Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 05-Nov-2021 | Report No: PIDA30859

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Nigeria	P175237	Agro-Climatic Resilience in Semi-Arid Landscapes (ACReSAL)	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
AFRICA WEST	28-Oct-2021	16-Dec-2021	Environment, Natural Resources & the Blue Economy
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	The Federal Republic of Nigeria	Federal Ministry of Environment	

Proposed Development Objective(s)

The PDO is to increase the implementation of sustainable landscape management practices in targeted watersheds in northern Nigeria and strengthen Nigeria's long-term enabling environment for integrated climate-resilient landscape management.

Components

Component A: Dryland Management
Component B: Community Climate Resilience
Component C: Institutional Strengthening and Project Management
Component D: Contingency Emergency Response

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	700.00
Total Financing	700.00
of which IBRD/IDA	700.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	700.00
IDA Credit	700.00

Environmental and Social Risk Classification

High

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

1. **Nigeria is central to the World Bank's mission of eliminating global poverty.** A multi-ethnic and diverse federation of 36 autonomous states, Nigeria is Africa's largest country (over 200 million people) and largest economy (nominal gross domestic product (GDP) of around USD405 billion in 2020). With an abundance of resources and a young and dynamic society, it has the potential to be a giant on the global stage. But with over 40 percent of its population (over 80 million people) in poverty, Nigeria is also among the countries with the largest number of people living below the poverty line. Economic growth, at -1.8 percent in 2020, has been below the rate of population growth since 2016, when Nigeria experienced its first recession in two decades. Fragility, conflict, and insecurity afflict many parts of the country, in particular the northeast. Insufficient capacity constrains the public sector, and on many human development indicators, Nigeria ranks amongst the lowest in the world. To realize its considerable potential, and to fulfill the government's ambition to lift 100 million Nigerians out of poverty by 2030, Nigeria must make tangible progress on multiple fronts, at both the federal and sub-national levels.

2. **Nigeria's poor human capital outcomes reflect the low levels of public expenditure and weaknesses in service delivery.** In terms of the Human Capital Index (HCI), Nigeria, in 2020, was the seventh lowest in the world—168th out of 174 countries. A baby born in Nigeria today will, if the levels, quality and coverage of human capital investments and service delivery remain unchanged, enter the labor force 18 years from now only 36 percent as productive as she would be if she were to enjoy the benefits of a complete quality education and full health. Human development outcomes are particularly low among girls and young women in Nigeria. Girls have fewer educational opportunities, more limited access to credit and productive resources, and poorer labor market outcomes even when gaps in human capital are considered.

3. **Nigeria experiences a diverse climate that ranges from arid in the north to tropical in much of the**

country and is listed among the countries most exposed to climate risks.[1] Temperature increases of 0.03°C per decade were observed between 1901-2016, with stronger increases occurring over the last 30 years of 0.19°C per decade[2]. It is also projected that heat wave duration will increase, with the largest increases in the North. There has also been an incremental decrease in rainfall amount and predictability in the country since the 1960s. Projections also indicate an increase in the number of days with extreme rainfall over most of Nigeria. Climate change is profoundly affecting Nigeria's economy. It is estimated that 2-11% of GDP could be lost due to decline in agricultural productivity and activities related to agriculture. A decline of 10 to 25 percent in agricultural productivity and shrinking of GDP by 4.5 % by the year 2080 has been projected[3]. Agricultural yield has already fallen by 50% in some parts of the north

4. **The country faces a high water-scarcity hazard level, with droughts expected to occur on average every five years, with potential increased frequency due to climate change**.[4] Such water scarcity not only threatens food security, livelihoods, and productivity, but also exacerbates fragility and increases the risk of violence. Seasonal variability in rainfall has affected groundwater recharge, availability of surface water for irrigation, power generation, navigation, and other economic activities. Persistent water shortages, especially in the extreme north, will continue to exacerbate land degradation, desertification, and habitat loss. Inaction (business-as-usual) could cost the country an estimated 2 to 11 percent of GDP by 2020 and between 6 and 30 percent by 2050, affecting the livelihoods of millions of households.[5] Other substantial climate-driven impacts include more frequent and harsher torrential rains and windstorms in the southern states in recent years than in the past 40 years; major floods in 2012, 2015, and 2016; and more heat and less rain in Nigeria's north, with portions of the northern Sahelian area receiving 25 percent less rain than 30 years ago.[6] Better environmental and water resources management and resilience against disaster and climate risks (largely water-related) are needed to sustain economic growth and protect the most vulnerable.

5. **The GoN launched the Economic Sustainability Plan (ESP) in July 2020, featuring an ambitious package of policy measures and programs over the next twelve to eighteen months.** These range from fiscal and monetary measures to mobilize revenues and maintain macro-financial stability to scaling up of social assistance and subsidized credit programs to support households and micro and small enterprises. It also includes large-scale initiatives to stimulate activity and create jobs through investments in agriculture, roads, renewables, housing, and water, sanitation, and hygiene (WASH). Nigeria's earlier multi-year plan, the 2017-2020 Economic Recovery and Growth Plan (ERGP), was formulated in the aftermath of the 2016-2017 recession. While the successor multi-year plan for 2021-2024 is being developed, and in the context of the COVID-19 crisis, the ESP serves as a bridge.

[1] Nigeria is ranked 18 of 135 countries according to *GermanWatch's Climate Risk Index* (*https://germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20Climate%20Risk%20Index%202020_14.pdf*; the higher being more vulnerable) and 160 of 181 countries based on Notre Dame's Global Adaptation Initiative Index (*https://gain.nd.edu/our-work/country-index/rankings/*; the lower being more vulnerable).
[2] https://climateknowledgeportal.worldbank.org/country/nigeria/climate-data-historical
[3] Updated Nationally Determined Contribution (NDC), page 10
[4] Assessment of thinkhazard.org web-based tool developed by Global Facility for Disaster Reduction and Recovery (GFDRR).
[5] According to the 2017 climate assessment.
[6] Nigeria's third National Communication to the United Nations Framework Convention on Climate Change (2020).

6. **The economic and human impact of the COVID-19 pandemic on Nigeria is severe, even if the country manages to contain the outbreak locally.** Because of Nigeria's vulnerability to oil price shocks, with the sharp fall in oil prices as a result of the COVID-19 crisis, the economy contracted by 1.8 percent in 2020, and consolidated government revenues fell from 8.2 percent of GDP in 2019 to 6.5 percent of GDP in 2020, at a time when fiscal resources were urgently needed to contain the outbreak and initiate counter-cyclical and pro-poor fiscal measures to protect the lives and livelihoods of the nearly 90 million Nigerians in extreme poverty and millions of others in urban areas who are dependent on the informal economy. Estimates suggest that the extreme poverty rate could go up by a couple of percentage points and that the number of poor could increase by between 10 to 15 million by 2022.[7] The human and economic costs would be amplified if the outbreak becomes more severe, leading to a deeper recession and greater health-related costs. Since the first COVID-19 infection case was identified in late February 2020, by April 30, 2021, Nigeria had recorded 165,055 cases and 2,063 deaths. The Government has responded proactively to contain the spread, mitigate adverse impacts of the crisis, and lay the groundwork for a robust recovery. The response has focused on containing the outbreak, marshaling the needed fiscal resources in the face of severe fiscal constraints, and taking steps to mitigate the adverse impact of the economic downturn by reprioritizing federal and state government spending and protecting social expenditures. Because of Nigeria's size, population, socioeconomic, and federal administrative structure, coupled with its weak public service provision and longstanding unfinished structural reform agenda, implementation of the crisis response will be challenging.

7. **Significant steps were taken during 2020 to address the macro-economic and fiscal crisis.** These included: (i) adopting measures to safeguard and mobilize oil and nonoil revenues through initial steps towards establishing a market-based gasoline pricing mechanism and adjustment of electricity tariffs towards more cost-reflective levels; (ii) announcing measures to subsidize loans to households and targeted sectors (housing and healthcare); and (iii) providing prudential forbearance for banks to promote lending to the private sector. The Federal Government adopted an amendment budget which included a fiscal stimulus package, and with support from the World Bank-financed States' Fiscal Transparency, Accountability, and Sustainability (SFTAS) Program for Results (PforR) (P162009), states also prepared supplementary budgets to reprioritize spending to protect social expenditures. However recent rises in oil prices have seen fuel subsidies reintroduced, and a reversal of fiscal consolidation efforts on the revenue side could threaten both macroeconomic sustainability and the government's policy credibility and would further limit the government's ability to address gaps in human and physical capital. Moreover, Nigeria is experiencing a rise in insecurity, and a tepid or uneven recovery could exacerbate social tensions and dampen investor enthusiasm.

8. **Nigeria's Country Partnership Framework (CPF) approved in December 2020 realigned the country program to emerging priorities and needs following the COVID-19 outbreak.** The WBG's support for Nigeria's COVID-19 crisis response spans all pillars of the framework outlined in the WBG COVID-19 Approach Paper and covers both adjustments to existing operations and preparation of new operations. Based on the Government's request, a large multi-pronged package of support was approved in FY20 and FY21. The package included: (i) support for public health efforts of about USD200 million from existing and new operations; (ii) support for the Federal Government focused

[7] See World Bank (June 2020), Nigeria Development Update (Spring 2020)—Nigeria in Times of COVID-19: Laying Foundations for a Strong Recovery.

on policy measures to maintain macro-financial stability and marshal the fiscal resources needed for the COVID-19 response; (iii) support for results-based, proactive, crisis-responsive fiscal measures by the states; and (iv) support for states' efforts to protect livelihoods, food security and local MSME activity. The following operations have been approved: (1) restructuring the States' Fiscal Transparency, Accountability, and Sustainability (SFTAS) Program for Results (PforR) (P162009) to incentivize an appropriate fiscal response by the states, with an additional financing of USD750 million; (2) the USD750 million Nigeria Covid-19 Action Response and Economic Stimulus (CARES) PforR (P174114) to support states' efforts to finance programs to support livelihoods, food security and local medium, small and micro-enterprise activity; (3) the USD700 million Sustainable Urban and Rural Water Supply, Sanitation and Hygiene (SURWASH) PforR (P170734) to improve access to basic water and sanitation; and (4) support of nearly USD200 million for the public health response by states comprised of USD82 million from an existing regional operation, the Second Regional Disease Surveillance Systems Enhancement Project (REDISSE) (P159040) and USD115 million from the new COVID-19 Preparedness and Response Project (P173980). A USD750 million Development Policy operation (P173993) for federal fiscal support is still under preparation. Adjustments have been made to the existing program (both lending and advisory) at the request of the Ministry of Finance Budget and National Planning (FMoFBNP). This has included partial cancellation of three projects with a further four operations being reviewed for full or partial cancellation to improve performance of existing operations and increase fiscal space for new operations that would help the Government to manage the crisis.

9. **Support for the social and economic response is focused in the short term on protecting the poor and vulnerable, and in the medium term on limiting the cost to human capital and protecting livelihoods.** The USD820-million National Social Safety Nets Project (P151488) is supporting expanded registration to reach 20 million beneficiaries and additional financing is anticipated in early FY22 to support a time-limited package of welfare support to cushion the impact of COVID-19 on labor markets, and the impact of inflation on poverty. Nigeria CARES PforR (P174114) approved in December 2020 is the flagship vehicle to support states to protect the poor and vulnerable. Prior to its effectiveness, two existing projects supporting youth employment and community based social protection schemes were extended beyond the planned closing date of June 30, 2020 to bridge the operational gap. Other active operations were reprogrammed to expand opportunities for community employment, such as under the Rural Access and Agricultural Marketing Project (P163353). Projects in the education sector including the Adolescent Girls Initiative for Learning and Empowerment (AGILE) (P170664), approved by the Board in July 2020, have been adapted to support distance learning and mitigate the risk of children, particularly girls, not returning to school. The Better Education Service Delivery for All (BESDA) Project (P160430) is being restructured to support schools to gear up for reopening.

10. **Support to policies and institutions is focused on providing immediate fiscal relief and laying the ground for resilient recovery.** The planned Nigeria COVID-19 Federal Fiscal and Economic Response (CoFFER) DPO (P173993) will help maintain macro-financial stability and create the fiscal space for a pro-poor stimulus package to support the Government's overall COVID response. To strengthen macro-economic resilience for recovery the program supports bold reforms in three critical areas: (i) safeguarding revenues and financing flows; (ii) reprioritizing spending and strengthening expenditure and debt management and (iii) enhancing macroeconomic and financial sector stability. The SFTAS PforR has been restructured and scaled up to support states to introduce measures to mitigate fiscal

shocks while protecting social expenditure, through additional disbursement-linked indicators at the state level. Nigeria's crisis-ridden power sector presents a twin barrier to resilient recovery: chronic power shortages stifle economic activity and job creation, and tariff subsidies impose a fiscally unsustainable burden on the federal budget. Both are being addressed through the Power Sector Recovery PforR (P164001) approved by the Board in June 2020, which was followed by Distribution Sector Recovery PforR (P172891) approved in February 2021. Sustainable Development Financing Policy actions anchored in the prior actions of the planned COVID-19 emergency DPF were implemented in FY21, and new actions have been proposed for FY22

Sectoral and Institutional Context

Drylands degradation

11. **Nigeria features diverse dryland ecosystems and degrees of aridity.** The country's arid zones, or drylands. cover about the northern half of Nigeria's total land area of 92 million hectares, and comprise three belts that are classified, from north to south, as arid, semi-arid, and dry sub-humid, according to a leading aridity index.[8] Annex 3 provides more information on Nigeria's drylands. The map at the back of the PAD illustrates their expanse. Nigeria's drylands have supported human communities for many centuries. Farmers and pastoralists historically had access to large areas of land, permitting long fallow periods and allowing for mobility to exploit forage and water resources both seasonally and in times of drought.

12. **The drylands of Nigeria are under stress due to densification and climate change.**[9] Nigeria's drylands have supported human communities for many centuries. Farmers and pastoralists historically had access to large areas of land, permitting long fallow periods and allowing for mobility to exploit forage and water resources both seasonally and in times of drought. Nigeria's population has however quadrupled in the last five decades. With increasing densification of populations along with climate change, traditional strategies to adapt to drylands are becoming less feasible, increasing vulnerability. With less land to farm, farmers must reduce fallow periods, resulting in a vicious cycle of soil degradation. Agricultural expansion into forestlands and rangelands reduces access to valuable forest products and to livestock forage, while also increasing erosion. Overexploitation of surface and groundwater coupled with the impacts of climate change reduces water availability for livestock and agriculture. Encroachment of agriculture into traditional pasturelands negatively impacts pastoralists.

13. **Climate change exacerbates drylands degradation.** Rainfall in northern Nigeria is becoming more variable, with more frequent extreme events, and temperatures are increasing. The dryland belts of northern Nigeria are expected to shift southward, hastening desertification. Rainfall variability and extreme weather events, both flooding and droughts, can be expected to bring increasing pressure on vulnerable communities who will often be forced to more intensively exploit the natural resources they depend on, promoting a cycle of further land degradation. Annex 3 has further information on climate change impacts in the project area.

[8] Consultative Group for International Agricultural Research's (CGIAR) Aridity Index.
[9] The ACReSAL project will promote more resilient dryland management strategies but will not address population growth.

14. **Desertification is the process of degradation of drylands such that they become progressively less suitable to support human populations.** Specifically, it is defined by the UNCCD as "the degradation of land in arid, semi-arid, and dry sub-humid areas. It is a gradual process of soil productivity loss and the thinning out of the vegetative cover because of human activities and climatic variations such as prolonged droughts and floods." Desertification in northern Nigeria is a complex process with many interrelated proximal drivers (see Annex 3 for further background information on desertification and its drivers).

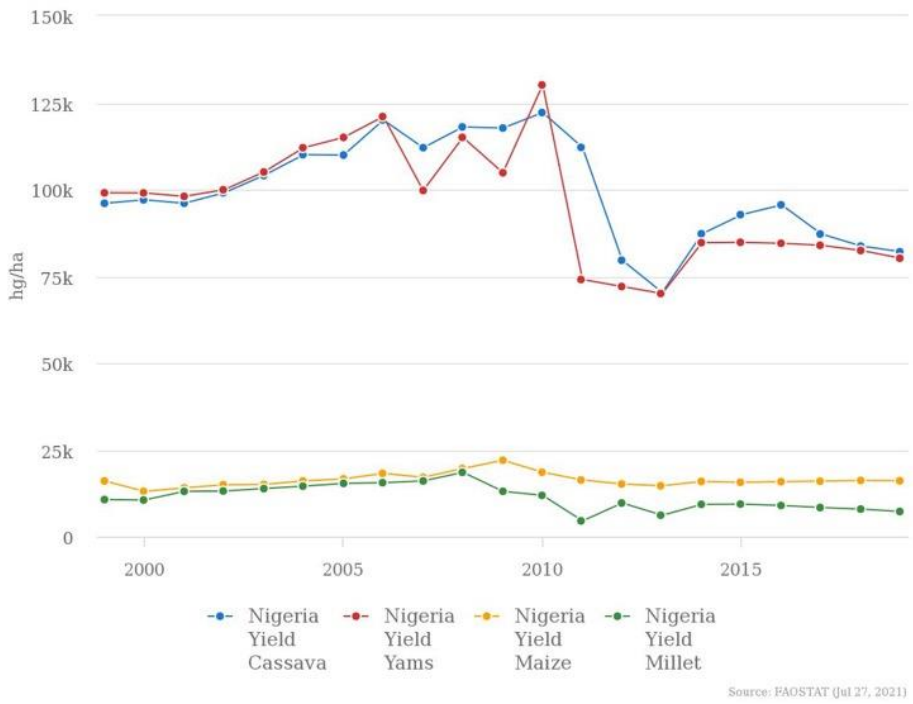
15. **Desertification advances, but its progress remains difficult to quantify in terms of hectares/year or desert kilometer/year.** Oft-cited figures for Nigeria may not be based on careful studies. Variability of rainfall from year to year can be significant and make it difficult to remotely measure vegetation cover. Better data, definitions, and monitoring (all to be supported under ACReSAL) will help to better quantify rates of desertification by the end of the project. Some current rough estimates are that more than half of the land area of the most northern states (Bauchi, Borno, Gombe, Adamawa, Jigawa, Kano, Katsina, Kebbi, Sokoto, Yobe, and Zamfara States) is undergoing significant desertification and up to 15% of the remaining more southerly buffer states of northern Nigeria. Behind the statistics of ever-increasing km^2 of degraded land are millions of households falling further and further into poverty.

Impact of drylands degradation

16. **The agricultural sector is a major driver of the northern Nigerian economy.**[10] This sector accounts for the main livelihood strategies of most rural dwellers in the drylands of northern Nigeria. The country has 78 million ha of agricultural lands,[11] of which 38 million ha are under cultivation, mainly rainfed. Eighty percent of the land in the 20 states in the center and northern part of the country is agricultural land (57 percent cropland and 23 percent grassland). Nigeria has significant potential for irrigation expansion, an estimated 2.1 million ha of potentially irrigable area. However, the current irrigated area is only approximately 200,000 ha. Most people derive their livelihoods from extensive, mixed rainfed cropping and livestock production systems, augmented where possible by off-farm income sources. Average household incomes from mixed cropping/pastoralism vary widely but can often be less than USD 500 per year. In part because of climate change, the productivity of major crops in Nigeria has been steadily declining over the past two decades (Figure 1),[12] forcing area expansion and increased imports to meet the food needs of the country's growing population. Resource shortages, climate change, violent conflict, outdated agricultural systems not adapted to changing dryland conditions, lack of access to finance, weak value chain linkages, uncompetitive environment for agribusiness, and poor market access are key barriers to increased agricultural productivity in Nigeria.[13, 14]

Figure 1. Yield of four major crops in Nigeria (2009-2019)

[10] Nigeria Bureau of Statistics (2016). The Nigerian Economy: Past, Present and Future.
[11] FAO defines agricultural land as the share of land that is arable, under permanent crops or pastures.
[12] FAOSTAT (2021), accessed in July 2021.
[13] Downie, R. (2019). Growing the agriculture sector in Nigeria. *Gates Open Res*, *3*(98), 98.
[14] Oyaniran, T. (2020, Sept. 29). *Current state of Nigeria agriculture and agribusiness sector* [Presentation]. AfCFTA Workshop. https://www.pwc.com/ng/en/publications/afcfta-series-ii-agriculture-agribusiness-workshop-presentations.html.



17. **Desertification exacerbates declining agricultural productivity, food insecurity and poverty challenges in northern Nigeria.** Desertification results in soil erosion, loss of soil nutrients, and low retention of soil water, which slows down plant growth and leads to a decline in the productivity of agricultural lands.[15] Increased use of inputs, such as fertilizers, to offset the loss of fertility, increases greenhouse gas (GHG) emissions and can increase soil deterioration. The Government of Nigeria has established several initiatives in the agriculture sector to combat desertification including afforestation and reforestation programs, dissemination of proven agricultural technologies and sustainable agricultural practices, and promotion of efficient energy sources.[16] Efforts to stop and reverse desertification are complicated by the need to feed a rapidly increasing population in a region where natural resources are dwindling and over 90 percent of national food production depends on smallholder farmers who lack the capacity to increase food production without degrading land.[17]

18. **The livestock population in Nigeria has been estimated to consist of 20.6 million cattle, 46.9 million sheep, 82 million goats, and 167 million poultry.**[18] The northern region of Nigeria supports a significant proportion of the country's livestock economy, hosting about 90 percent of the cattle population, two-thirds of the goats and sheep and almost all donkeys, camels, and horses.[19] The livestock sector mainly comprises smallholders using extensive animal production systems. The cattle population is predominantly managed by transhumant herdsmen and semi-sedentary pastoralists. The aggregate annual demand for milk and dairy products is estimated at 1.3 million tonnes out of

[15] UNCCD (2017). The global land outlook, first edition. Bonn, Germany. https://knowledge.unccd.int/publication/full-report.
[16] Federal Republic of Nigeria Ministry of Environment Nigeria (2012). Great green wall for the Sahara and Sahel initiative. National strategic action plan.
[17] Federal Republic of Nigeria Ministry of Environment Nigeria (2012). Great green wall for the Sahara and Sahel initiative. National strategic action plan.
[18] FAOSTAT (July 28, 2021).
[19] Federal Ministry of Environment of Nigeria (2001). National Action Programme to combat desertification.

which only 0.5 million tonnes are produced domestically.[20] Pastoral herds move along moisture gradient and with the seasons, southwards towards the deciduous forest during the dry season and northwards as far as the Sahel during the rainy season.[19] This system allows pastoralists to exploit the seasonal availability of pasture, accessing crop residue, fallow land and open range to produce beef and milk. Transhumance is also a successful strategy in coping with uncertainties due to diseases, climate change, and local conflicts. In the past, movement was mainly through designated stock routes with rest points in grazing grounds. However, desertification exacerbated by drought and climate change continue to push cattle herders further south in search of grazing land with sufficient forage yield. This change has caused friction between cattle herders migrating from the north and farmers in the south leading to the death of at least 10,000 people between 2011 and 2018.[21] The impacts of droughts and desertification on rangelands and livestock farming include changes in forage yield and changes in livestock feed grain availability, which in turn affects changes in pasture and forage yield.

19. **Desertification is thus driven by the increasing demand for food, fuel and fiber combined with a reduction in the total area of agricultural land available and declines in soil fertility and water access.**[22] Most smallholder farmers in northern Nigeria lack the capacity to increase food production or exploit natural resources, without degrading the land. The pursuit of higher yields in a fragile arid landscape fosters the adoption of unsustainable agricultural practices such as cropland expansion, intensive cultivation, overgrazing, cultivation of marginal land, deforestation, bush burning, poor and inefficient irrigation practices, inappropriate use of inputs, shortening and often elimination of fallow period resulting in continuous cropping with little or no necessary inputs.[23],[24] The abandonment of traditional land uses such as fallowing has led to the reduction of semi-natural habitats of high conservation value and the disappearance of associated local knowledge and practices.[25] Agricultural intensification, bush burning, climate change impacts and deforestation in drylands have also led to loss of biodiversity and soil fertility as well as loss of the soil's carbon sequestration capacity.

20. **Northern Nigeria is characterized by erratic availability of water resources.** Although Nigeria generally is endowed with abundant water resources, its occurrence is highly variable in time and space. Water situation in the north is often characterized by cycles of frequent flooding during the wet season and water scarcity during the dry season. The Nigeria Water Resources Masterplan (2013)[26] estimates a potential of about 375 billion cubic meters (BCM)/year of surface water resources inclusive of external flows into the country and the groundwater resources potential as renewable resources is estimated at 156 BCM/year. These resources, though huge, are unevenly distributed across the country. Also, the Intergovernmental Panel on Climate Change's (IPCC) Emissions Report suggests a drier north with an average decrease in rainfall of about 7.5 cm annually. With the twin effect of growing population and climate change, water resources availability for the

[20] FAO (2019). The Future of Livestock in Nigeria: Opportunities and Challenges in Face of Uncertainty
[21] Nugent, C. (2018, June 28). Land conflict has long been a problem in Nigeria: Here's how climate change is making it worse. TIME. https://time.com/5324712/climate-change-nigeria/
[22] UNCCD (2017). The global land outlook, first edition. Bonn, Germany. https://knowledge.unccd.int/publication/full-report
[23] Federal Republic of Nigeria Ministry of Environment Nigeria (2012). Great green wall for the Sahara and Sahel initiative. National strategic action plan.
[24] UNCCD (2017). The global land outlook, first edition. Bonn, Germany. https://knowledge.unccd.int/publication/full-report
[25] Rossi, R. (2020). *Desertification and agriculture.* European Parliamentary Research Service. https://www.europarl.europa.eu/thinktank/en/document.html?reference=EPRS_BRI(2020)646171
[26] FMWR. 2013. Nigeria Water Resources Master Plan (2013), supported by JICA.

mostly agrarian community in northern Nigeria is expected to become even more erratic.

21. **There is a need for improved water resources management to address water scarcity challenges in northern Nigeria.** Land degradation, compounded by the effects of climate change, reduces the water holding capacity of watersheds, increasing the impact of droughts and floods. Watershed management interventions and climate adaptation measures to better control erosion and sedimentation into existing dams include construction and rehabilitation of small storage reservoirs and rainwater harvesting structures to support communities, introduction of micro-irrigation, harnessing flood waters for productive uses, and identification of recharge areas to protect groundwater resources.

22. **Forests provide important sources of income to many rural people in the north.** Forest products such as fuelwood are gathered and traded at local markets, with charcoal generally destined for urban consumers. Forests also provide the raw materials for a great range of non-timber forest products (NTFP), including forage. They are the last refuges of much of the remaining biodiversity of northern Nigeria. Forests protect against desertification by providing alternative sources of income (especially in drought years) can create climate adaptation, by slowing erosion and movement of sand, and constituting a source pool for dryland-adapted biodiversity.

23. **A direct degradation of the productive capacity of forest lands can be an outcome of desertification.** This can occur because of climate change as natural and planted forests become less adapted to changing climatic conditions. Forests can also be degraded or destroyed as local populations are forced to overexploit resources, are affected by reduced availability of water, or are cut down for expansion of agricultural areas or for meeting energy demands.

24. **Natural drylands ecosystems of northern Nigeria have been significantly degraded.** Expansion of agriculture, overgrazing, and increasing demand for land along with climate change has directly affected native vegetation and biodiversity. Nigeria has one of the highest deforestation rates in the world, 3.4%, per year (Nigeria REDD, 2019)[27] and this year in Nigeria, 4.0 million ha of land has been burned (Global Forest Watch). The few remaining patches of vegetation that remain in northern Nigeria harbor globally and national important biodiversity and are genetic reservoirs for many species of endangered flora and fauna species which are also important for local livelihoods. Ecosystems in northern Nigeria important for conservation include national parks, gazetted forests, wetlands, and oases. All these areas provide important ecosystem services, but have been affected by varying degrees of degradation, deforestation, encroachment, climate change shocks, and agricultural invasion. Restoration of some of these important habitats is urgently needed. Natural ecosystems such as wetlands play particularly important functions in regulation of water flows and recharge of surface and groundwater and provision of critical ecosystem services to communities in the northern region. According to FAO's Global Forest Assessment 2020, only 16,000 ha/year has been reforested in the country from 2015-2020.

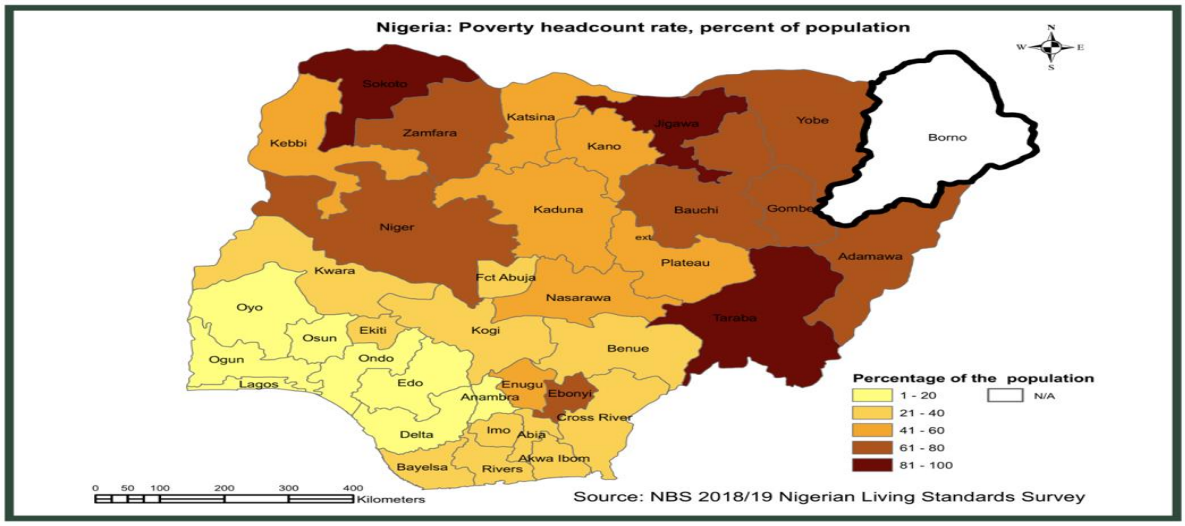
25. **A consequence of weakened coping strategies in fragile and drought-prone drylands is growing poverty.** About 40% of Nigeria's total population is living below the poverty line,[28] but poverty is

[27] https://www.unredd.net/documents/un-redd-partner-countries-181/africa-335/nigeria-336/national-programme-document-and-related-1079/17407-un-redd-national-programme-final-evaluation-report-june-2019/file.html.

[28] Poverty and Inequality in Nigeria: Executive Summary (2019). National Bureau of Statistics, May 2020.

strikingly rural – nationwide the urban poverty rate is 18 percent but 52 percent rural. Furthermore, the northern region is disproportionately poor. The northern states targeted by this project have the worst indices of poverty (Figure 2). In three of the northern states (Jigawa, Sokoto, and Taraba), the poverty rate exceeds 80 percent (data not available for Borno State).

Figure 2. Poverty headcount rate in Nigeria



26. **Increasing competition over access to declining natural resources caused by climate change, desertification and population growth contribute to conflicts, insurgencies, and violence.** Northern Nigeria has experienced multiple conflicts over the past decade, including a decade of armed insurgency in the northeast by Boko Haram and the Islamic State – West Africa Province (ISWAP), farmer-herder conflicts in the northwest, and increased banditry and armed violence across large parts of the north. This region has seen ongoing conflicts (through the mobilization of local militias), increased competition over natural resources, and opportunistic crime in a weakened security environment. These conflicts have led to devastating consequences for the civilian population with large-scale displacements (estimates show about 2.2 million people displaced in the north-east), destruction of productive assets and livelihoods creating widespread food insecurity and humanitarian needs (with UN OCHA estimating about 8 million people facing urgent needs), and criminal gangs proliferating, including in the northwest. Beyond their human toll, these conflicts in turn have often exacerbated the exploitation of dwindling natural resources, resulting in worsening cycles of misuse of resources and further conflict. In parallel to security efforts, increased resilience at the community level requires peacebuilding efforts that are grounded in sound land and natural resource management to support conflict prevention, mitigation, resolution, and recovery.

27. **Nigeria is 139th out of 156 countries on the World Economic Forum's 2020 Global Gender Gap Index.**[29] Women's disadvantaged position and lack of decision-making power in the social,

[29] https://www3.weforum.org/docs/WEF_GGGR_2021.pdf.

economic, and political spheres is reflected in policies, laws, and resource allocation that thwart progress towards gender equality in the country. More than 70 percent of women live below the poverty line, and maternal mortality ratio is among the highest in the world at 576 per 100,000. Female enrollment in school lags behind boys and represents one third to one quarter of classroom participants depending on the state; and two-thirds of the 10.5 million out-of-school children, are girls. The wide diversity and distinct socio-economic, cultural and political contexts across Nigerian geopolitical regions and states results in different gender-related vulnerabilities. While gender inequitable norms prevail throughout the country, these vary by region and interact with other structural, community, and individual factors exposing women, girls and boys to some forms of Gender-Based Violence (GBV) more than others.

28. **Women lag behind men in terms of earned income from self-employment and production in agriculture. Self-employed women in the north earn 56 percent less than their male counterparts (World Bank Nigeria Gender Diagnostic, 2020).** Two key factors are associated with the profit gap between male-managed and female managed enterprises: physical capital and target market. Self-employed women operate firms with significantly less capital than firms operated by men: on average, the value of the equipment owned by women-operated firms is only 16 percent of the value for firms operated by men. Their lower capital endowments impede their productivity but also limits their ability to purchase inputs, invest in new activities, and move up higher in the value chain. Women are also 25 percentage points less likely to manage an agricultural plot than men. Female plot managers in Nigeria produce significantly less per hectare than their male counterparts. Nationally, the value of the output per hectare on female-managed plots is 30 percent lower than comparably sized male-managed plots. Three key factors are associated with the productivity gap between male-managed and female-managed plots: input use, crop choice, and the composition of labor used on the plot. Women use fewer inputs: nationally, male farmers use over 8 times more fertilizer and 50 percent more herbicide per hectare than their female counterparts, suggesting that equalizing input use could significantly increase female productivity. Women farmers in the north use significantly less fertilizer than their male counterparts. In both the north and the south, women consistently farm less valuable root and tuber crops, holding back their agricultural productivity relative to male farmers. Access to machinery that decreases time and labor requirements on the farm could greatly aid women in filling the productivity gap between themselves and male farmers, yet female farmers often lack financing to purchase valuable tools.

Nigeria's multisectoral sustainable land and water management approach

29. **Many projects and initiatives have been undertaken in northern Nigeria over the past decades to combat the growing crisis of desertification.** Responses embarked upon by the Government include (a) sand dune fixation, (b) rangeland establishment, (c) oasis inventory and restoration, (d) drought forecasting, (e) better adapting agriculture to drylands, and (f) increase of water storage and management through dams. Some sector-based responses have been successful, and Nigeria has built up a rich experience in addressing challenges of climate change and dryland management.

30. **The Great Green Wall for the Sahara and the Sahel Initiative (GGWSSI or GGW)** is Africa's flagship initiative to combat the effects of above-described climate change and desertification and develop sustainable development pathways in this food-insecure region and its highly vulnerable populations and landscapes. Led by the African Union, which represents the governments of all African nations, the initiative approved in 2007 aims to achieve a transformational change for millions of people by

increasing resilience in the Sahara and the Sahel region through an integrated landscape approach.[30] The initiative initially promoted establishment of a 15 km wide and 8,000 km long belt of trees, extending from Senegal to Djibouti. It has subsequently evolved into the promotion of integrated approaches to management of dryland areas. In Nigeria, the initiative, covering 11 frontline states of northern Nigeria, is managed by a specific agency of the FME to give it greater visibility and impetus. With FAO's support, the AU Commission has developed a regional harmonized strategy,[31] which includes the integrated landscape/AFOLU approach, which is also aligned to all Sahelian countries' climate strategies: NAPs, NAMAs, and NDCs (FAO, 2018).

31. **The FGN is thus increasingly moving toward an integrated and multisectoral approach to address the challenges of dryland management.**[32] Key policies and planning documents of the government include the following: (a) Drought and Desertification Policy, (b) National Drought Preparedness Plan (c) National Action Plan to Combat Desertification, and (d) Land Degradation Neutrality Process. The national commitment is evidenced by Nigeria's intention to restore 4 million hectares of degraded land by 2030 as part of the AFR100 Initiative and the Bonn Challenge. With respect to mitigation, Nigeria's commitments as outlined in its NDC and LDN targets are to unconditionally reduce greenhouse gas emission by 20% compared to Business-as-Usual scenario (BAU) and 45% compared to BAU with international support by 2030.[33]

32. **Because of policy and institutional constraints at the federal and state levels, multisectoral initiatives have not always achieved the anticipated success and results.** ACReSAL will strengthen multi-sectorality at the institutional and policy level but the project's design additionally emphasizes the importance of multisectoral sustainable land and water management planning. Best practice integrated watershed management usually includes a participatory planning approach at both landscape and micro-scales, with management plans developed utilizing high quality scientific data from both field and geospatial sources. Based on approved sustainable land and water management (SLWM) plans, targeted interventions can then be delivered to address natural resource priorities and build climate resilience which in northern regions could include reducing land degradation and erosion, increasing vegetative cover, improving agricultural productivity, increasing availability and access to water and protecting existing water sources, improving pasture management and nomadic grazing practices, etc. In addition, an integrated watershed management approach should include activities to improve farm and non-farm livelihoods to broaden economic activity, particularly for women and vulnerable groups, and reduce the community's dependency on, and illegal use of natural resources. Overall, as the natural resource and economic base are put on a more sustainable footing, conflict over natural resources is expected to decline.

[30] In June 2010 the following 11 Sahelian countries signed a convention to implement the GGW: Burkina Faso, Chad, Djibouti, Eritrea, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal and Sudan.
[31] *Harmonised regional strategy for implementation of the "Great Green Wall Initiative of the Sahara and the Sahel*" was achieved based on strong political will in the African continent to form an African partnership supported by international solidarity, to halt and reverse degradation of Africa's arid lands through a coherent and cooperative set of actions. FAO was one of the principal authors.
[32] Cervigni R. and Michael M., editors (2016). Confronting Drought in Africa's Drylands: Opportunities for Enhancing Resilience. Africa Development Forum series. Washington, DC: World Bank. doi:10.1596/978-1-4648-0817-3. License: Creative Commons Attribution CC BY 3.0 IGO

[33] http://www.fao.org/faolex/results/details/en/c/LEX-FAOC187295/.

33. **Several World Bank-financed projects have contributed to implementing sectoral elements of dryland management strategies.**[34] The highly successful and innovative USD 900 million World Bank-supported Nigeria Erosion and Watershed Management Project (NEWMAP) has been under operation since September 2012. NEWMAP introduced a holistic watershed management approach linking poverty alleviation with maintaining sustainable ecosystems and better disaster risk management. Within a catchment management framework, NEWMAP focuses investments on rehabilitating existing gully systems that pose major risks to infrastructure and people. The project has pioneered a highly participatory approach for gully rehabilitation, the blending of physical and vegetative soil and water conservation technologies to reduce investment costs and introduced an integrated livelihood component that has helped communities improve their economic welfare. Policy makers see the value of an integrated approach, which can significantly reduce soil erosion, and improve surface water management, which is the main cause of gully formation. NEWMAP is currently working in the northern and southern part of the country.

34. **The USD 500 million Third National FADAMA Development Project for Nigeria focused on increasing the incomes for users of rural lands and water resources within selected areas in a sustainable manner throughout the recipient's territory.** The original project (USD 250 million) worked in 35 states and the Federal Capital Territory. Since the original closing date of 2013, two rounds of additional financing of USD 250 million allowed the project to put more focus on several conflict and non-conflict states. The project improved farm productivity performance of clusters of farmers engaged in priority food staples namely rice, cassava, sorghum, and horticulture. The project used a Community-Driven Development (CDD) approach. Local community members, through FADAMA Community Associations (FCAs) and FADAMA User Groups (FUGs), oversaw the design and implementation of the project and were empowered through skills and capacity-building to improve their livelihoods by increasing income generating activities. The FADAMA projects were successful at transforming agriculture in the country, but the final Additional Financing support ended in 2019.

35. **The USD 495 million Transforming Irrigation Management in Nigeria project (TRIMING) was approved in June 2014 and is ongoing.** It is establishing holistic basin-level water resources management strategies in northern states, rehabilitating major irrigation systems, integrating them with existing surface reservoir-based canal irrigation, and helping farmers improve productivity on irrigated lands. The project is operating in selected dams and irrigation schemes within a) the Sokoto-Rima river basin, in northwest Nigeria; b) the Hadejia-Jama'are sub-river basin within the Hadejia-Jama'are-Komadugu-Yobe Basin in northeastern Nigeria; and c) the Gongola River Basin in the Upper Benue sub-basin.

36. **While past operations have delivered important results and lessons, there is now a critical need to build on these experiences** and address land degradation, increase climate change adaptation and mitigation measures, improve the quality and values generated by the natural resource base, strengthen climate resiliency, and lessen livelihood vulnerabilities in dry, semi-arid and semi-humid regions in the northern states. The proposed ACReSAL project accounts for a large part of the Federal Government of Nigeria's objective of restoring one million ha degraded land out of the 4 million ha target set for broader landscape restoration by 2030 (Africa 100 Initiative). The project will also help

[34] Further details on related World Bank and non-World Bank projects are included in a reference document in Project Files.

reduce the vulnerability of millions of the extreme poor in northern Nigeria, strengthening their own role in the management of their territories.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

37. The PDO is to increase the implementation of sustainable landscape management practices in targeted watersheds in northern Nigeria and strengthen Nigeria's long-term enabling environment for integrated climate-resilient landscape management.

Key Results

Land area under sustainable landscape management practices, disaggregated by practice (ha):

- Area under improved catchment management (ha);
- Area under community-led landscape restoration (ha);
- Protected areas under improved management (ha);
- Area provided with new/improved irrigation or drainage services (ha);
- Area under improved rainwater harvesting (ha);

Enabling environment for integrated landscape management strengthened. (text);

Percentage increase in Normalized Difference Vegetation Index (NDVI) in targeted sub-watersheds, correcting for natural variability (percentage);

Number of direct project beneficiaries (number).

D. Project Description

38. **The project has four components and will be implemented over a period of six years.** A six year duration was considered appropriate because of what is expected to be a slow trajectory in the first two years as the project helps build the institutional and policy enabling environment for strategic watershed planning. Additionally, significant security constraints could slow project implementation. The project components are presented briefly in this section; Annex 3 presents a more detailed description of the components and subcomponents.

39. **The total project cost is estimated at USD 784.2 million, of which USD 700 million will be financed through IDA (Table 1).** Counterpart funding of the FGN is their contribution to staff costs, operating costs, and payments for resettlement and compensation for civil works. Beneficiaries will participate in the financing of subprojects and community activities through revolving funds or in-kind contributions.

Table 1. Project Cost and Financing (USD million)

Table 1. Project Cost and Financing (USD million)

Components	IDA
A1 Strategic Watershed Planning	13.5
A2 Landscape Investments	236.1
A3 Special Ecosystems	50.0
Subtotal	299.6
B1 Community Strengthening	22.0
B2 Community Investments	271.4
Subtotal	293.4
C1 Institutional and Policy Strengthening	34.4
C2 Project Management	72.6
Subtotal	107.0
Total	700.0

40. **Component A. Dryland Management (USD 299.6 million).** This component will implement integrated watershed management planning and addresses challenges of large-scale watershed degradation in northern Nigeria. It will support the following subcomponents:

41. **A1. Strategic Watershed Planning (USD 13.5 million):** This subcomponent will support large-scale integrated watershed management planning. Plans will be prepared for up to 20 watersheds, covering all of northern Nigeria. Rapid initial versions will be prepared in less than a year, with refined updates to be prepared throughout the project lifetime. The planning will be carried out using analytical approaches and through development of a modern knowledge base (including collation of existing data from in-situ and earth observation and biophysical surveys). Extensive participatory stakeholder consultations will be fundamental. The multisectoral planning process will prioritize project investments, expected to include those related to information, institutions, and those required for desertification control, sustainable land and water management in drylands, and improved natural resource-based livelihoods. The strategic watershed plans will also provide a framework and guidance to the micro-watershed-level planning in Component B and will be a foundation for the longer-term dryland management framework of Nigeria supported under Subcomponent C1.

42. **Subcomponet A2. Landscape Investmens (USD 236.1 million)**. This subcomponent will support landscape-level investments, as prioritized in the strategic watershed plans. These may include those related to water resources management (e.g., surface and groundwater storage, managed aquifer recharge, riverbank restoration, gully rehabilitation, and irrigation), to nature-based solutions for environmental management (e.g., stabilization of sand dunes, vegetation management, reforestation). Additionally, the subcomponent will support large-scale agriculture investments for rangeland management and for a range of agricultural extension services such as the promotion of integrated pest management (IPM) and knowledge and data services. The subcomponent is expected to include both state-implemented and federally implemented investments, depending on the scope of the subprojects. A considerable pipeline of investments has already been identified and prepared under NEWMAP and some of these will be financed under ACReSAL, provided they are consistent

with ACReSAL objectives and requirements.

43. **A3. Special Ecosystems (USD 50.0 million):** Investments under this subcomponent will support better management and conservation of special ecosystems in all participating states, including wetlands, desert oases, and protected areas. Investments could include those related to wetland improvements, monitoring systems, inventories of the current status of these ecosystems,[35] stabilization and restoration of wetlands, forest reserves, and oases. Traditional uses of wetlands and oases have been impacted by overuse of water for agriculture and other uses. The project will support investments for community work in restoration activities (e.g., including women and youth participation in restoration action plans such as tree planting), creation of demonstration gardens, knowledge sharing of traditional uses of wetlands and oases, and pest management, among others. Actions to increase application of current policies and regulations applicable to special ecosystems, the review or improvement of these policies and capacity building of institutions responsible for their management and conservation are included under Subcomponent C1.

44. **Component B. Community Climate Resilience (USD 293.4 million).** Most of the challenges of dryland management are to be found at the local level, where they constitute the day-to-day reality of communities and farmers. Communities need support to be more resilient and communites and households need targeted investments to put new approaches into effect. In targeted micro-watersheds, this component will support the following subcomponents:

45. **B1. Community Strengthening (USD 22.0 million):** This subcomponent aims to strengthen the capacity of communities for sustainable natural resource use and management. Support will be provided to "local project implementation committees", or their local equivalent. Building on the outcomes of the higher-level strategic watershed planning (Subcomponent A1), micro-watershed planning will be supported to prioritize investments. Social cohesion and peace building will be strengthened by addressing gender inequalities, the needs of vulnerable and marginalized groups, and by improving conflict resolution capacities at the local level, all through joint planning and implementation across stakeholder groups to foster mutual understanding. Activities such as participatory planning processes, capacity building, and establishment of community revolving fund management committees will be implemented in a gender-inclusive manner to help improve women's voice and agency in participating communities.

46. **B2. Community Investments (USD 271.4 million):** This subcomponent will finance physical investments as prioritized through the micro-watershed planning process. Although the menu of potential investments will vary from community to community, based on their own priorities, three groups can be described:

    - Landscape restoration in community-selected degraded areas will promote hybrid agroforestry models on communal lands, using plant species chosen by the communities. These investments produce non-timber forestry products, such as: fodder, acacia (gum Arabic), balanites, beekeeping, nuts, mushrooms, and grains such as millet and sorghum. Improved pasture and rangeland management and restoration could also be included. Prioritized community infrastructure investments can also be supported.

[35] The Wetlands Act requires states to perform inventories of the status of wetlands and riverbanks to define priority interventions in these areas.

- Climate-smart rainfed agriculture: support to farmers at the household level to optimize climate-smart rainfed agriculture practices, particularly relating to crops. Investments could include water and soil conservation, optimizing farm management (improved crop varieties, Integrated Pest Management; soil and water testing technologies), controlling invasive species, and supporting value chains. The project will support these investments by providing loans from community revolving funds (CRFs) to registered community/farmer groups and cooperatives. The project will address gender inequalities in access to funding for enterprises by prioritizing subproject proposals from groups/cooperatives that have women beneficiaries as members and/or leaders.

- Farmer-led irrigation development (FLID). North and central Nigeria is rich in shallow groundwater resources, with about 7 million ha of cropland with groundwater resources within a depth of 25 m. The project will support farmers at the household level to increase irrigation, including small-scale solar-powered irrigation.

47. **Component C. Institutional Strengthening and Project Management (USD 107.0 million).** This component includes investments to improve the enabling institutional and policy foundation for multisectoral integrated landscape management and climate resilence, as well as support project management. It will include the following subcomponents:

48. **C1. Institutional and Policy Strengthening (USD 34.4 million):** This subcomponent aims to improve the enabling institutional and policy foundation for integrated landscape management and climate change resilience in Nigeria – with an initial focus on ACReSAL activities but also for a longer-term enabling environment for dryland management. This subcomponent will include support to all states in northern Nigeria for monitoring infrastructure, institutional infrastructure, knowledge products, policy environment, capacity-building and outreach, and payments for ecosystem services (PES).

49. **C2. Project Management (USD 72.6 million):** This subcomponent intends to support overall project monitoring and management. It will provide support for key consultancies (e.g. to support project monitoring and management, watershed implementation support, and capacity-building), as well as incremental operating costs (for specialized expertise, project-related travel, meetings, documentation, etc.) as well as systems for improving remote preparation and supervision of investments (e.g. through use of satellite imagery, drones, cameras, videoconferencing, etc.). It will also support the development of monitoring systems and dashboards and improving workflow processes to facilitate coordination across agencies at the central and state levels and public versions to improve transparency and outreach. Activities under this component would include monitoring of conflict impacts in the project area, including through aggregation and analysis of community and localized data to inform project activities. Given the dynamic situation on the ground, including the evolving security situation, the project's monitoring systems and documentation of lessons learned on an ongoing basis will be used to support adaptive project management, especially to identify activities that can be scaled-up depending on implementation performance and feedback.

50. **Component D: Contingency Emergency Response (USD 0 million).** A Contingency Emergency Response Component (CERC) is a financing mechanism available to Borrowers in IPF operations to enable quick deployment of uncommitted funds to respond to an eligible crisis or emergency. An operations manual will describe in detail the implementation arrangements for the emergency response mechanism.

Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	Yes
Projects in Disputed Areas OP 7.60	No

Summary of Assessment of Environmental and Social Risks and Impacts

51. The proposed project will target selected States in arid and semi-arid areas in the Sahel, Sudan Guinea Savanna and Southern Guinea which are characterized by dry-semi-arid conditions, low precipitation, and sparse vegetative cover. In this project, an integrated and participatory catchment management approach will be the operating framework for the project implementation. Appropriate modern technology will be leveraged throughout the project activities, including to manage the disruption of the ongoing COVID-19 pandemic and help build back better and smarter. The project will aim to support communities with improved capacity and investments to improve sustainable livelihoods. These activities will have some level of environmental and social impacts including impacts resulting from soil conservation works and green infrastructure such as gully plugging, construction and rehabilitation of small -medium size dams, contour ripping and water weirs as well as drains for improved flood water management and watershed rehabilitation works. Potential risk associated with these activities include land acquisition, restriction of access, labor influx, child labor, community health and safety and SEA/SH risk. Other potential risks are related to exclusion of some vulnerable groups/minority groups in the community agro-processing, common market infrastructures like water point improvement, sanitation, and shared market logistic.

52. **The project's social risk is rated as High.** Medium- to large-scale civil works might result in an influx of labor, with risks associated with labor management and working conditions. The High rating also reflects security concerns. In addition, the social risks include COVID-19 related risks with respect to stakeholder engagement and community mobilization activities. The project interventions include risks of sexual exploitation and abuse and sexual harassment (SEA/SH). As such, the project was screened for risk of SEA/SH and a SEA/SH action plan was developed, including a code of conduct, and will be implemented to address such risks. No voluntary land donations are expected. Where community land is used for community-shared infrastructure, any person suffering from a restriction to economic resources would be compensated in line with the requirement of ESS5.

53. **Environmental risk rating is considered Substantial because of potential environmental impacts and widespread nature of infrastructure investments with potential cumulative impact.** Given that the potential environmental and social impacts and the Borrower's limited capacity with the ESF, the overall E&S risk is considered Substantial. Risks and impacts of infrastructure works will be assessed as per ESMF prior to construction and will be managed in accordance with environment and social management plans (ESMPs). Project will also support investments for better management and conservation of special ecosystems, including wetlands, desert oases, and protected areas. Investments might include those related to wetland improvements, monitoring systems, inventories

of the status of these ecosystems, stabilization and restoration of wetlands, forest reserves and oases. These interventions will result in overall positive impacts on these special ecosystems, however, due to sensitive nature of these ecosystems extra attention will be given to biodiversity protection during interventions. Location of these interventions will be identified during project implementation as per participating state selections and watershed management plans. Biodiversity surveys and Biodiversity Management Plans (BMP) will be prepared as needed once the locations and interventions are identified, to avoid, minimize, mitigate and/or offset potential adverse impacts, and as per ESMF.

E. Implementation

Institutional and Implementation Arrangements

54. **The Federal Ministry of Environment (FMEnv) is the lead implementing ministry for the project, to be carried out in collaboration with the Federal Ministry of Water Resources (FMWR) and the Federal Ministry of Agriculture and Rural Development (FMARD).** Seconded ministry staff and consultants will constitute the Federal Program Management Unit (FPMU).

55. **Individual project components, sub-components, and activities will be implemented through relevant departments, other ministries, states, and local governments, as appropriate.** FMEnv will sign a memorandum of understanding with each federal-level MDA. Subsidiary agreements will be signed with participating states, which will each establish a State Project Management Unit (SPMU). A robust annual joint work programming process will be facilitated by the FPMU and SPMUs.

56. **A Federal Steering Committee (FSC) and Federal Technical Committee (FTC) will provide overall policy and technical guidance respectively.** These same organs and functions will be replicated at the state level. Annex 1 provides more details on the project's implementation arrangements at federal, state and community levels.

57. **State selection, investment staging and dynamic fund allocation.** The 19 states of Northern Nigeria and the Federal Capital Territory (FCT) have been deemed eligible to participate in ACRESAL based on a technical aridity criteria. The participating states have also been ranked based on demonstrated commitment and implementation readiness criteria. Performance-based conditions will apply to the staging of investments by each state, and the dynamic allocation of Project funds. These processes are further described in Annex 2

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