Concept Note

Forest Restoration for Resilience

Nigeria | African Development Bank (AfDB)

18 April 2018
Concept Note

The Green Climate Fund (GCF) is seeking high-quality projects or programmes.

The Accredited Entity is encouraged to submit a concept note, in consultation with the National Designated Authority, to present a project or programme idea and receive early feedback and recommendation.

Programme Title: Forest Restoration for Resilience

Country: Nigeria

National Designated Authority (NDA): Federal Department of Climate Change, Federal Ministry of Environment

Accredited Entity(ies) (AE): AfDB

Date of first submission/version number: [2018-04-18] [V.0]

Date of current submission/version number: [2018-04-18] [V.0]
### A. Project / Programme Information (max. 1 page)

<table>
<thead>
<tr>
<th>A.1. Project or programme</th>
<th>☐ Project</th>
<th>☒ Programme</th>
<th>A.2. Public or private sector</th>
<th>☒ Public sector</th>
<th>☐ Private sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.3. Is the CN submitted in response to an RFP?</td>
<td>Yes ☐ No ☒</td>
<td>If yes, specify the RFP:</td>
<td>A.4. Confidentiality&lt;sup&gt;1&lt;/sup&gt;</td>
<td>☐ Confidential</td>
<td>☒ Not confidential</td>
</tr>
<tr>
<td>A.5. Indicate the result areas for the project/programme</td>
<td>Mitigation: Reduced emissions from:</td>
<td>Adaptation: Increased resilience of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☒ Energy access and power generation</td>
<td>☐ Most vulnerable people and communities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Low emission transport</td>
<td>☐ Health and well-being, and food and water security</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Buildings, cities and industries and appliances</td>
<td>☐ Infrastructure and built environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☒ Forestry and land use</td>
<td>☒ Ecosystem and ecosystem services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.6. Estimated mitigation impact (tCO2eq over lifespan)</td>
<td>Mitigation will be secured via better forest management which will stabilize the rate of deforestation, protecting over 2 million hectares of carbon stock that hasn’t yet been lost. The total mitigation potential from forest regeneration alone is estimated at 94,438,400 tCO2eq (248 tCO2e/ha) for ten years. This could triple by 2030, which is the accounting period for the program. FAO E.X.A.C.T. will be used during formulation to assess additional mitigation from conservation agriculture and agroforestry.</td>
<td>A.7. Estimated adaptation impact (number of direct beneficiaries and % of population)</td>
<td>Direct beneficiaries estimated at 12 million in the pilot regions (15.6% of the rural population of the 17 states). 65 million considered indirect beneficiaries (36.5% of the total population of the country). Women &amp; youth make up slightly more than 65% of the population in rural areas, hence more than half of the program beneficiaries will be women.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.8. Indicative total project cost (GCF + co-finance)</td>
<td>Amount: USD 194.4 million</td>
<td>A.9. Indicative GCF funding requested</td>
<td>Amount: USD 100 million</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.10. Mark the type of financial instrument requested for the GCF funding</td>
<td>☒ Grant ☐ Reimbursable grant ☐ Guarantees ☐ Equity</td>
<td>☐ Subordinated loan ☐ Senior Loan ☐ Other: specify</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.11. Estimated duration of project/programme:</td>
<td>a) disbursement period:</td>
<td>A.12. Estimated project/Programme lifespan</td>
<td>This refers to the total period over which the investment is effective.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) repayment period, if applicable:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A.13. Is funding from the Project Preparation Facility requested?</td>
<td>Yes ☒ No ☐</td>
<td>Other support received ☐ If so, by who:</td>
<td>A.14. ESS category&lt;sup&gt;3&lt;/sup&gt;</td>
<td>☐ A or I-1</td>
<td>☐ B or I-2</td>
</tr>
<tr>
<td>A.15. Is the CN aligned with your accreditation standard?</td>
<td>Yes ☒ No ☐</td>
<td>A.16. Has the CN been shared with the NDA?</td>
<td>Yes ☒ No ☐</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

1 Concept notes (or sections of) not marked as confidential may be published in accordance with the Information Disclosure Policy (Decision B.12/35) and the Review of the Initial Proposal Approval Process (Decision B.17/18).

2 See [here](#) for access to project preparation support request template and guidelines

3 Refer to the Fund’s environmental and social safeguards (Decision B.07/02)
A17. AMA signed (if submitted by AE)

Yes ☐ No ☐

If no, specify the status of AMA negotiations and expected date of signing:

A18. Is the CN included in the Entity Work Programme?

Yes ☒ No ☐

A19. Project/Programme rationale, objectives and approach of programme/project (max 100 words)

Climate change has disproportionately affected smallholder farmers in the Derived Savannah/Guinea belt, rendering their coping strategies ineffective. Coping strategies include opening new fields and overharvesting NTFPs, leading to deforestation, forest degradation, and loss of ecosystems services. The Program will build adaptive capacity of 12 million people by tackling drivers of deforestation to deliver multiple benefits to livelihoods, the economy and environment: Policies, Capacity and information for better forest management will increase land productivity and reduce deforestation. Removing deforestation from energy systems will increase access to energy and mitigation, private sector expansion of plantations will create jobs and wood products. Collectively these measures will increase resilience. The ten-year, 194 million USD program will be implemented by the Government of Nigeria (GON) with technical support from AfDB.

B. Project / Programme details (max. 8 pages)

B1. Context and Baseline (max. 2 pages)

1. Between 1941 and 2000, climate change has manifested in the following ways in Nigeria4: i) total annual rainfall decreased by 2-8 mm across most of the country, but increased by 2-4 mm in a few places, most significantly around Port Harcourt; ii) a combination of late onset and early cessation of rains shortened the length of the growing season in most parts of the country; iii) general increase in temperature throughout the country with the most significant increases recorded in the extreme northeast, extreme northwest and extreme southwest, where average temperatures rose by 1.4-1.9°C. In Nigeria, agriculture accounts for 44% of GDP and 70% of employment, linking it intricately with many sectors of the economy and making it essential for a broad based growth necessary for development. The impacts of climate change have disproportionately affected smallholder farmers throughout the country, rendering their coping strategies ineffective. This group is highly dependent on shifting cultivation and harvesting forest products (both non-timber and timber products) for their livelihoods. Current challenges include increasing crop failure and loss of yields due to false start of rains, frequent intervening dry spells during the growing seasons, early cessation of growing season, crop damages by storms and flooding, rising temperatures as well as pest infestations5. Common coping strategy is opening new fields and complementing agriculture with non-timber forest products. Combined with high rate of population growth and high levels of poverty, this mode of livelihood has become a serious driver of deforestation and forest degradation, via encroachment of agriculture into forest frontiers and overharvesting of forest products.

2. This vulnerability is sharply evident in the Derived Savannah and Guinea Savannah ecosystem6 (focus of this project), which covers 41,918,000 ha across seventeen states7, with over 2,000,000 ha of it being forests (just over 5%) (Map in Annex 1). By 2016 estimates, this ecosystem harbored 43.4% of the total population (77.2 million of the 178 million total population)8. Livelihoods and economic activities in this belt are characterized by: i) a climate vulnerable and food insecure population of smallholder farmers; ii) extensive deforestation leading to degradation of ecosystems services and loss of resilience of the ecosystem and weakened ability of the ecosystem to provide goods and services for resilient livelihoods; ii) energy poverty with high dependency on biomass energy and inefficient technologies and low uptake of modern forms of energy, further aggravating vulnerability of livelihoods; iv) inadequate investments into forest based value chains hence declining contributions of forestry sector into household, state and federal economies; further reducing options for cushioning production systems and livelihoods from climate variability, exacerbating vulnerability to climate risks.


6 The common species are Pterocarpus erinaceous, Gmelina arborea, Tectona grandis, Terminalia spp. Khaya senegalensis, Adansonia digitata, Parkia biglobosa, Butospermum vitellaria, Afzelia Africana, Millacea excelsa, Borassus aethiopum, Neaulea diderichii, Manonia altissima, Khaya grandifolia, Abiessei bomei, A. congensis, Berlinia auriculata, Daniellia oliveri, Afzelia africana etc. Tectona grandis, Gmelina arborea and Eucalyptus camaldulensis are plantation forests

7 Anambra, Adamawa, Kogi, Oyo, Kwara, Kaduna, Osun, Ekiti, Enugu, Benue, Niger, Nasarawa, Plateau, Taraba, Ebonyi, Abia, FCT

3. While farm management practices, where practiced, have been demonstrated to overcome impacts of climate change and increase land productivity, this is not widespread among small holder farmers in the Derived Savannah and Guinea Savannah ecosystem because of limited skills at the individual and institutional levels for adoption of proven technologies that increase land productivity while simultaneously promoting ecosystem rehabilitation/restoration with mitigation benefits such as Forest Landscape Restoration, conservation agriculture and agroforestry (Barrier 1). In addition, there are inadequate skills and awareness levels of resource managers, coupled with weak capacities of technical institutions (Federal, State and Community levels) to provide extension services, awareness raising and facilitation to adopt SFM practices. This is exacerbated by weak research to support improvement of productivity of forestry and enhance carbon sequestration while supporting livelihoods (via economically viable income generating activities based on forestry supply chains and value addition).

4. While incomes from forest based economic activities could increase adaptive capacity, there is inadequate contribution of forest resources to the state and federal economies, as well as to livelihoods. The deforestation and forest degradation have happened in tandem with declining rate of contribution of the sector to the Gross Domestic Product (GDP), with the share of GDP from the forestry sector currently at 0.23%, having registered very small actual increase from USD43m in 1990 to about USD51m in 2011. The contribution of forestry sector to total employment in Nigeria is half the value of the figure recorded for Africa as a continent. This is due to many interrelated issues including prioritization of investments in the oil and gas sectors over other sectors and inadequate incentives for the private sector investments in the forestry sector (Barrier 2).

5. The Nationally Determined Contribution (NDC) (2015) reported that historical emissions (1850 -2010) for Nigeria are 2,564.02 million tons CO₂e. This gives per capita emissions of around 2 tons CO₂e. The country aims to cut emissions by 45% from what would have been emitted under business as usual by 2030, under a growth scenario of 5% per year. While increasing access to household energy can increase both adaptive capacity and reduce emissions (avoided emissions), adoption of modern forms of energy is very low. A 2011 assessment of the energy sector in Nigeria reported the following scenario, which exacerbates the difficulty of accessing improved and high efficiency cooking devices thereby increasing the pressure on forests: i) Efficient woodstoves are expensive, have not yet been fully developed, or reached critical volume to benefit from economies of scale; ii) Basic wood and charcoal stoves are manufactured by local welders; some kerosene stoves are locally made, although most are imported from China; iii) High import duties and long lead times for custom clearance increases the cost for improved stoves; iv) While consumers may be willing to adopt efficient and modern fuel cook stoves, this would require that they be customized for local needs and made available at a cost-effective price (ibid). This is because wood and charcoal are more expensive than LPG, with majority of the poor opting for it only because it can be purchased in smaller quantities. However, the supply chains for kerosene and LPG fuel were characterized by numerous impediments causing supply shortages and high costs (Barrier 3).

6. While better forest management could increase the integrity and reliance of the forest ecosystem itself and contribute to mitigation and adaptive capacity, inadequate skills in forest management is exacerbated by poor planning due to a near absence of data and information on the country’s forests. Nigeria has only three sets of “wall-to-wall” time-series data with potentials for historic trends in emission and a consistent basis on which to build a future national forest monitoring. These were undertaken in 1976/1977, 1997 and 2007. However, no nationwide forest inventory has ever been undertaken in Nigeria (ibid). The three forest inventory exercises undertaken in the past were mostly in the high forest zone (HFZ) and excluded some States in the arid regions. Capacity to collect forest sector data and conduct forest inventories in government and the state-level is very limited. This is partly because the national and state governments do not demand up-to date information on forest resources as an input into decision-making, leading to lack of prioritization for building up such capacity. The institutions responsible for acquiring and managing this data are under-resourced and are unable to deliver reliable data in a timely fashion. The national statistical databases have big gaps or use dated values that are prone to gross errors. This has created a vicious circle, with users dismissing the services of these organizations, reducing the funding for these organizations, and causing them to continually perform poorly. Addressing the barriers described above is exacerbated by weak policy environment and a lack of

---

9 One major drawback in planning in the forest sector is that no comprehensive forest inventory or studies has been undertaken for about two decades. Currently, the country’s forestry sector statistics are just mere extrapolations or estimates (Okonofua, 2016).
knowledge management systems to support lessons learning, adaptive management and upscaling of current baseline programs.

7. In addition to contributing to both the NAPA and NDC, the proposed program builds on, and contributes to: a) Nigeria National REDD+ Strategy whose vision is to achieve, by 2030, sustainable management of Nigeria’s forests and ecosystems, to reduce emissions from deforestation and forest degradation by 20%, promote sustainable livelihoods and advance a climate resilient national economy towards attainment of sustainable development goals (SDGs)\(^{13}\); b) Agricultural Transformation Agenda (ATA), which aims to add at least 20 million metric tons of food to the national supply and 3.5 million new jobs in the agricultural sector by 2030; c) The Sustainable Energy for All (SE4ALL) Action Agenda which aims to increase the uptake of improved energy technologies, increasing energy efficiency from 20% in 2015 to 50% by 2030, reduce the percentage of rural households using woodfuel from 90% to less than 50% and to improve the energy mix by 30% by 2030, over the current baseline.

B.2. Project / Programme description (max. 3 pages)

8. The GCF funds will be used to build adaptive capacity of selected communities, by reversing the loss of forest ecosystem goods and services caused by rampant deforestation and forest degradation of the Derived and Guinea savannah belt\(^{14}\). Although the project targets 17 states, implementation will be carefully programmed to focus on states and localities within the states where a set of criteria will guarantee the best return on GCF investments\(^{15}\). A draft theory of change for the program was developed between March and August 2017 (Annex 2), via a multi-stakeholder participative process organized through two workshops (Abuja and Kaduna). The GCF National Designated Authority (Department of Climate Change in the Federal Ministry of Environment) was fully involved in the preparation of this program through a series of meetings to define the overall objectives, the theory of change, the program logframe and the management structure of the project.

9. **The goal of the program is:** “A healthier forest ecosystem providing goods and services to the environment and dependent communities, while simultaneously securing resilience for the ecosystem and dependent economies (in 17 States)”. A program of work is proposed to engineer a shift from the ‘business as usual’ scenario of overexploitation of forest resources without careful planning; a process which has reduced the ability of the forest ecosystem to provide goods and services to livelihoods, increasing their vulnerability to climate risks, slowed the economic growth, degraded the natural capital and accelerated loss of resilience for the ecosystems and people dependent on them. The new approach will secure ecosystem resilience, accelerate economic growth and enhance development, which will build adaptive capacity. The program will therefore address drivers of deforestation and forest degradation in the belt, and support measures that enhance resilience of the ecosystem and the people dependent on them.

**Component 1: Forest Resources Assessment provides information for improved forest management.**

10. Forest planning is the most important condition for sustainable, continuous, economically efficient and ecological forest use, necessary to sustain adaptive capacities of rural production systems and livelihoods. The program will therefore undertake a national wall-wall forest mapping, set up a national forest monitoring information system and conduct forest inventories, map boundaries for protected areas and forest reserves, and, identify degradation and forest intactness hotspots in the 17 states. The findings of the assessments will be published in the triennial State of Forest Report, which will include forest cover maps for the country, based on the states. These maps, prepared with the use of remote sensing technology, will also provide information on other spatial characteristics and trends such as monitoring shifting cultivation, assessment of forest density, mining leases, wildlife habitats, forest fragmentation, and forest fire affected areas, assessment of mangroves, and delineation of forest types.

---

\(^{13}\) The REDD+ Strategy does not have a specific timeline or budget; it is being used as a framework planning tool to mobilize more specific projects, such as this one proposed for GCF funding

\(^{14}\) The region covers 17 States measuring 419,180Km\(^2\) (2,000 Km\(^2\) forests) with a total population of just over 77 million people (43% of the total population).

\(^{15}\) During the project development period, the criteria will be negotiated, agreed and applied to select the states and localities; however it is likely to include considerations such as: i) Readiness at the state level - demonstrated by setting up state implementation units financed by the state (co-finance to GCF), and willingness to review state level policy and legislation, in tandem with the national policy review; ii) At the locality level, existence of reasonable forest estates (carbon stocks) under growing threat from the drivers of deforestation and forest degradation (described in the earlier chapter), combined with high levels of community forest management being live close to the forests and dependent on forest ecosystem services. For the establishment of plantations, willingness of the relevant governance unit to issue guarantee of long-term tenure to the private sector will be critical. Other criteria might include considerations such as: i) the degree to which proposed actions serve public objectives, the probability of success, the degree to which the issue of concern threatens the economy, environment, society, or human health, the availability of funding and other resources and the degree to which any proposed actions fulfil international obligations and other strategic goals. A risk analysis will also be conducted to inform the selection of both states and localities within states.
Component 2: Natural resources management guided by Forest landscape restoration plans

11. The program will support the formulation and implementation of Forest Landscape Restoration plans for the participating 17 states. Where applicable, implementation of the FLR plans will take the form of a state level REDD+ scheme, coordinating closely with the National REDD+ strategy. The program will therefore assist five community groups and their technical advisors/supporters with the formulation of REDD+ Strategy and Action Plans (RS/AP) including identification of relevant safety measures in line with the Cancun Provisions; development of five Regional Forest Monitoring Systems (RFMS) (in conjunction with component 1), and development and submission of Forest Reference Emission Levels (FREL)/ Forest Reference Levels (FRLs) to the National REDD+ strategy.

12. As part of implementation of the FLR plans, the program will support stakeholders to engage in afforestation, enrichment planting, assisted natural regeneration and protection of important forests and carbon stocks (Outcome 2). Working with community based organizations, the program will train about 50 officials from the state governments on SFM and support about 20,000 community members (including youths and women) on seedlings production and silvicultural management (from selected communities throughout the region). These community groups (or individuals) will supply quality seeds for afforestation and enrichment planting (under supervision of the staff of the state department of forestry for quality control). They will therefore receive training on best management practices in nursery production and will be linked to micro finance to finance the micro businesses and market opportunities. Other community members (especially the youth, both men and women) will benefit by providing labour for planting and nurturing the trees. It is estimated that: i) under community based afforestation/reforestation, 42,500,000 trees can be planted on 17,000ha of restored land per state (289,000ha), benefitting about 2.56 million people; ii) under enrichment planting in secondary forests, 6,800,000 trees can be planted on 34,000ha of restored land per state (benefiting about 1.28 million people); iii) 273,000ha can be protected to ensure speedy forest restoration through Farmer Managed Natural Regeneration on free areas (outside FR), benefitting about 2.56 million people. Thus a total of 49.3 million seedlings would be planted on a total of 323,000 ha (1% of the landmass of the 17 states), and benefitting a total of 6.4 million people (or 8% of the population of the 17 states).

13. The program will also support the adoption of conservation agriculture (outcome 3). This will include measures such as putting at least 40% of cultivated lands under crops that are tolerant to the prevailing climatic conditions; adopt better agronomic practices over at least 75% of cultivated lands, to increase soil moisture holding capacity (e.g., conservation tillage), and soil erosion protection measures, such as terraces and bunds. It will facilitate identification of suitable varieties of arable crops (such as groundnut, rice, orange, flesh sweet potato, sorghum, maize, cassava, yams). It will also organize Farmer Field Schools for at least 40% of peasant farmers, through which it will provide relevant skills, in response to the training needs assessment. It is however expected that skills will be needed in areas such as sustainable land management (SLM), Good Agricultural Practise (GAP), bee keeping, taungya and improved agroforestry practice, backyard farming of vegetable, mushroom, etc. It is estimated that at least 50 farmer Field Schools groups will be created in each state; 10 shallow wells with treadle pumps per state, 10 solar powered boreholes per state, 10 windmills boreholes and 340 treadle pumps (all these numbers will be confirmed during program planning, or in the course of program implementation). Under this component, the program will bring over 1 million hectares under a triple-win production system (2.4% of total landmass of the 17 states): higher yields, higher climate resilience, and lower carbon emissions by at least 2 million tons in twenty years. In addition, agroforestry will be practiced over an additional 3 million hectares (7% of the landmass of the 17 states), benefitting 3.84 million people (via increased soil fertility and higher yields – about 5% of the population of the 17 states). It is expected that collectively, these measures will improve yields by at least 50% for three core crops per area.

Component 3: Increasing economic contribution of the forestry sector to economic development

14. The program will provide incentives for private sector and other relevant stakeholders to participate in plantation development. 60,000 ha of new plantations will be established to supply industrial wood and revenues. The program will facilitate the identification of interested investors and structure financial deals which will include financing and availability of land that is suitable for rehabilitation via plantations (within the FLR plans, especially within degraded forest reserves and/or community forests). They will secure land tenure arrangements, without which long-term investments in plantations are not viable. It will then identify investors and link them to the entities providing land for plantations (either government on forest reserves or communities on community forests). Potential species for plantation establishment include Tectonial grandis (Teak), Terminalia ivorensis and Gmelina arborea. It is estimated that establishing plantations on 60,000 hectares would create jobs for about 420,000 individuals per year (from communities around the plantations) engaged in planting, silvicultural operation and sustainable harvesting. This will introduce over four million US dollars to the local economy over ten years. In addition, the program will facilitate
community participation in the plantation enterprise, in an out grower scheme covering a minimum of 10,000 ha. The program will therefore facilitate the process of identifying state/village level entrepreneurs and assess the barriers to their effective participation in plantation out grower schemes. Based on the findings of the assessment, the program will design and implement a capacity development program for qualifying entrepreneurs to ensure that they can engage in growing trees on plantations in strict compliance with technical guidelines, to ensure that the end products meet international standards of quality, guaranteeing profitability of the enterprise. It is estimated that at least 2 million tons of carbon will be mitigated via the plantation establishment over twenty years (actual mitigation to be confirmed during project design).

**Component 4: Removing deforestation from the energy systems in the 17 states.**

15. This component will be implemented in close coordination with the Nigeria chapter of the Sustainable Energy for All (SESALL), and partly financed from the loan component of the program. The program will remove deforestation from household energy by reducing wastage in charcoal burning by at least 50% and increasing adoption of low carbon modern energy systems by at least 25%, while simultaneously increasing employment and incomes in the energy sector. The program will therefore design and implement an incentive package to support widespread uptake of the low carbon modern energy technologies and sustainable charcoal. This will include review of policy to identify policy measures that would promote uptake of these technologies (in conjunction with component 5). Specific activities will include formation and operationalization of at least 100 charcoal producer associations, whose members will be trained on improved charcoal production technologies. It will set up community pilot demonstrations for charcoal production (including woodlots) and support their implementation, connecting communities to research institutions for information on fast growing tree spp. for charcoal and support to development of alternative energy sources such as Jatropha spp. The charcoal associations will also be vehicles for disseminating information on better conversion methods and sustainable forest management principles. It will also include provision of loans to willing entrepreneurs to manufacture and trade in low carbon energy technologies (biogas, solar lamps/cookers, mini hydro grids), and sustainable charcoal equipment (such as high efficiency kilns and stoves, packaging and marketing sustainably produced charcoal). The program will identify potential investors in the energy sector and link them to sources of finance (deal structuring). This will add and/or strengthen at least two thousand entrepreneurs, creating more than 4,000 jobs. The program will put measures in place to ensure that at least 30% of these entrepreneurs are women and that the share of women taking up the new jobs is similar to that of men. It is estimated that improved household energy systems will reduce localized forest degradation significantly, mitigating up to 2 million tons of carbon over twenty years (tons of carbon to be confirmed during program design).

**Component 5 – Enabling environment to support implementation and sustain results.**

16. The program will support the establishment of a policy enabling environment for mainstreaming SFM into the productive and energy sectors, to be undertaken in a highly participatory process. At the national level, the program will support the review of the Forestry Policy (2006) and the draft Policy Bill (formulated in 2003 but has not yet been enacted). It will also support 17 states to review their Forestry legislation to align them with the recommended content of the National Policy and Act. The program will also facilitate review of the agriculture, Trade and Energy policies to identify and propose recommendations for mainstreaming SFM considerations into these sectors. The program will also provide skills and operational capacities to the extension service and other relevant institutions to support the implementation and sustainability of results of the whole program. The program will deliver a 40% increase in capacity from the baseline (to be confirmed during program formulation). The institutions are likely to be the Federal Departments of Environment and Climate Change; the state departments of agriculture and forestry (forestry resides in the Ministry of Agriculture in many state governments), Protected area Managers (where National Parks and/or Forest Reserves are part of the state forests), State extension service (which are typically housed by the State Ministry of Agriculture), Community Forest Management Committees, Community Based Organizations (CBOs), Producer groups and cooperatives (where such exist or where they need to be established), local land users in Farmer Field Schools, micro finance service providers and institutions of higher learning.

**Risks and mitigation measures**

17. Risk 1: Recommended policy changes are not approved during program lifetime: An advocacy program will be implemented along with the policy analysis, targeting the relevant high level policy makers who can make it happen.

Risk 2: Cheap imports make locally produced timber products uncompetitive hence program has no real impact on increasing contribute of forestry sector to the economy or shifting balance of trade: The program will facilitate an assessment of projections of future timber supply – number of countries that were net exporters that are now net

---

16 The extent of carbon emissions reductions will be confirmed during project design
importers. It will then design and implement incentives to make production cheaper such as low interest loans (under component 3). Risk 3: Demand for energy and forest products continue to outpace sustainable supply despite the project: The program includes activities to promote alternative energy mix – addressed under component 4. This will be based on an in-depth analysis of the structural barriers hindering adoption of a more varied energy mix, including the value chain for LPG, biogas and hydro-electricity. Risk 5: Inadequate collaboration between the many partners in the program due to ineffective coordination, turf wars, inflexible institutional cultures, etc.: The program implementation arrangement is based on the necessity to cultivate a strong political buy in supported by robust program implementation manual, strong program coordination comprising a Federal level coordination unit as well as state level implementation units. Risk 6: Land-Use Restrictions - The program will develop FLR to promote measures to reduce deforestation and forest degradation, and restore forest ecosystems. Some of the FLR plans may place restrictions on existing and future land uses. Although the program does not envisage physical displacement, land-use restrictions may increase the possibility of economic displacement, especially for poorer and marginalized individuals who may not have resources to change current production practices: All the components have a focus on strengthening community participation through capacity building, advocacy and sensitization, and provision of alternative livelihoods. Empowering the community forestry management committees and updating the forestry policy, at federal and state level will secure community ownership and security of tenure. Risk 7: Elite capture of benefits at the community level – e.g. increased financial benefits are not equitably distributed to stakeholder groups: Program implementation will be guided by a gender action plan to ensure equitable sharing of benefits between gender groups. In addition, where relevant, the REDD+ Cancun Safeguards and grievances mechanism will be adopted.

B.3. Expected project results aligned with the GCF investment criteria (max. 3 pages)

18. Adaptation potential: The expected total number of direct beneficiaries (reduced vulnerability and increased resilience) of the program are estimated at more than 12 million in the pilot regions representing 15.6% of the rural population of the 17 states. The rest of the 65 million people can be considered indirect beneficiaries, representing 36.5% of the total population of the country. Women and youth make up slightly more than 65% of the population in rural areas, hence more than half of the program beneficiaries will be women. This will be supported by the gender action plan. The share of youth (under 35 years) is 50% of the total population. The program will build social capital by increasing food productivity, skills, household income, access to energy and empowered local institutions. This will increase their livelihood assets because of the increased human, financial, social, physical and natural capitals, boosted by increased linkages to markets, information and new technologies. It will also improve self-organization (via farmer field schools, producer groups, etc.), enabling local groups to address the problems they encounter with little external help. Finally, provision of energy, along the principles of the SE4ALL contributes directly to Sustainable Development Goal (SDG) No. 7 on energy. This goal underpins progress on other sectors, especially health, water and education, gender equality, economic growth and climate action. Improvements in these areas of livelihoods increases resilience.

19. Mitigation potential: Mitigation will be secured via better forest management which will stabilize the rate of deforestation, protecting over 2 million hectares of carbon stock that hasn’t yet been lost (the 17 states have an average forest cover of 5%). The total mitigation potential of the program from forest regeneration alone is estimated at 94,438,400 t/CO2Eq @ 248 t/CO2 e/ha for ten years. This could triple by 2030, which is the accounting period for the program. These figures will be refined during program planning period to include mitigation potential from establishment of plantations, reduced deforestation and protection of current carbon stocks and conservation agriculture. The FAO E.X.A.C.T tool will be applied and final figures reported in the Program document.

20. Innovation: The Forest landscape restoration (FLR) is a highly innovative long-term process of regaining ecological functionality and enhancing human well-being across deforested or degraded forest landscapes. Its innovation is well described by its guiding principles17. Mapping forest resources under component 1 will rely on the application of cutting edge space based technologies. One of the strengths of space based technology is that the activities can be replicated, the results are consistent and can be verified. Additionally, space technology creates an opportunity to access information in locations that are not accessible via other technologies. Use of private sector to for increasing financial incentives for forest conservation from value chains and diversifying sources of

---

17 IUCN, 2014: Forest Landscape Restoration Opportunity Assessment for Rwanda September, 2014
21. **Potential for knowledge and learning:** The program will make provision for actively generating and sharing lessons that will be widely applicable in the rest of the states (within the country) and other countries with potential for adopting the FLR as a tool for an integrated approach to rehabilitating forested landscapes to secure ecosystems services in support of resilient production systems and livelihoods. The program will engage an expert on knowledge management at the National Program Coordination Unit, to ensure that the program has a knowledge management system that is utilized to: i) systematically build on existing knowledge (lessons, best and worst practices) to reduce duplication and waste while building on synergies and adding to existing knowledge; b) generate, collate and use lessons in adaptive management; c) disseminate lessons widely to facilitate replication. The program will in particular share knowledge with the West Africa sub-region, especially countries with similar ecosystem characteristics and more broadly within the entire zone of the Green Great Wall.

22. **Contribution to the creation of an enabling environment:** The program seeks to create enabling environment in two broad areas that will foster replication and sustainability of results: i) building capacity of the stakeholders, especially for community groups and their extension services. Combined with the updated information on the state of forests in the country (provided via component 1), this capacity will foster engagement of the private sector in rehabilitation of degraded forests and replication of the initiatives outside of the pilot areas in and around the 17 states; ii) increasing the contribution of the forestry sector to economic development at national and local levels. This will be achieved by expanding the forest plantations with trees of economic value (as part of the FLR, guided by knowledge and environmental impact assessments), and introducing forest based value chains such as sustainable charcoal.

23. **Improving regulatory framework and policies:** the national forestry policy will be reviewed and the draft Bill updated. The 17 states will update their forest policies and bring them in line with current needs and opportunities, strengthening the country’s contribution to the global effort of improving forest management and enhancing carbon pools. Communities will update their forest management and sustainable harvest rules and regulations, encoded in Community Based Forest Management plans and Bylaws, which are informed by the updated state Forestry policies. These bylaws will have the full weight of formal law and should tackle issues of user rights, ownership/tree tenure in the free areas, and contribute to regulations on benefit sharing under the REDD+ arrangements. Regulatory framework will also be increased via improved inter and intra coordination between Federal State, state governments, community natural resources and community forest management committees. The program will contribute recommendations on amendments required to mainstream SFM in other sector policies such as energy, agriculture, trade and mining.

24. **Economic co-benefits:** The (NASPA-CCN) (2011) estimated that, in the absence of adaptation, climate change could result in a loss of between 2% and 11% of Nigeria’s GDP by 2020, rising to between 6% and 30% by the year 2050. This loss is equivalent to between N15 trillion (US$100 billion) and N69 trillion (US$460 billion). The (NASPA-CCN) identified improving forest ecosystem for increasing resilience of ecosystems services, production systems and livelihoods. It can be assumed that the cost of adapting the economy, production systems and livelihoods to climate change would be close to the projected loss to GDP. The program will yield foreign currency savings by reducing timber imports in the long-term. It will halt the trend of declining contribution of the forest sector to the GDP. At the peak of good forestry management, the sector contributed 6% to GDP, which has fallen to 0.23%. The program is expected to catalyze the state and local economies, creating up to 1,000,000 jobs per year ranging from direct labor in forest rehabilitation works (100,000); direct labour on 60,000 hectares of plantation (420,000); local entrepreneurs on 10,000 hectares plantation out-grower schemes (100,000) and traders on alternative energy technologies (10,000); These numbers are estimates to be confirmed during program development phase.

25. **Social co-benefits:** The benefits from components 2, 3, 4 and 5 will collectively increase social capital via stronger community institutions, skilled community members, advance gender balance in the society, improved cross sectoral and stakeholder coordination and improved governance in NRM issues, increased access to modern forms of energy (improved cookstoves, liquefied petroleum gas, solar, biogas, electricity). Combined with higher productivity of the land, these measures improve the adaptive capacity for participating individuals by improving health (reduced respiratory infections from fire-smoke) and allowing better time management (increased leisure time which can be utilized to improve prospects of individuals – acquiring more education, etc.). This will increase the resilience of the production systems and livelihoods, thereby reducing vulnerability to climate change. The
gender action plan will be applied to ensure that costs and benefits of the program are equitably distributed amongst all the gender groups.

26. **Environmental co-benefits:** Providing an updated information on the forest resources (component 1) will provide a solid basis for improved forest management. Together with the policy and legislative reform, the forest landscape restoration approach adopted will enhance forest management, protection of ecologically sensitive landscapes/forests, afforestation and reforestation. Collectively, these measures will enhance the ecological functionality of forest ecosystems of over 4 million ha of direct intervention (10% of the total landscape) and 37 million hectares of indirect and upscaled interventions (the rest of the landscape). This will secure ecosystem services, including: carbon stocks in over 2 million hectares of forests, enhanced biodiversity conservation in both protected areas and the productive landscape, via improvement of management effectiveness of protected areas and community forests; improved soil quality and fertility, via conservation agriculture (including agroforestry) and improved tree cover, which reduces soil erosion. In addition, increased tree cover in agroforestry and planting of living hedges and windbreaks will reduce wind erosion and improve air quality beyond the program intervention areas. In the long-term, the program will contribute to recharging of groundwater resources, rivers and other water bodies, as a result of increased forest cover, reduced erosion and siltation of water bodies and protection and restoration of ecologically sensitive areas for watershed protection.

27. **Gender-sensitive development impact:** Many of the proposed program activities are ordinarily undertaken by women and the youth, who form about 60% of the rural population in the 17 states. The program will design and use a gender action plan to ensure that costs and benefits of the program are distributed equitably amongst all the gender groups, and that women and the youth are actively engaged in program implementation.

28. **Vulnerability:** The country has high exposure and sensitivity to impacts of climate change. Nigeria’s economy is dependent on sectors that are either climate sensitive or contribute to climate change such as agriculture, forestry, fisheries, which together employ up to 70% of the workforce. The program will address loss of resilience, structure and functions of forest ecosystems resulting from deforestation and forest degradation; loss of resilience of community groups to climate change impacts from reduced forest ecosystem services, inadequate and life threatening energy supply systems, food insecurity and low household incomes due to high rates of unemployment, low productivity of the land and inadequate economic beneficiation opportunities.

29. **D.5. Country ownership** - The program is fully aligned with all the relevant national development policies and strategies, especially the Nigeria Vision 2020, the NAPA and the NDC. The program was initiated by the Federal Department of Forestry (FDF). The concept was developed through a consultative process involving relevant public sector agencies, national, local and international civil society organizations, the private sector, and other stakeholders (50 participants). The problem analysis was elaborated by a participatory multidisciplinary working group led by the FDF, and validated in a multidisciplinary workshop.

30. **D.6. Effectiveness and efficiency** – Effective delivery of the project results will be ensured via the project management arrangements (Annex 2), which will be based on efficient management systems of the AfDB and the GoN. Due to lack of data, it is not yet possible to calculate the unit cost per tCO2eq (obtained by dividing the program investment directed at supporting mitigation by the total amount of the mitigation impact), which could be given for the entire program implementation and capitalization period (30 years) until 2048. This will be calculated during project formulation. As achieving the mitigation potential is not possible without parallel investment in adaptation, it is not appropriate to divide the investment cost between mitigation and adaptation. The co-financing ratio for the Fund is 1:1, made possible by the extensive investment the Federal Government, State Governments and communities are making into natural resources management. The Forest sector is reasonable equipped with staff and equipment, and a budget for operations. The challenge is that all these institutions lack the resources for implementing the necessary programs of work that would meaningfully improve forest management and address the drivers of deforestation, forest degradation and loss of resilience of the ecosystems and livelihoods.

C. **Indicative financing / Cost information (max. 3 pages)**

C.1. Financing by components (max ½ page)
### Component Indicative cost (USD, 000,000)

<table>
<thead>
<tr>
<th>Component</th>
<th>Indicative cost (USD, 000,000)</th>
<th>GCF financing</th>
<th>Co-financing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Amount (USD, 000,000)</td>
<td>Financial Instrument</td>
</tr>
<tr>
<td>1</td>
<td>10</td>
<td>10</td>
<td>Grant</td>
</tr>
<tr>
<td>2</td>
<td>26</td>
<td>26</td>
<td>Grant</td>
</tr>
<tr>
<td>3</td>
<td>80</td>
<td>40</td>
<td>Loan</td>
</tr>
<tr>
<td>4</td>
<td>60</td>
<td>20</td>
<td>Grant</td>
</tr>
<tr>
<td>5</td>
<td>18.4</td>
<td>4</td>
<td>Grant</td>
</tr>
</tbody>
</table>

**Indicative total cost (USD)** 194.4

<table>
<thead>
<tr>
<th>Co-financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
</tr>
<tr>
<td>94.4</td>
</tr>
</tbody>
</table>

### C.2. Justification of GCF funding request (max 1 page)

31. Climate change increases existing development challenges and brings new ones. In Nigeria in general, and the Derived Savannah-Guinea savannah belt in particular, climate change impacts on ecosystems are increasing pressure on the natural resources that many people depend on for their wellbeing and livelihoods, further threatening development investments. Although rural communities have minimal contribution to climate changing emissions, they suffer greatly from the impacts of climate change due to their low adaptive capacities. There are three potential strategies to address the vulnerability and impacts of climate change in the rural landscapes: planned retreat, protection via engineering, ecosystems based adaptation. Under (Planned) Retreat – The loss of resilience, reduction in food productivity, flooding and droughts are allowed to occur, and human impacts are minimized by opening up new areas for agriculture, combined with food aid, using more agricultural inputs, land use planning, early warning and evacuation systems, risk-based hazard insurance, etc.; under Protection – The impacts of lower resilience and increased predictability/reliability of weather patterns, hazards from droughts and flooding are controlled by soft or hard engineering (e.g., use concrete to build rural houses and roads, etc.), reducing human impacts in the zone that would be affected without protection. However, a residual risk always remains, and complete protection cannot be achieved. The two options above are very expensive. Under **Ecosystem/nature based adaptation**: Ecosystem services, for example those provided by the country’s forests, aquatic and agro-ecosystems can be a cheap, readily available form of adaptation. Healthy forest ecosystems play an important role in enhancing food and human security and protecting infrastructure, acting as natural barriers and mitigating the impact of (and aiding recovery from) many extreme weather events, such as flooding, droughts, extreme temperatures, fires, landslides, hurricanes and cyclones. Food security is particularly dependent on people being able to benefit from the flow of ecosystem services, both directly and indirectly.

32. Given the low levels of economic and technological sophistication in the communities of the 17 states however, the ideal situation would be to adopt an ecosystems based approach to adaptation that incorporates various options from the other two strategies wherever relevant, as will be achieved via the proposed program. The program will build on the baseline programs through which the government will address developmental challenges, and use the GCF funds to build adaptive capacity of the rural populations, to tackle vulnerabilities. The program is therefore in line with the GFC objectives and investment framework, particularly creating a transformative change through a systemic solution and a programmatic mechanism to address a key environmental problem leading to avoided emissions and significant investment for adaptation through the program intervention.

*Justify the rationale and level of concessionality of the GCF financial instrument(s) as well as how this will be passed on to the end-users and beneficiaries. Justify why this is the minimum required to make the investment viable and most efficient considering the incremental cost or risk premium of the Project/Programme (refer to Decisions B.12/17; B.10/03; and B.09/04 for more details). The justification for grants and reimbursable grants is mandatory.*

*In the case of private sector proposal, concessional terms should be minimized and justified as per the Guiding principles applicable to the private sector operations (Decision B.05/07).*

### C.3. Sustainability and replicability of the project (exit strategy) (max. 1 page)
### Exit strategy
The nature of the proposed program is such that most of the outputs will be self-sustaining after the GCF funding ends. Due to the large area targeted (Derived Savannah-Guinea forest belt covering 17 states) and the long-term nature of rehabilitating degraded forestlands, a ten year period is proposed (instead of the traditional 5-6 years). The most significant deliverables from the program will be sustained as suggested below, which will be confirmed during the program planning phase:

- **a)** Updated forest information (maps, inventories) – which will be used to guide future forest management planning. This needs to be updated every 10 to 20 years. The government will mobilize funding for the next update in the next 10 to 20 years.
- **b)** Forest Landscape Restoration plans for 17 States – implementation of these plans will be mainstreamed into the States forest management plans and supported through the regular extension services systems and community forest management regimes. At least 5 REDD+ Action Plans will be formulated to support long-term implementation of SFM measures, with prospects of financial benefits in addition to the other types of benefits from such schemes (biodiversity conservation, land productivity, etc.).
- **c)** Alternative energy systems (solar, high efficiency cookstoves, rural electrification for selected villages) and **d)** plantations of commercial species – these are self-sustaining, but the continued supply of alternative sources of energy will be sustained through involvement of the private sector and established/strengthened market channels.
- **e)** Systemic, institutional and individual capacities (policy/legislative reform, capacities at institutional and individual levels) – these are mechanisms for sustaining the results and promoting upscaling and replication. However, an exit strategy will be designed during the program formulation stage.

*For non-grant instruments, explain how the capital invested will be repaid and over what duration of time.*

### Engagement among the NDA, AE, and/or other relevant stakeholders in the country (max ½ page)

34. The project concept was initiated by the Department of Forestry. The NDA has participated in all the stages of the design, including the formulation of theory of change and the project strategy, including budget.

### Supporting documents submitted (OPTIONAL)

- Map indicating the location of the project/programme
- Diagram of the theory of change
- Financial Model
- Pre-feasibility Study
- Evaluation Report of previous project
Annex 1:

Degraded Areas in the Programme States

Source: Land Degradation Neutrality Programme
Annex 2: Theory of Change for the program
Annex 3: Program Management Arrangement

**Program Steering Committee**
- Representative of the Federal Ministry of Environment (Chair); Federal Depts of environment and climate change, Representative of the AfDB National Forest Conservation Council (NFCCN), civil society, academia and the private sector
- Roles:
  - Program oversight
  - Advise
  - Program advocacy

**Program Coordination Unit**
- National Program Director – Head
- Finance and Ops
- Technical Director
- Knowledge, M&E, Gender officer
- Roles:
  - Coordination
  - Planning

**Program Execution units**
- Head of PIU
- Federal Department of Forestry
- State Department of Forestry
- State Ministries of agric., Trade, Energy
- Roles:
  - Execution
  - Day to day management
  - Monitoring
  - Reporting
  - Financial Management

**Contractors**
- National Mapping
- FLR plans
- Conservation Agriculture
- Plantation & out grower scheme
- Energy
- NTFP value
- Others

**Loan management**
- Reporting
  - Sharing information
### Self-awareness check boxes

<table>
<thead>
<tr>
<th>Are you aware that the full <strong>Funding Proposal</strong> and Annexes will require these documents? Yes ☐ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Feasibility Study</td>
</tr>
<tr>
<td>• Environmental and social impact assessment or environmental and social management framework</td>
</tr>
<tr>
<td>• Stakeholder consultations at national and project level implementation including with indigenous people if relevant</td>
</tr>
<tr>
<td>• Gender assessment and action plan</td>
</tr>
<tr>
<td>• Operations and maintenance plan if relevant</td>
</tr>
<tr>
<td>• Loan or grant operation manual as appropriate</td>
</tr>
<tr>
<td>• Co-financing commitment letters</td>
</tr>
</tbody>
</table>

| Are you aware that a **funding proposal** from an accredited entity without a signed AMA will be reviewed but not sent to the Board for consideration? Yes ☐ No ☐ |