produced and at least 20 local partners will be trained in how to identify these plant species. *The production of the book will be co-funded by the JRS Biodiversity Foundation project.*

Outputs:

1. Incomes of target communities are increased through payments received for harvesting seed and raising seedlings, and production of 12 threatened tree species for sale to other tree planting schemes in Guinée Forestière. Either through national tree planting schemes or to other NGOs e.g. Birdlife’s Occitan project at Mt Béro. We will encourage the collectives with nurseries to become more independent of project funds with agreements stating that profits from sales of trees are to be partly reinvested in the group nurseries to pay costs each year. This will demonstrate to communities that it is profitable to produce and sell tree saplings in a sustainable way. Further engagement and awareness training with these communities will benefit Rio Tinto in future if considering these sites as potential offsets.
2. Post-project legacy for local community livelihood improvement built by chemical and nutritional analysis and pilot-production of additional, identified, under-utilised species with potential for development of additional high value products initially for the Guinean market (foods, cosmetics, natural pesticides). Communities and local schools engaged in environmental awareness programmes to influence the next generation to protect the environment.
3. Capacity of local partners enhanced to continue the project outputs for plant biodiversity conservation including enhanced skills in vegetation survey techniques, management and identification of risks to ZTIPs and quantification of threatened species.

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By the end of the project, local authorities will have better means to produce local species for reforestation in conjunction with local communities. Local communities will see the benefits of protecting the environment and sustainable harvesting of indigenous useful species and how this can be a source of revenue. The next generation will be conscious of the need to protect the environment and the ecosystem services it provides. Collaborations between the Centre Forestière Nzérékoré, IRAG-Sérédou, Herbar National de Guinée, Guinée Ecologie and RBG Kew will be strengthened and trust between organisations and local communities built to ensure protection of Forest Guinea's Tropical Important Plant Areas.

Logical Framework

Project Summary	SMART Indicators	Means of Verification	Important Assumptions
<p>Impact: A proven toolkit is available for conservation practitioners throughout Africa to motivate impoverished local communities to protect natural habitat and threatened plant species of high conservation importance using local-based solutions.</p>			
<p>Outcome: Proof of concept is achieved for motivating 12 local communities in the buffer zones of three IPAs in Forest Guinea to protect the natural habitat of conservation value in which they live.</p>	<p>0.1 Income of target communities from sustainable exploitation of IPA species/habitat increases from base case within life of project, motivating protection of same.</p> <p>0.2 Priority plant biodiversity in IPAs is protected by local communities: numbers of individuals of 12 Vulnerable, Endangered and Critically Endangered plant species (as proxy for all threatened plant species) first stabilises and then increases over the life of the project and beyond.</p>	<p>Household census reports at start and end of project by independent social scientist.</p> <p>Annual census of the same 12 species over the life of the project and 10 years beyond using photos taken from fixed points of replanted areas.</p>	<p>Guinea will continue to remain politically stable with a government supportive of reduction of poverty linked with sustainable exploitation of natural resources.</p> <p>The Guinea government Ministry of the Environment will maintain its stated commitment to treating IPAs as protected areas.</p> <p>There are no further pandemic situations or outbreaks of other diseases which could prevent project going ahead as scheduled.</p>
<p>Outputs:</p> <p>1. Incomes of target communities are increased through payments received for harvesting seed and raising seedlings, and production of 12 threatened tree species for sale to other tree planting schemes in Guinee Forestière.</p>	<p>1.1 Tree nurseries established in additional 4 villages by end Y2.</p> <p>1.2 1800 seeds of 12 threatened species collected and sown by Q2 Y1, end Q3 Y2, Q3 Y3. Plus 5000 seeds of socioeconomic species by end of Y3.</p> <p>1.3 Seed samples backed-up, 8 threatened tree species banked in Guinea and UK (MSB).</p> <p>1.4 Alley cropping trial set up with minimum 2 communities by end Y2.</p> <p>1.5 Mechanism for selling excess saplings of both threatened and</p>	<p>1.1 Quarterly reports on tree production to project coordination</p> <p>1.2 Annual reports to Rio Tinto</p>	<p>Project interventions are integrated into long-term initiatives, involving government reforestation programmes.</p>

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	useful trees to local reforestation projects in place by end Y1.		
2. Post-project legacy for local community livelihood improvement built by chemical and nutritional analysis and pilot-production of additional, identified, under-utilised species with potential for development of additional high value products initially for the Guinean market (foods, cosmetics, natural pesticides). Communities and local schools engaged in environmental awareness programmes to influence the next generation to protect the environment.	2.1 Samples of total 5 additional species supplied to Kew, KCL & UGAN for nutritional and chemical analysis to inform on economic value by end Y1, total 10 species by end Y2; 2.2 Community awareness programmes rolled out to additional communities around the 3 TIPAs. 2.3 Ten local schools engaged in environmental education activities and tree planting	2.1 Technical fact sheets produced for each species, in French and English, and papers published with Guinean co-authors in peer reviewed journals by end Y3. 2.2 Information panels installed, and communities sign up to sustainable harvesting practices. Improved cookstoves and training introduced in communities with reforestation programmes. 2.3 Local school groups participate in tree planting activities with CFZ.	Current (10-year) strong collaborative partnership between UK-based and in-country scientific partners continues. Political and health and safety conditions remain favourable to work in Guinea.
3. Capacity of local partners enhanced to continue the project outputs for plant biodiversity conservation.	3.1 20 local partners trained in plant identification and vegetation survey techniques. 3.2 Red Data book of plants of Guinea published.	3.1. Certificates of attendance. Exam score sheets. 3.2 Guinea Red Data Book of plants published in hardcopy and pdf by end Y2.5.	Current (10-year) strong collaborative partnership between UK-based and in-country scientific partners continues. Political and health and safety conditions remain favourable to work in Guinea.